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Bulletin

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

Invasive Exotics: Our Progress

Since VNPS started studying the subject of invasive exotics last spring, major contributions to the study have been made by members of the Department of Conservation and Recreation's Division of Natural Heritage. The combination of the two organizations has worked so well that the Division of Natural Heritage suggested that it join VNPS as a partner in the project. VNPS gladly formalized that arrangement at its December Board meeting. On January 10, 1992, members of the study group from the two organizations met with representatives from a number of state-wide organizations including the Departments of Game and Inland Fisheries, Forestry, and Transportation, the Horticulture Department of Virginia Tech, Virginia Nurserymen's Association, Virginia Institute of Marine Sciences, The Garden Club of Virginia, and The Nature Conservancy.

The purpose of the meeting was to introduce to the group a list of plants that have been suggested as having invasive tendencies, to hear the points of view on the idea of trying to organize some control on these plants, and to gather suggestions on how to prevent other species with similar tendencies from being imported. Since the list runs the gamut of plants used in agriculture (grasses), horticulture, wildlife management, and soil conservation and erosion control, as well as some which arrived in this country by accident, the potential for conflicting views was obvious. As the discussion progressed, VNPS and Natural Heritage participants were pleasantly surprised to sense a developing consensus that many of the plants on the list were indeed problems and that all at the meeting were interested in seeing some of the problems confronted in one way or another.

The comments and suggestions from all those who attended the meeting were indeed helpful to the study team and indicated many opportunities for us to help each other accomplish our own individual objectives. There were exceptions, of course, where someone's personal interest might be threatened, but the sense of the meeting was generally upbeat.

The Division of Natural Heritage and VNPS agreed to develop fact sheets on at least a dozen of the plants reputed to be the worst offenders or threateners. We will select the plants causing or having the potential to cause the greatest damage to our natural habitats and collect the latest information on those species. We believe considerable assistance will be forthcoming from the various groups at the meeting; e.g., the representative for the Virginia Nurserymen's Association might help us get information to nurseries in Virginia about the threat of the purple loosestrifes, *Lythrum salicaria* and *L. virgatum*, certainly the first step to be taken to prevent the spread of this scourge.

(Continued on page 6)

Virginia Native Plant Registry Challenge

On page 4 of this *Bulletin*, you will find an article on the VNPS second registry site, an unusual wetland located in Augusta County. The Society is extremely proud of this registry, since this marsh embraces an exceptional ecosystem with several rare and threatened plants, and since wetlands are among our most vulnerable areas.

You will also find inserted in this *Bulletin* a copy of the Virginia Native Plant Registry brochure which outlines the program's nature and value, the sites eligible for registry, and the steps you can take to get involved. Please read this folder carefully.

In implementing the registry program, our Society has a rare opportunity to reward the stewardship of those who maintain these special plant communities and to further the appreciation and conservation of Virginia's priceless plant heritage. Many sites in Virginia are appropriate for registry. In talking with chapter registrars, I have learned of a quaking bog with absentee owners, a wet meadow with rare and uncommon orchids and other remarkable wildflowers, and a mountainside with an unusual hybrid azalea population. These and many other unique sites are out there -- areas that need our concern and protection.

During the first year of the registry program, two sites, each distinct and important in different ways, have been registered with the Society. The trillium slopes of the G. Richard Thompson WMA with their magnificent display of large-flowered trillium and the special marsh ecosystem in Augusta County are just the beginning.

(Continued on page 5)

VNPS Special Events

Winter Workshop on Photography

Saturday, March 21

Details in Coming Events Column
on page 6.

Virginia Wildflower Celebration 1992

Months of April and May
See page 3 for calendar
of chapter sponsored events.

FROM THE PRESIDENT

HAPPY BIRTHDAY, VNPS!

It is time to celebrate ten years, a decade, of transforming our love and concern for wildflowers into actions to guarantee their existence when our children's children have great-grandchildren. A bit closer to our time on earth, we want to assure that our shared habitat is healthy.

On April 1, 1982, the Virginia Wildflower Preservation Society was chartered to do that by Mary Painter and charter members of the Potowmack Chapter. Prince William Wildflower Society was forming at the same time and quickly joined with Potowmack. Since then, seven other chapters have been chartered throughout Virginia to include 52 counties and 10 cities.

By 1989, it was time to change the name of our Society to Virginia Native Plant Society to reflect our concern for the ecosystems involved with the plants. VNPS members have enjoyed ten years filled with a variety of activities befriending native plants. During April and May, we will again enjoy the VNPS Virginia Wildflower Celebration with many chapter events. This spring is an especially exciting time for us as a society.

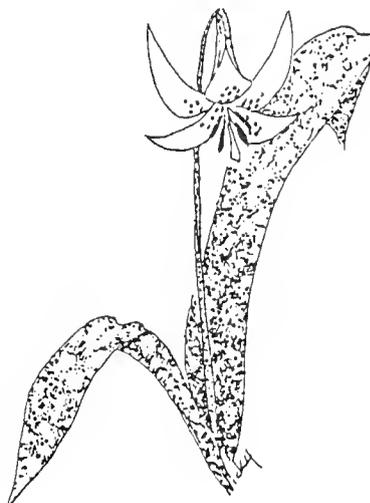
With our study of invasion of our native flora by exotic plants, VNPS moves on with new programs as we begin our second decade. We also continue with our other projects as we look for more sites to be registered under the Registry Program. We are truly ready to highlight a favorite Virginia wildflower, butterfly weed, VNPS Wildflower of the Year 1992.

Environmental protection efforts by our federal Environmental Protection Agency continue to be supported by VNPS. I hope the bond referendum was passed by the Virginia State Legislature this spring for purchase of natural areas by the Department of Conservation and Recreation. The Division of Natural Heritage would receive a portion of these funds. In the coming year, I hope our new legislative coordinator will keep us up-to-date on important issues. (See "Help Wanted" on back page.)

With nearly 1100 members, each with more than one skill, it is no wonder we can be proud of our Society's accomplishments! Diversity and energy are our strengths.

When we have the VNPS Annual Meeting, September 11-13 in Roanoke, hosted by the Blue Ridge Wildflower Society, founding president Mary Painter, past president Mary Pockman, and I (current president) will be ready to lead some special celebrations to observe the Virginia Native Plant Society's tenth birthday. Mark your calendar right now to be in southwest Virginia for some special trails and times. All the exciting annual meeting events we've enjoyed throughout the years will be there. Will you be there, too?

Nicky Staunton



VNPS 1992 Board of Directors

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Nominating Committee

Becky White, Chair
 Gay Bailey Dorna Kreitz
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Nominations Needed

The VNPS Nominating Committee, chaired by Becky White (South Hampton Roads Chapter), is developing a slate of candidates for election to the VNPS 1993 Board of Directors and next year's Nominating Committee. The slate will be proposed at the 1992 Annual Meeting on September 12 in Roanoke.

All VNPS members are invited to send the committee suggestions to consider. Members may also nominate candidates directly by submitting a petition signed by at least fifteen VNPS members. Nominees must have consented to nomination, and the petition must be received by the Nominating Committee by July 1, 1992. Send suggestions and petitions to Becky White, 1149 Larchmont Crescent, Norfolk, VA 23508, or call 804 489-7067.

Tax Time Gifts

All or a portion of your Virginia tax refund can be donated to two organizations involved in habitat protection. Check line 27(e) on your state tax return to donate to the Open Space Recreation and Conservation Fund, and line 27(a) to donate to the Virginia Non-Game Wildlife Program.

VIRGINIA NATIVE PLANT SOCIETY FY 1992 BUDGET

The VNPS Board of Directors has approved the following budget for fiscal year 1992. 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	\$7,500
Sales, fees & investments	\$6,160
Donations & contributions	<u>\$3,000</u>

INCOME TOTAL \$16,660

EXPENDITURES

Programs (conservation, botany, etc.)	\$1,420
Outreach (education, publications, etc.)	\$7,225
Administration (membership, correspondence, insurance, annual meeting, etc.)	<u>\$8,765</u>

EXPENDITURE TOTAL \$17,410

NET INCOME (\$750)

Total Assets Beginning FY 1992
 (bank account & investments) \$15,860

Virginia Wildflower Celebration 1992 Calendar of Events

Chapters of the Virginia Native Plant Society have planned a variety of field trips, programs, tours and plant sales during April and May. These activities enable members to celebrate the spring wildflowers and share enthusiasm for native plants among themselves and with other members of their communities. All activities listed are open to the public. Use phone numbers provided to obtain more information or to register for events.

Butterfly weed, Virginia Wildflower of the Year 1992, is a summer bloomer and will not be in flower during our Wildflower Celebration. Propagated plants will be available at various chapter plant sales.

April 4, Saturday. 8:30 a.m. Early Spring Wildflowers Field Trip. Near Bridgewater. Jacob Kagey (Shenandoah) 703 828-3297.

April 5, Sunday. 2:00 p.m. Catawba and Dry Branch Wildflower Walk. Salem. Hugh Smith (Blue Ridge) 703 774-8392.

April 8, Wednesday. 7:30 p.m. Native Ferns Program by Tim Williams, Botany Chair, Jefferson Chapter. Branchlands Manor House, Charlottesville. Gay Bailey 804 293-8997.

April 11, Saturday. 1:30 p.m. Spring Wildflowers at Monticello. Hike from mountaintop to Rivanna River. Peggy Newcomb, leader. \$3.00 fee. Gay Bailey (Jefferson) 804 293-8997.

April 12, Sunday. 8:30 a.m. Blackwater Ecological Preserve (aka Zuni Pine Barrens) Field Trip. Carpool from Charlottesville. Gay Bailey (Jefferson) 804 293-8997.

April 12, Sunday. 2:00 p.m. Balls Bluff Hike. Near Leesburg. Reservation required. Marion B. Lobstein (Prince William) 703 536-7150.

April 12, Sunday. 2:00 p.m. Bluebell Walk. Bull Run Regional Park, Centreville. For more information or group tours at other times during Bluebell Week, April 12-17, call 703 631-0550 or 703 528-5406 two weeks in advance.

April 18, Saturday. 2:00 p.m. Buffalo Creek Field Trip. Lexington. Dot Bliss (Blue Ridge) 804 845-5665.

April 19, Sunday. 10:00 a.m. Great Falls Park Hike. Near Great Falls. Marion B. Lobstein (Prince William) 703 536-7150.

April 19, Sunday. 2:00 p.m. Riverbend Park Hike. Near Great Falls. Reservations required. Marion Lobstein (Prince William) 703 536-7150.

April 24-26, Friday through Sunday. Annual Wildflower Pilgrimage of Roanoke Area. Co-sponsored by Science Museum of Western Virginia. Call Amy Cooper (Science Museum) 703 342-5726 for brochure or Hugh Smith (Blue Ridge) 703 774-8392 for more information.

April 25, Saturday. Member's Gardens Tours. Edith Bradbury (Potowmack) 703 971-8878.

April 25, Saturday. Time TBA. Reddish Knob Field Trip. Near Bridgewater. Jacob Kagey (Shenandoah) 703 828-3297.

April 25 & 26, Saturday and Sunday. Member's Gardens Tours. Nancy Arrington (Prince William) 703 368-8431.

April 26, Sunday. 10:00 a.m. Blue Ridge Parkway Field Trip. Carpool from Charlottesville. Gay Bailey (Jefferson) 804 293-8997.

April 26, Sunday. 1:30 p.m. Fraser Preserve Field Trip. Near Great Falls. David Askegaard, leader. Nancy Luria (Potowmack) 703 528-3612.

April 26, Sunday. 2:00 p.m. Trillium at Thunder Ridge Walk. Blue Ridge Parkway. Dot Bliss (Blue Ridge) 804 845-5665.

April 26 through May 10. Trillium Display and other outstanding wildflowers. G. Richard Thompson WMA. No organized hike but information packet with directions and checklists available from Jocelyn Arundel-Sladen (Piedmont) 703 349-3248.

May 2, Saturday. Time TBA. Wildflower Walk at Vickie & John Keenum's. Near Roanoke. Hugh Smith (Blue Ridge) 703 774-8392.

May 2, Saturday. 2:00 p.m. Guided Tour of Wildlife/Native Plant Garden at Norfolk Botanical Gardens. Greg Lonergan (South Hampton Roads) 804 721-5050.

May 3, Sunday. 1:00 p.m. High Top Mountain Hike. Shenandoah National Park. Carpool from Charlottesville. Gay Bailey 804 293-8997.

May 9, Saturday. 10:00 a.m. to 2:00 p.m. Wildflower Plant Sale. Virginia Western Community College Arboretum, Roanoke. Rich Crites (Blue Ridge) 703 774-4518.

May 9, Saturday. 8:30 a.m. Blue Mountain Field Trip. G. Richard Thompson WMA. Carpool from Bridgewater. Jacob Kagey (Shenandoah) 703 828-3297.

May 9, Saturday. 9:00 a.m. to noon. Wildflower Plant Sale. Bethel Lutheran Church, Manassas. Nancy Vehrs (Prince William) 703 368-2898.

May 9 & 10, 10:00 a.m. to 3:00 p.m. Native Plant Sale by John Clayton Chapter and The Virginia Living Museum. The Virginia Living Museum, Newport News. Jane Showacre (John Clayton) 804 435-3912.

May 13, Wednesday. 7:30 p.m. Species Iris Presentation by Nick Schwartz. Branchlands Manor House, Charlottesville. Gay Bailey (Jefferson) 804 293-8997.

May 16, Saturday. 11:00 a.m. Plant and Seed Sale. Green Spring Farm Park, Fairfax County. Tiana Camfiord (Potowmack) 703 830-3783.

May 9 & 10, 10:00 a.m. to 3:00 p.m. Native Plant Sale by John Clayton Chapter and The Virginia Living Museum. The Virginia Living Museum, Newport News. Jane Showacre (John Clayton) 804 435-3912.

May 16 & 17, Wintergreen Wildflower Symposium including Jefferson Chapter Plant Sale. Gay Bailey (Jefferson) 804 293-8997.

May 17, Sunday. 10:00 a.m. Great Falls Park Hike. Near Great Falls. Marion B. Lobstein (Prince William) 703 536-7150.

May 23, Saturday. 10:00 a.m. Propagation Workshop at Green Spring Farm Park, Fairfax Co. Tiana Camfiord (Potowmack) 703 830-3783.



Virginia Wildflower of the Year 1992

Butterfly weed, *Asclepias tuberosa*, our Virginia Wildflower of the Year 1992, has earned many common names, indicating both its common occurrence and wide distribution. Found in almost every county in Virginia, butterfly weed to one person may be pleurisy root or orange milkweed to another, or even orange root, white root, or chigger weed. Growing in pastures, along roadsides, in abandoned fields, and power-line or railroad rights-of-way, its orange splashes of color brighten the landscape in mid- to late summer.

The name *Asclepias* honors Aesculapius, the Greek god of medicine. The word *tuberosa* means bearing tubers and refers to the species' habit of growing shoots upward from horizontal, underground stems. What looks like a patch of several plants may be one plant with several branches connected by underground tubers.

Butterfly weed grows erect or ascending stems from 15 to 30 inches high, lined with fuzzy, lance-shaped leaves. Most milkweeds have opposite leaves, but butterfly weed foliage is arranged alternately up the stem. Unlike other milkweeds in our area, butterfly weed stems do not have milky juice. A young plant may produce just one umbel of flowers at the top of a stem, but often the stem branches near the top to produce broad, flat clusters of umbels of butter-yellow to deep red-orange flowers, each about one-half inch long. In the fall, these flower clusters are replaced by one or two, narrow, three-inch-long seedpods standing upright on stems that are bent downward, as if bearing a heavy weight. Inside the pods, however, are light, wafer-thin seeds, each with a gossamer parachute of milkweed "fluff" which aids dispersal by the wind.

Now that you and butterfly weed have been properly introduced, look forward to becoming acquainted with the plant's biology, including unique pollination mechanisms, medicinal uses, and its progression to horticultural respectability, from being grubbed out of pastures as poisonous to cattle to being a favorite wildflower for gardens. A brochure highlighting this plant will arrive with your May issue of the *Bulletin*.

Catharine Tucker
Botany Chair

For Wildflower Gardeners

Nursery List Available

VNPS's updated list "Mail Order Retail Sources of Native Plants" is now available. A total of 27 nurseries offering seeds, perennials, ferns, grasses, carnivorous and woody plants are listed. Some new nurseries have been added and a few distant ones were deleted.

Several non-mail order nurseries were removed from the list and are featured in a new list that promotes Virginia and surrounding area nurseries offering propagated native plants. This list is available for gardeners who like to shop locally and for anyone who enjoys visiting nurseries while traveling in the state. Check with your local chapter for copies of both lists or write to VNPS, P.O. Box 844, Annandale, VA 22003.

Propagated Orchid Sources

I've recently found two sources of propagated lady's-slipper orchids. Roslyn Nursery (211 Burrs Lane, Dix Hills, NY 11746; catalog \$3) offers yellow lady's-slippers, *Cypripedium calceolus*, propagated by division at \$9 each. Spangle Creek Labs (West 2802 Depot Springs Road, Spangle, WA 99031; info \$2) offers laboratory-grown seedlings of yellow lady's-slipper, *C. calceolus*, and showy lady's-slipper, *C. reginae*, at \$5 each.

Spangle Creek sounds like a source for professional growers or very experienced and well equipped (greenhouse, grow lights, etc.) home gardeners because the literature indicates that the small, fragile seedlings require very precise growing conditions. I would appreciate hearing from anyone who tries the laboratory-grown seedlings.

Coreopsis Chosen

The Perennial Plant Association has chosen *Coreopsis verticillata* 'Moonbeam' as its 1992 Plant of the Year. This is the third consecutive year the association has chosen a native plant. The 1991 selection was *Heuchera* 'Palace Purple'; 1990's was *Phlox stolonifera*.

Although *Coreopsis verticillata* 'Moonbeam' appears delicate with its finely cut foliage and pale yellow flowers, this native species is hardy and easy to grow. It blooms from early summer into fall and is an excellent perennial for mass planting or as part of a flower border.

Nancy Arrington
Horticulture Coordinator

New Site Added to VNPS Registry

A small marsh in a picturesque valley in Augusta County has joined the G. Richard Thompson Wildlife Management Area's trillium slopes as the second VNPS registry site. A wetland fed by artesian springs and waters from the surrounding hills, the newly registered area is underlain with a substrate of clay over limestone bedrock. It includes both marshland and calcareous fen with sedges and other plants indicative of a wetland.

Among the several rare plant species known to occur in this marsh are buckbean, *Menyanthes trifoliata*, and queen-of-the-prairie, *Filipendula rubra*. A member of the gentian family, buckbean, is a smooth perennial herb arising from a creeping rootstock that sends up several leaves with three oblong leaflets on a long petiole. Clusters of white to pinkish flowers, with the upper surfaces of the petals bearded, are produced in an elongated cluster or raceme from April to June.



Buckbean
Menyanthes trifoliata

Buckbean has been found in only one other county in Virginia, Madison. Although this plant is considered globally secure, as it occurs in shallow water and bogs from Alaska to Newfoundland and south to Virginia and West Virginia, it is so rare in Virginia that the Virginia Natural Heritage Program recommends that it be listed as endangered in this state.

Queen-of-the-prairie, which can grow up to eight feet tall, is a perennial member of the rose family native to meadows and prairies from Pennsylvania to Michigan and southward. It is often planted as an ornamental and has frequently escaped from gardens in the north and east.

Many deep pink flowers are produced in large branching clusters in summer. The lower leaves are large and divided into several segments.

Queen-of-the-prairie has been recorded in five counties in the western half of Virginia. This species is also apparently secure world-wide but is rare in Virginia. The Virginia Natural Heritage Program recommends that it be listed with the rating of "Special Concern."

In addition to these two rare species, several disjunct northern species occur at the new registry site including pussy willow, *Salix discolor*, swamp lousewort, *Pedicularis lanceolata*, and four-flowered loosestrife, *Lysimachia quadriflora*. During the last glaciation, these plants may have been driven south and found refuge in the wetlands.

Although pussy willow has been reported as occurring in this bog, it is not included in the *Atlas of the Virginia Flora*. This large shrub or small tree is found in swamps and damp thickets from Labrador to Alaska and southward to Maryland and Delaware. It is also known from a mountain glade in West Virginia. Since several closely allied willow species are frequently cultivated, this population may be an escapee or it may be a natural occurrence. Its status is worthy of careful research.

Although not classed as rare or threatened, swamp or lance-leaved lousewort is of a generally northern distribution and is infrequently encountered in Virginia, being known in only fifteen western counties of the state. Four-flowered loosestrife is another rare species in Virginia, known from only three counties. It also has been recommended for the Virginia status of "Special Concern."

With further research other interesting, even rare plants, may be documented. With the continual loss of bogs and marshes to drainage, construction and other human activities, this wetland which harbors uncommon Virginia species is especially significant.

The property owner was enthusiastic about registering the site and is aware of the importance of maintaining this exceptional ecosystem. A registry plaque and framed photograph will be awarded to the site's owner later this spring.

Our thanks to Shenandoah Chapter for the diligent efforts that made this registry possible, especially chapter members Doris True and Jacob Kagey for their time-consuming and thorough research in gathering and recording the needed information.

Dorothy C. Bliss
Registry Chair

Coming Events

VNPS 1992 Winter Workshop - Wildflower Photography

A photography workshop will be held for VNPS members and the interested public, Saturday, March 21, 9:30 a.m. to 2:00 p.m., at the Gottwald Science Center, University of Richmond. Three experienced photographers, VNPS members Kent Minichiello, Ted Scott and Hal Horwitz will discuss and demonstrate the techniques they use to produce successful pictures. Get your camera ready and register for this free workshop by calling Cris Fleming 301 657-9289.

Jim Wilson Lectures

On Saturday, March 28, Blue Ridge Wildflower Society will co-sponsor a free, day-long, lecture series on gardening. Among the talks scheduled by TV's "Victory Garden" host Jim Wilson is "Landscaping with Wildflowers." This event will be held at Virginia Western Community College in Roanoke. For more information, call Hugh Smith 703 774-8392.

Wintergreen Symposium

This year's weekend of plant workshops and hikes at Wintergreen Resort will be held May 15-17. Jefferson Chapter will hold its plant sale during the weekend and several VNPS members will participate as instructors and hike leaders. For more information, contact Wildflower Symposium, Wintergreen, VA 22958; 804 325-2200.

Botany at Blandy

Marion Blois Lobstein, Botany Chair of VNPS Potowmack and Prince William chapters, will teach Field Botany, Monday through Thursday, June 15 through July 2, at Blandy Experimental Farm. Classification, identification and evolution of flowering plants will be covered in lectures and laboratories. Field work will be emphasized. College credit is available for the course. Call Blandy Farm 703 837-1758 for information and registration details.

VNPS 10th Annual Meeting

The VNPS 1992 Annual Meeting will be hosted by Blue Ridge Wildflower Society, September 11-13 in Roanoke. The meeting, which marks the 10th anniversary of our Society's organization, is shaping up as a very special celebration. Mark your calendar now and plan to attend.

Landscaping Conferences

These two events are limited to about 300 persons each and always fill up early. Make your plans soon.

The second annual "Native Plants in the Landscape Conference" will be held June 25-27 in Millersville, PA. This symposium, modeled after the popular Cullowhee conference, is closer to home for some Virginians. For an information brochure, contact FM Mooberry, Conference Director, 106 Spottswood Lane, Kennett Square, PA 19348; 214 444-5495.

The ninth annual "Landscaping with Native Plants Conference" at Cullowhee, NC is scheduled for July 23-25. For an information brochure, contact Sue DeBord, Office of Continuing Education, Western Carolina University, Cullowhee, NC 28732; 704 227-7397.

Summer Trips Bruce Peninsula

VNPS Conservation Chair Ted Scott and fellow VNPS member Doug Coleman, naturalist at Wintergreen Resort, will lead a trip to the botanically rich Bruce Peninsula, Ontario, Canada, June 14-21. Participants can expect to see up to 300 plant species in many different habitats. This trip is limited to 15 people. The cost of \$400 covers everything except travel and personal expenses, and includes a donation to VNPS. For reservations or more information, call Ted at 703 672-3814.

Mt. Cuba

Potowmack and Prince William chapter members are planning a trip to Mt. Cuba Center for the Study of Piedmont Flora near Greenville, Delaware, Friday, May 1. The guided tour is free and limited to 15 people. Participants have the option of staying over for a tour of area gardens on Saturday. Call Tiana Camfiord, 703 830-3783, or Nancy Arrington, 703 368-8431, for more information.

Colorado Wildflowers

VNPS Education Chair Cris Fleming will lead a 10-day excursion to the central Rocky Mountains, June 27-July 5. Plans include visits to mountain meadows and the alpine zone to view native plants. The trip is sponsored by the Audubon Naturalist Society. Cost of \$950 for ANS members includes double room and local travel. VNPS members should inquire about ANS rates. For more information, call 301 652-5964.

Registry Challenge

(Continued from page 1)

I toss this challenge to you. Let us make 1992 a banner year for the Registry Program with at least one site registered in each chapter area. Get in touch with your chapter registrar if you have suggestions for registry sites. The chapter registrars are

Blue Ridge	Paul James
Jefferson	Ann Regn
John Clayton	Gale Roberts
Pocahontas	Robert Wright
Potowmack	Mary Pockman and Jane Collins
Prince William	Elaine Haug
Shenandoah	Jacob Kagey
South Hampton Roads	Greg Lonergan

Dorothy C. Bliss
Registry Chair

Rebecca Bray of South Hampton Roads Chapter has agreed to serve on the VNPS Registry Committee. She has taught at Old Dominion University and serves as volunteer curator of the ODU Herbarium. Bray joins Jocelyn Arundel-Sladen and Dorothy C. Bliss as the third Society representative on the Committee. Also serving on the Committee are VNPS member Larry Smith of the Division of Natural Heritage and Steve Hobbs of The Virginia Chapter of The Nature Conservancy. - Ed.

World-Wide Society?

Recently, I counted the states in which the VNPS had members. I was surprised by the results! Besides our faithful member in Ireland, the Society can boast of members in 19 states and the District of Columbia. In addition to Virginia and Maryland, there are members in Delaware, Florida, Illinois, Kentucky, Michigan, Minnesota, Montana, North Carolina, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, South Carolina, Tennessee, Wisconsin and West Virginia. The *Bulletin* goes to government and volunteer organizations in several more states and Canada.

The message of VNPS is relevant all over our country and, indeed, throughout the world. Regardless of where they live, if you have friends or relatives who might be interested in joining the VNPS, I can send them membership information and a copy of a recent *Bulletin*. Send requests to: VNPS Membership, P.O. Box 844, Annandale, VA 22003. Meanwhile, many thanks to those who recently renewed their memberships.

Phoebe White
Membership Chair

Invasive Exotics

(Continued from page 1)

Currently, this is where the efforts of the study group are being directed. We plan on a wide distribution of the fact sheets, including distribution to each organization represented at the meeting, most of which will help in the distribution. We will meet again with representatives from the organizations present on January 10 when sufficient time has passed to evaluate this part of the project.

The discussion at the meeting naturally started with common invasive plants such as kudzu, *Pueraria lobata*, multiflora rose, *Rosa multiflora*, and Japanese honeysuckle, *Lonicera japonica*. Other species like tree of heaven, *Ailanthus altissima*, reed grass, *Phragmites australis*, and the purple loosestrifes, *Lythrum salicaria* and *L. virgatum*, may not be quite as well known, but they form a second group that is currently moving rapidly across Virginia. Unfortunately, there are a number of other plants which promise to do the same if they behave in Virginia the way they have in other states to the north and south.

One might ask, "Are we sensationalizing the situation?" The VNPS/Natural Heritage study group doesn't think so because we are making every effort to support our position by careful examination of the facts available.

Birds Spread Plants

Ignorance is one of the big elements leading to the importation of potentially invasive exotics today. Some of these plants are imported for horticultural purposes without allowing enough time to determine how they grow under our growing conditions. Porcelain berry vine, *Ampelopsis brevipedunculata*, is a good example of a plant that in the last year has been recommended as a garden vine in a popular gardening column in *The New York Times* and again on the front page of the July 1991 *Newsletter* of the American Association of Botanical Gardens and Arboreta, where it is reported to be promoted by the Chicago Botanic Garden and in several new garden catalogs. The Eastern Native Plant Alliance reports, "Introduced as an ornamental, [it is a] most serious pest in the woods at Wave Hill Preserve in New York. [It is] often seen draped in trees in parks near NYC; [a] perennial woody vine, seeds spread by birds."

There are other examples of invasive exotic plants innocently imported and recommended for horticultural purposes. Round-leaved or

Asiatic bittersweet, *Celastrus orbiculatus*, is very popular because of its vivid orange berries in the fall, yet it will cover trees in the same manner as kudzu, albeit requiring more time. Thus, it would appear at times that some of the "experts" are leading us down the garden path. We see education as our toughest job as we attempt to bring some measure of control to these foreign plants which take over the habitats they like, choking out native plants in the process.

One observation I would make from my brief study of the subject is that one should be very cautious about planting any exotic shrub or vine with numerous berries that the birds like. Another threatening newcomer is the mile-a-minute-weed, *Polygonum perfoliatum*, an annual vine described in *Organic Gardening*, January 1992, as "a blue-berried marauder that grows at the dizzying rate of up to one-half-foot per day and has been smothering plants and trees all over [southeastern] Pennsylvania." It has moved down the Sesquahanna River to the upper end of the Chesapeake Bay, spread by birds.



Japanese honeysuckle
Lonicera japonica

In addition to the vines mentioned above, Japanese honeysuckle, most of the exotic bush honeysuckles, multiflora rose, and Autumn olive, *Elaeagnus umbellata*, are popular bird foods, the latter being one of the most popular since it was introduced in the early 1960s. In some locations where Autumn olive was planted thirty years ago, it has taken over in the same style as multiflora rose, which was imported on a large scale almost sixty years ago. Wildlife populations depended on native plants before these exotic species were

here, so if we need wildlife food, it is native species we should be planting.

Industry Obstacles

Plants as popular as some of the above also raise another problem when we think in terms of control. Bush honeysuckles, Autumn olive, ailanthus, and purple loosestrife are grown and displayed in nurseries and garden centers because people want to buy them, usually unaware of the nightmare they will represent at some future date. Because people buy them, nurseries grow these plants and, thereby, make a considerable investment in them. To suddenly ban the sale of these plants turns a horticultural problem into an economic problem by, in effect, taking money out of the pockets of the nurseryman.

Thus, the decisions of what to do about plants that tend to seize the landscape are not going to be easy ones. One might hope that, when the facts are marshalled and presented in a reasonable way, growers would recognize the wisdom of reducing and even eliminating their stocks of invasive species. When I talked about purple loosestrife, which has taken over the wetlands to our north and is rapidly moving into Virginia, to one amicable nurseryman, his reply was, "That's an awful good seller, Ted." That response points directly to the difficult education effort facing our group in our effort to control even some of the most aggressive exotics.

In addition to the plants named above, there are a few others that stand near the head of the list of plants appearing to be aggressive. They are listed below. A few of the plants, above and below, have already been declared "noxious weeds" under Virginia's Noxious Weed Laws. These are marked with an asterisk. This is an incomplete listing and should be considered as simply the ones in the upper portion of our study list. We are not yet in a position to make any firm recommendations relative to any of them. However, as we continue to collect information on these plants and others, we are confident that the facts on some will demand some kind of control.

Additional Plants Under Study:

Garlic mustard, *Alliaria petiolata*
Thistles, *Carduus* spp* and *Cirsium* spp
A dune sedge, *Carex kobomugi*
Meadow fescue, *Festuca elatior*
Tall fescue, *Festuca arundinacea*
Hydrilla, *Hydrilla verticillata*
Johnson grass*, *Sorghum halepense*

Ted Scott
Conservation Chair

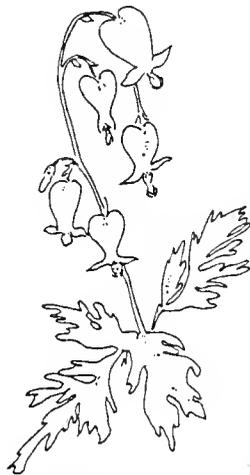
Ecological Factors Affecting Spring Wildflower Development and Flowering

This time of year wildflower enthusiasts are waiting for the exciting burst of spring wildflower activity in the deciduous woods. What are some of the ecological factors that affect the development and flowering of this special group of early emerging plants?

In early spring, woodland wildflowers have a number of environmental challenges with which to cope. The temperature of both air and bare ground is below freezing much of January and February. However, leaf litter and snow on the forest floor can maintain a ground temperature of 34 degrees F even if the air temperature is as cold as 10 degrees. Some species such as *Erythronium* (trout lily) and *Dicentra* (Dutchman's breeches and squirrel corn) will not start growing unless exposed to a minimum cold period. This prevents their initiation of growth in fall or early winter after a warm spell. Other species such as *Claytonia* (spring beauty) do not require such cold exposure and may begin growing in autumn.

The role of temperature in initiating growth in early spring is a complex interaction of soil and air temperatures. Soil temperature is the more critical factor for initiating shoot growth (by stimulating rhizome development), while air temperature is more critical in controlling vegetative growth and flowering. Soil temperatures begin to rise quickly in early spring as the snow melts. A temperature rise to 49-50 degrees F can take place in only three days after snowmelt. Soil warming may not be as dramatic if there is no snow cover, but it also may be significant. Air temperature in early spring may vary in one day from 32 to 77 degrees F. Most

insect pollinators do not become active until temperatures reach 55 degrees. Bumblebees are an exception, becoming active at 41 degrees.



Bleeding heart
Dicentra eximia

The overhead tree canopy begins developing in mid-April and is completed by early May. In March, 55 percent of available light reaches the forest floor, by mid-April it is 32 percent, and it drops to 10 percent by early May. The filling in of the canopy not only affects the light intensity that reaches the forest floor but also regulates the amount of moisture that reaches the ground. Moisture availability also affects the development of spring wildflowers and their seedlings.

In addition to average soil and air temperature, microclimate factors such as precipitation, soil moisture, relative humidity, evaporation, wind, orientation of slopes, altitude, soil temperature at various depths, and nutrient variation play a role in controlling shoot development and flowering. For

example, the threshold temperature or summation of air temperature is 40 degrees F for spring beauty and wild bleeding heart, but is 50 degrees for Dutchman's breeches and is slightly higher for squirrel corn. In the same general area for the same species, there can be a two to three day delay of development on north facing slopes compared to south facing ones.

It is during the narrow time window from March or early April until early May that a balance must be accomplished by these species -- enough warmth to begin and continue above ground development and enough light and moisture to sustain photosynthetic activity so that energy will be locked in underground storage structures for the next year's development. Enough warmth for insect pollinators to be active is also essential.

The ecological factors affecting spring wildflower development and flowering are complex but interesting to consider. They are an important part of the fascinating life cycles of these plants.

Marion Blois Lobstein
Botany Chair

Prince William and Potowmack Chapters

(Adapted from an article of the same name in *Wild News*, Prince William Wildflower Society's newsletter, Jan. - Feb., 1991)

Please check the expiration date on your mailing label. Your timely membership renewal will be appreciated and will assure you of uninterrupted membership benefits.

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

VNPS Membership/Renewal Form

Name(s) _____

Address _____

Individual \$10 Senior (60 or over) \$5 Sustaining \$100
 Family \$15 Senior Family \$10 Life \$250
 Patron \$25 Student \$5 Corp. sponsor \$125
 Supporting \$50 Associate (group) \$25; delegate _____

To give a gift membership: Enclose dues, name and address.

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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Barbara Stewart, Artist

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The deadline for the next issue is April 10.

CHAPTER NEWS

Wildflowers on Scenic Byway

Wildflowers will bloom this spring and summer at the Georgetown Pike Roadside Wildflower Refuge in McLean thanks to the efforts of **Potowmack** chapter member Ed Mainland, and seeds and plants donated by chapter members, the Winkler Botanical Reserve, and the Virginia Department of Transportation. The refuge is intended to beautify a section of the pike, Virginia's first designated Scenic Byway, to cut down on VDOT's roadside mowing costs, and to provide a colorful mini-habitat of native plants beneficial to birds, butterflies and small wildlife. VDOT will maintain the area by mowing it once a year in early spring. Members of the McLean Citizen Association's Environmental Committee will remove unwanted plants as necessary.

Logo Chosen

Shenandoah chapter has adopted mountain fetterbush, *Pieris floribunda*, as its logo. The species was chosen because it is found in at least one location in each of the six counties the chapter represents and in both higher and lower elevations of the Shenandoah Valley, the northern extreme of this attractive heath's range.

Students Study Natives

Piedmont chapter continues to be involved in the environmental education programs at Fauquier County Schools' Outdoor Lab. Native plant, wildlife and habitat classes and field trips are offered to both youngsters and adults. Habitat plantings which are used in the classes are being established at the lab. Chapter members donated seeds, plants, materials, labor, ideas and time,

as members give classes and lead field trips. The VNPS slide program "From Beach to Blue Ridge" has been presented to school groups.

This year the focus for Piedmont chapter's activities and the theme of Fauquier County Schools' Environmental Awareness Week is hedgerows. The chapter will award a mini-grant to a school that presents a hedgerow project.

Members Fight Aliens

Members of **Pocahontas** chapter have accepted Conservation Chair Ted Scott's suggestion to rid a public area of invasive alien plants. They plan to clear kudzu from Point-of-Rocks Parks in Chesterfield County, site of a rare partridge pea, *Cassia fasciculata* var. *macrospora*.

Butterfly Weed Seed

Prince William chapter members are willing to share the bumper crop of butterfly weed seed collected from their wildflower gardens last year. To request seed, send a SASE to PWWS Butterfly Weed Seed, P.O. Box 83, Manassas, VA 22110.

DUES INCREASE IN JUNE

Recently, Society members received a letter concerning changes in VNPS membership categories and dues, which will become effective June 1, 1992. After serious study and consideration, the VNPS Board of Directors announces the following dues increases and changes in membership categories:

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

Logo Patches Available

The colorful, 3-inch, circular, sew-on, VNPS patches are again available. Order by sending a SASE and a check to VNPS for \$3.25 for each patch to Pat Baldwin, 430 Yale Drive, Hampton, VA 23666.

Help Wanted

VNPS needs to fill the following volunteer positions:

Legislative Coordinator;
Printing Production Coordinator;
Fund Raising Chair.

Currently, the Fund Raising Chair remains vacant on the Board of Directors. This position needs to be filled as do two new positions, Legislative Coordinator and Printing Production Coordinator, which are being developed to fill some of our needs.

By the time this *Bulletin* reaches you, the 1992 Virginia General Assembly will have ended. Were you familiar with the issues and satisfied with decisions recently made in Richmond which impact native plants? VNPS wants its members to be well informed and ready to communicate with lawmakers during the 1993 session. The Legislative Coordinator would speed our education about pertinent issues.

The Printing Production Coordinator would help with the production and printing arrangements of VNPS educational materials. Some of the projects which the coordinator would work on are Virginia Wildflower of the Year brochures and Invasive Exotics factsheets.

Call Nicky Staunton 703 368-9803 or Becky White, Nominating Committee Chair, 804 489-7067 if you are interested in any of these positions or if you know a member who might be.



Virginia Native Plant Society

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Vol. 11, No. 2

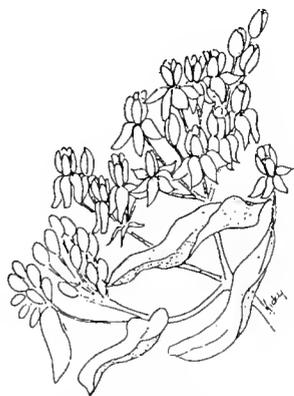


Bulletin

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

Governor's Proclamation

By a certificate of recognition, Governor Douglas Wilder has officially recognized the Virginia Native Plant Society's Virginia Wildflower Celebration 1992 in April and May. The Governor's signature on the certificate calls the significance of our Celebration to all citizens of the Commonwealth. The variety of Chapter sponsored events open to the public during these two months helps participants learn about Virginia's natural habitats and native plants.



1992 Virginia Wildflower of the Year Brochure

Look inside for the bonus in this issue of the *Bulletin* -- the third Virginia Wildflower of the Year brochure which features the beautiful butterfly weed, *Asclepias tuberosa*. Spend a minute learning about the botanical characteristics, habitat and range of this year's highlighted wildflower.

The brochure is intended to promote the VNPS and help spread information about native plants and their habitats to the public. Additional copies are available for distribution at chapter activities, libraries, schools, nature centers, museums, etc. To obtain more brochures, write to VNPS -- Virginia Wildflower of the Year, P.O. Box 844, Annadale, VA 22003.

VNPS Annual Meeting Weekend September 11-13, 1992 in Roanoke

It is none too soon to plan to attend the VNPS Annual Meeting weekend, September 11-13. Blue Ridge Wildflower Society will host the event which features excursions in the southwestern section of the Commonwealth. For remarkable diversity of flora and habitat, Virginia's Blue Ridge region cannot be matched. You can look forward to exploring special sites along the Blue Ridge Parkway and other unique locations in the Roanoke/Lynchburg area.

Early arrivals can attend a presentation Friday evening, September 11, on invasive exotic plants given by VNPS Registry Committee member Dorothy Bliss.

Saturday will be filled with field trips for viewing native plants in their distinctive habitats. Along the way, you will see breathtaking vistas along the Blue Ridge and perhaps take in a few attractions such as Mabry Mill. In the evening, enjoy the company of other native plant enthusiasts as we conduct the Society's annual business meeting, make bids in the gala auction, and savor a buffet dinner.

Following dinner, Gwynn Ramsey, Professor of Biology and Curator of the Herbarium at Lynchburg College, will speak on the flora of the James River Gorge Watershed. Ramsey, a noted storyteller, is sure to fascinate us with stories of his field explorations and may include a few folk tales from the Southern Appalachians.

Mark your calendar now so you will be with us to conduct our business meeting, but equally as important, to enjoy being together after a year of tending to native plant issues in our own regions. In addition to fascinating field trips, fine guest speakers, and other activities which Society members have enjoyed in the past, some special events are in the works to celebrate VNPS's Tenth Anniversary.

The particulars concerning accommodations, dinner and activities will be detailed in the next *Bulletin*, but reserve the dates now so you don't miss an extraordinary weekend of wildflowering.

Auction Donations Needed

What can you contribute to the fun and fund raising at the Silent Auction to be held at VNPS's 10th Annual Meeting? Something from your attic -- botanical prints or plant books you aren't using... Something from your garden or greenhouse -- seeds, starts, rooted cuttings, or divisions... Something you make -- photographs, prints, notecards, floral arrangements, needlework items... Almost anything with a nature theme is popular in the bidding at the auction. So look around now and set an item or two aside to add to the fun. If you have questions, call Hugh Smith 703 774-8392.

Nominations Still Being Accepted

The slate of candidates for the VNPS Board of Directors and next year's Nominating Committee, which will be voted on at the annual business meeting on September 12, is being developed by the Nominating Committee. Suggestions for nominations and nominees by petition must be received by the Committee by July 1, 1992. Direct questions, suggestions and petitions to Committee Chair Becky White at 1149 Larchmont Crescent, Norfolk, VA 23504; 804 489-7067.

Virginia Natural Areas Bond Referendum

On November 3, 1992, VNPS members will have an opportunity to effect the acquisition of natural areas and state parks in Virginia. But voting for the bond referendum is just part of our responsibility. Since we understand the importance of protecting natural heritages -- our land, in this instance, we need to share our understanding with fellow Virginians who have not given thought to the personal importance of the bond referendum. Think about these facts:

Out of 467 High Biological Diversity Value Sites, only 55 are protected;

Our state ranks 49th in the nation in percentage of total state funds spent on parks and recreation;

The Department of Conservation and Recreation through the Natural Heritage Program is authorized to conduct biological inventories for Virginia's rare natural features and to provide protection for them, yet no regular funding method exists for conservation of these habitats;

Park and natural area acquisitions create jobs and stimulate the economy; Approximately \$80 million per year is generated by day-use and overnight visitors to state parks, not including indirect benefits to local economies.

If you are willing to communicate this information in support of the bond referendum to other Virginians and want more detailed information, please send a self-addressed, stamped envelope to Nicky Staunton c/o VNPS.

GWNF Master Plan Review

Virginia's citizens recently had the opportunity to review the new management plan for the George Washington National Forest in Virginia. (A small portion of the forest is located in West Virginia.) Fifteen Alternative Plans were proposed; forest biologists recommend Alternative 8.

Alternative 8 presents a balanced management plan for botanists, recreational users including ATV proponents, the timber industry, and wildlife management interests. With recommended modifications, Alternative 8 is supported by VNPS. The Society requests changes to include more wilderness areas, less ATV traffic near threatened and endangered plants, more wildlife corridors, increased protection of the natural flora from exotic invasive plants and insects, and wider buffer zones near rivers.

April 17th was the deadline for review comments, but it will not be the end of this issue. We would be wise to prepare for further considerations of this management plan. For additional information, please contact Nicky Staunton c/o VNPS.

FROM THE PRESIDENT

VIRGINIA ABLOOM!

We Virginians have glorious fields of yellow rocket blooming. Folks visiting our state, as well as residents, ask, "What is that beautiful field of flowers?" Some say, "Buttercups." Not so. This mustard relative is a naturalized wildflower that gives spring landscapes broad swathes of brilliant yellow.

Our spring woodlands paint a different picture. Participants in spring pilgrimages are visiting subtly colored areas of palest pink spring beauties, of quiet golden trout lilies, of sky-blue Virginia bluebells. If you have the opportunity to travel across Virginia, you may follow the blooming season from the southeast corner westward through the piedmont and then to the mountains. Throughout the Commonwealth, VNPS Chapters are getting out into the field. A phone call will let you know when you might join them.

Meanwhile, winter debris is being removed from gardens to reveal the shy, early ginger leaves and fern fronds. Welcome little friends! Chapter sponsored garden tours show how wonderfully well native species live with us in our habitats.

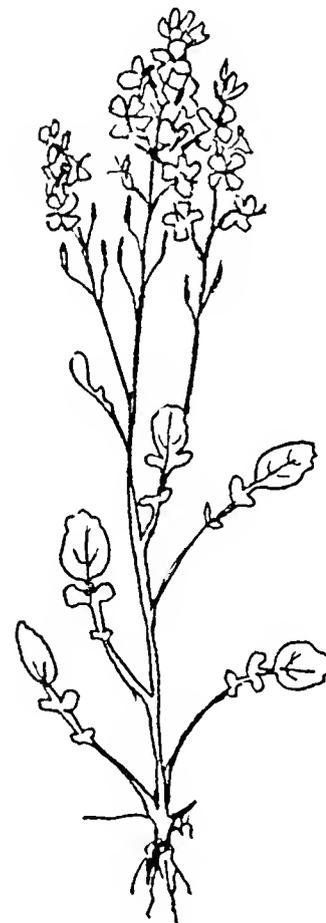
Not only that, but seeds collected last fall are sown and are being tended carefully in preparation for chapter plant sales. Check the Virginia Wildflower Celebration Calendar in the March *Bulletin*. It contains quite a list of state-wide activities you may participate in this month.

The proclamation of Virginia Wildflower Celebration 1992 by Governor Douglas Wilder for the months of April and May is formal recognition of the importance of wildflowers and other native plants to Virginians. Visitors from around the world come to pay homage to the unique natural areas in Virginia... we do a good bit of it ourselves, don't we?

VNPS members understand the worth of conserving wild flowers and wild places. We must continue the work in the field... introducing our flora to others, rescuing rare plants when necessary, protecting areas by our registry program, researching the control of invasive exotics, planning landscapes for native plants... And in our actions as citizens... meeting our elected representatives and our representatives on the Virginia Department of Agriculture and Consumer Services Board, those in the Department of Game and Inland Fisheries, and our foresters in the state and national forests... all those people who are charged to manage the state's natural areas.

There are some exciting ideas brewing for future programs which our Society is anxious to begin. Come. Work along with us. You might be the person with the exact skills to direct one of our new programs. Decide now to say, "Yes!" It isn't "work" when it's for something you cherish.

Nicky Staunton



Director's Position Filled

The VNPS Board of Directors is pleased to announce that Holly Cruser will fill the vacant Director-at-Large position for the rest of the term. Cruser helped establish South Hampton Roads Chapter and is currently membership chair of the Chapter. She made many of the arrangements for the 1991 VNPS Annual Meeting. An avid gardener, Cruser shares her horticultural knowledge and talents as a Virginia Master Gardener and as a landscape designer specializing in planning small landscapes which utilize wildflowers and woody native plants.

Thank You

While I was attending to my new daughter, two Nancy's were making sure your March *Bulletin* arrived on schedule. Nancy Arrington collected and edited material, while Nancy Vehrs compiled chapter events for the Wildflower Celebration calendar. I thank both of them for their diligence.

My thanks also to the Society for their gift of a mountain laurel shrub to commemorate the arrival of my second child -- a very fitting gift as she is named Laurel.

Virginia Nathan
Editor, VNPS *Bulletin*

Guidebooks for Identifying Virginia's Wild Plants

"What's the name of that plant?" is perhaps the most commonly asked question by both amateur and professional botanists. Although the answer to this question can be found in many readily-available books, the array of manuals can be daunting. Here we would like to review the standard references for the vascular plants of Virginia. It should be pointed out, however, that there are many more pertinent books than can be mentioned here.

Perhaps the best-known books for identifying wild plants are the numerous "picture guides" such as *A Field Guide to Wildflowers* by R. T. Peterson and M. McKenny (1968). These books provide color drawings or photographs of the most widely encountered species, which are often arranged by flower color. A personal favorite among these non-technical works is *Newcomb's Wildflower Guide* by L. Newcomb (1977). The advantage of this book is that it includes a key to the species based on easily-seen features of the plants: number of flower parts, growth form, and leaf shape.

For more complete coverage and more accurate identification, one must turn to technical manuals. For the northeastern US (including Virginia), the two most widely-used works are the 8th edition of *Gray's Manual of Botany* (1950), which was edited by M. L. Fernald, and the 2nd edition of the *Manual of Vascular Plants of the Northeastern United States and Adjacent Canada* by H. A. Gleason and A. Cronquist (1991). Both works provide technical keys to the thousands of plant species within their range, but reflect the authors' distinctly different perspectives on plant taxonomy. The older work includes some illustrations. The newer one is substantially slimmer and incorporates information that was unavailable to Fernald forty years ago. It is also the official VNPS standard for plant names.

At present, there is no manual specifically for the identification of Virginia plants, but manuals for the adjacent states are available. The *Manual of the Vascular Flora of the Carolinas* by A. E. Radford, H. A. Ahles and C. R. Bell (1968) is especially useful for identifying plants east of the Shenandoah Valley; the 2nd edition of the *Flora of West Virginia* by P. D. Strausbaugh and E. L. Core (1977) is appropriate for the mountainous portion of the state; and the *Woody Plants of Maryland* (1972) and the *Herbaceous Plants of Maryland* (1984) by R. G. and

R. L. Brown are useful in the northern portions of Virginia. All of these are illustrated and indicate the counties or regions where each species is found.

While a key to Virginia plants has yet to be written, the *Atlas of the Virginia Flora* by A. M. Harvill and others is soon to be released in its 3rd edition. This work consists of a map of Virginia that shows the counties from which each of over 2700 species has been collected. This can be extremely useful in evaluating a tentative identification. However, a few species recognized in the *Atlas of the Virginia Flora* do not match those in any of the works mentioned above.

A *Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland* by J. T. Kartez and R. Kartez (1980, but the 2nd edition is due soon) presents the currently accepted scientific name for each species within its range and lists the synonyms that have been used over time in various works. Because this is the only current work covering the entire US, it is the standard reference used by the network of Natural Heritage Programs across the US.

These books, along with the Natural Heritage rare plant list, make a useful library for Virginia botanists. Because each work focusses on different species and characteristics, it may be necessary to refer to several of these to positively identify a plant. While it would be too awkward to carry all of these books in the field, they can be kept in the car, readily available for reference.

Chris Clampitt

Virginia Division of Natural Heritage

Cris Fleming

VNPS Education Chair



Resources Available

Two Revised Editions

The second edition of the *Manual of Vascular Plants of Northeastern United States and Adjacent Canada* by Henry Gleason and Arthur Cronquist is available for \$74.60 (includes postage) from New York Botanical Garden, Scientific Publications Dept., Bronx, NY 10458-5126. This book (which is described in the previous article) is the official VNPS standard for plant names.

A revised edition of *The Complete Trees of North America* by Thomas S. Elias (first edition 1980) has been released under the title *Field Guide to North American Trees*. This 948 page book examines all our native trees and over 100 introduced species, and features over 2000 labeled illustrations. It is available for \$32.95 from Stackpole Press, P.O. Box 1831, Harrisburg, PA 17105.

Wetlands Preservation Handbook

A guidebook designed to help people safeguard wetlands in their communities has been developed by the National Wildlife Federation. The publication entitled *A Citizens' Guide to Protecting Wetlands* outlines federal, state and local laws affecting wetlands and explains how to comment on dredge and fill permit applications, how to participate in public hearings, and how to enlist the aid of technical experts, legislators, the media, and others in fighting wetlands destruction. To receive a copy of the booklet, send \$7 plus \$3.95 for postage and handling to National Wildlife Federation, 1400 16th St. NW, Washington, D.C. 20036. Request Item No. 79961.

Conservation Resource Book

The *1992 Plant Conservation Resource Book* is an updated publication which inventories over 500 professionals and offices involved in native plant conservation. It includes a summary of state plant conservation laws and contains government contacts at the resource level who can provide information about rare and endangered plants, permit procedures, and pertinent government programs. Also listed are state Heritage Programs, native plant societies, and national private organizations working on plant conservation. To order, send a check or money order for \$15 (includes postage) made out to the Center for Plant Conservation to: CPC, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166.

For Wildflower Gardeners

Gardening for Butterflies

Butterfly weed (*Asclepias tuberosa*), Virginia Wildflower of the Year 1992, is a nearly perfect butterfly plant. Butterflies are attracted to its warm orange flower clusters which provide flat landing surfaces for them. Abundant nectar is present in the small tubular flowers and the foliage is a larval food for monarchs.

Along with butterfly weed, other wildflowers are good nectar sources for the butterflies that appear in Virginia from early spring through the fall. Purple and lavender flowers that are butterfly favorites include New England aster (*Aster novae-angliae*), wild bergamot (*Monarda fistulosa*), blazing star (*Liatris* sp.), woodland phlox (*Phlox divaricata*), ironweed (*Vernonia noveboracensis*), Joe-pye weed (*Eupatorium* sp.), Stokes aster (*Stokesia laevis*), and blue mistflower (*Eupatorium coelestinum*).

Yellow flowering native plants appealing to butterflies include coreopsis (*Coreopsis* sp.), sunflowers (*Helianthus* sp.), Maryland golden aster (*Heterotheca mariana*), goldenrods (*Solidago* sp.), and black-eyed Susans (*Rudbeckia* sp.).

Red and pink nectar sources include purple coneflower (*Echinacea purpurea*), summer phlox (*P. paniculata*), swamp milkweed (*Asclepias incarnata*), and cardinal flower (*Lobelia cardinalis*). White native species that interest butterflies include boneset (*Eupatorium perfoliatum*) and white wood aster (*A. divaricatus*).

Native shrubs that provide nectar include azaleas (*Rhododendron* sp.), buttonbush (*Cephalanthus occidentalis*), sweet pepperbush (*Clethra alnifolia*), New Jersey tea (*Ceanothus americanus*), and mountain laurel (*Kalmia latifolia*).

In order to draw a variety of butterflies and keep them as permanent residents, the garden should also contain food for the caterpillars. Here are some common Virginia butterflies and their larval plants:

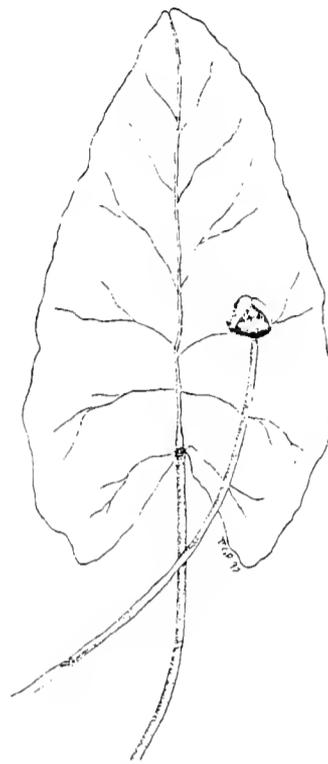
- painter lady - pussytoes (*Antennaria* sp.);
- spicebush swallowtail - spicebush (*Lindera benzoin*);
- spring azure - dogwood (*Cornus florida*);
- black swallowtail - Queen-Anne's lace (*Daucus carota*) and other parsley family members;
- tiger swallowtail - wild cherry (*Prunus* sp.), apple (*Malus* sp.), and tulip tree (*Liriodendron tulipifera*).

VIRGINIA'S RAREST PLANTS

Nuphar luteum subsp. *sagittifolium* Narrow-leaved yellow cow-lily

A number of Virginia's rarest plants are best sought by boat. The narrow-leaved yellow cow-lily (*Nuphar luteum* subsp. *sagittifolium*) is certainly among them. This member of the water-lily family, *Nymphaeaceae*, is known only from tidal mudflats and open water on a short stretch of the Chickahominy River. As with many tidewater species, the plant occurs towards the upper tidal reaches, where the water is slightly brackish to fresh. Not only is the narrow-leaved yellow cow-lily rare in Virginia, it is restricted to a small portion of the Atlantic seaboard, from Virginia south to northern South Carolina.

In most ways, *Nuphar luteum* subsp. *sagittifolium* is like the common yellow cow-lily (*Nuphar luteum* subsp. *macrophyllum*), except for its leaves, which are narrower, and for the lax habit of its leaves and flower stalks. However, specimens are often encountered which grade between the narrow-leaved, lax subspecies *sagittifolium* and the wider-leaved, stiffer *macrophyllum*. The gradational nature of *Nuphar* was recognized by E. O. Beal



Nuphar luteum
subsp. *sagittifolium*
Illustrated by Megan G. Rollins

who recognized only one full species of yellow cow-lily, *Nuphar luteum*, and divided the species into nine subspecies, *sagittifolium* and *macrophyllum* among them.

Several Virginia populations of *Nuphar luteum* subsp. *sagittifolium* are included in natural areas identified during the Department of Conservation and Recreation's (DCR) recently-completed Lower Peninsula Natural Areas Inventory. Currently, DCR staff are working with the local governments to better protect these natural areas by improving or augmenting local protection tools such as the ordinances enacted in response to

the Chesapeake Bay Act. The DCR staff is also working with local landowners to advise them of the significance of their lands and the ways that they can help protect the rare plants on and near them. The future for the narrow-leaved yellow cow-lily looks more promising because of these protection efforts and the concern of Virginians for water quality in the Chesapeake Bay.

Chris Ludwig
Virginia Division of Natural Heritage



Also keep these points in mind:

Avoid the use of pesticides; even natural ones will kill adults and larvae.

Locate the butterfly garden in a sunny, sheltered area. Butterflies are cold blooded and need the sun for warmth and orientation. Protection from wind allows them to fly freely.

Use large splashes of color that are easy to spot and remember that butterflies prefer flat blossoms or clusters of small tubular flowers.

Provide damp areas or shallow puddles for sipping water and stones for basking in the sunshine.

Learn to recognize butterfly caterpillars and accept their temporary destruction. Don't disturb their feeding areas because larvae will remain nearby to enter the chrysalis stage and will later emerge as adult butterflies.

Nancy Arrington
Horticulture Coordinator

USFWS Wetland Restoration Program

The U.S. Fish and Wildlife Service (USFWS) is looking for landowners interested in having shallow water wetlands restored on their properties. Their aim is to restore the water conditions of sites which were once wetlands in order to encourage the wetland plant and animal community. The Service will provide technical and financial support for restoration projects but, due to limited funding, sites being considered are currently limited to areas east of Interstate 95. Most sites selected for this purpose have tile drains or man-made ditches that will be plugged in order to reflood wetlands. An emphasis is being placed on land that lie within focal areas identified by the USFWS.

The wetland restoration program is a cooperative effort between the USFWS and Virginia Department of Game and Inland Fisheries. FMI contact: Bridgett Costanzo, Ecological Services, U.S. Fish and Wildlife Service, White Marsh, VA 23183; 804 693-6694.

Wetland Plants Available

Persons who want to diversify wetland properties on their own may want to peruse the catalog of The Salt and The Earth nursery -- its motto "stop shoreline erosion... plant a marsh." Native species for salt water wetlands and fresh water non-tidal wetlands are offered. Plants are wet-cultured and acclimated to salinity when necessary. To request a catalog, contact The Salt and The Earth, P.O. Box 51, Deltaville, VA 23043; 804 776-6324.

COMING EVENTS

Wildflower Weekend

Shenandoah National Park Wildflower Weekend - May 15, 16 & 17. Activities include guided walks and talks given by VNPS members. For more details, call Joy Stiles 703 999-2243.

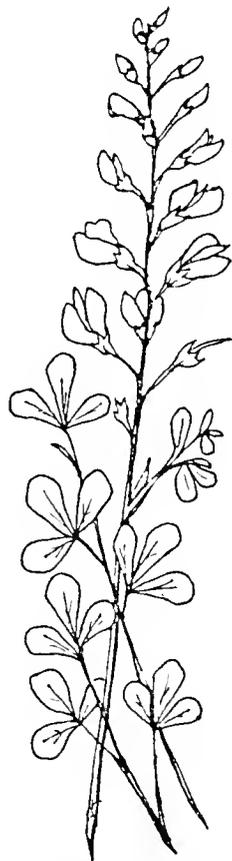
Chapter Sponsored Events

On Saturday, June 7, two chapters will be conducting field trips on the Blue Ridge Parkway. At 8:30 a.m., Society members can meet Shenandoah chapter members in Bridgewater to carpool for the Rhododendron/Mountain Laurel Field Trip. FMI: Jacob Kagey 703 828-3297.

Members wishing to view the *Rhododendrons*, *Kalmias* and other wildflowers further south on the Parkway can join Blue Ridge chapter at 8:30 a.m. at Peaks of Otter. Musical entertainment is planned for the lunch break. FMI: Hugh Smith 703 774-8392.

NCBG Offerings Native Plant Seeds

North Carolina Botanical Garden's Wildflower for 1992 is blue wild indigo, *Baptisia australis*. This easy-care, native perennial has clover-shaped, blue-green foliage, and attractive, violet-blue flowers. To receive a packet of seed and a descriptive brochure, send a business-size, stamped, self-addressed envelope to 1992 NC Wildflower of the Year, NCBG, UNC -- Chapel Hill, Box 3375, Totten Center, Chapel Hill, NC 27599.



Baptisia australis

Also available from NCBG is its 1992 Southeastern Native Plant Seed List which is a selection of showy and easy-to-grow native plants, consisting of woody plants, vines, perennials, carnivorous plants, and ferns. The list includes old favorites, as well as many new species. Botanical Garden Foundation members can receive eight free seed packets from those listed. Non-members must include \$1.00 per packet with their request. To receive a copy of the list, send a business-size, self-addressed, stamped envelope to NCBG Seed Distribution Program at the address above.

Potted Plants

For those travelling south, a wide selection of plants is on sale daily at the North Carolina Botanical Garden through October 31. Different selections of herbs and wildflowers are made available each month. Plants, most of which are in 4 - inch pots, cost \$3 each or two for \$5. Botanical Garden Foundation members receive a 10% discount.

Organizations Of Interest VTA

Greenways are land or water corridors, including trails and open spaces, that can be used by nature lovers to study plants and animals. They can connect places of interest in cities and suburbs, or may wander through rural areas. Greenways can interconnect with each other, creating a network of state-wide, regional or even national trails, serving as wildlife migration corridors.

The Virginia Trails Association (VTA) has begun a three year plan to work with the Virginia Division of Planning & Recreation Resources of the Virginia Department of Conservation and Recreation to encourage communities to create Greenway and Open Space Committees. To learn more about VTA and its plan, write: VTA, 13 W. Maple St., Alexandria, VA 22301.

VUFC

A new non-profit group, the Virginia Urban Forest Council (VUFC) has been organized to increase awareness of the value of trees and to improve forests in and around communities in the Commonwealth. Members of the Council include arborists, conservationists, foresters, nurserymen, developers, politicians and garden club members.

For Society members, VUFC represents an opportunity to promote the protection and establishment of native tree species. For more information about VUFC and its Arbor Fund, contact your local Virginia Department of Forestry office or write: VUFC, P.O. Box 3758, Charlottesville, VA 22900.

ACCF

The American Chestnut Cooperators' Foundation (ACCF) is a group of volunteers working to reestablish the American chestnut as a fruiting tree in its native habitat. Among the techniques used by ACCF is intercrossing surviving trees in blight stricken areas to try and concentrate blight resistance in their offspring. FMI: ACCF, 2667 Forest Service Road 708, Newport, VA 24128.

NAPPC

The North American Plant Preservation Council (NAPPC) is a non-profit organization modeled after the National Council for the Conservation of Plants and Gardens in Great Britain. Among its goals are the conservation and reintroduction of uncommon and endangered plants, and the establishment of private plant collections in various places throughout the continent. For details, write NAPPC, Route 5, Renick, WV 24966.

Finding Wildflowers in Virginia The Chesapeake Trail

Located south of West Point in New Kent County, the Chesapeake Nature Trail passes through a 565 acre forestry complex owned and managed by the Chesapeake Corporation. To help develop an appreciation for natural resources, the land containing the trail has been set aside for public use and enjoyment. The trail is 2 1/2 miles long, but it is divided into three sections so that you may return to the beginning without hiking the entire trail or retracing any of your footsteps. The sections vary in degree of difficulty, but none is very strenuous.

The trail has been designed to pass many interesting points and plant species, some marked with numbered stakes. An excellent free booklet, available at the kiosk at the trail head, describes each of the marked areas and gives other valuable information about the trail and plants found along it.

Although interesting even during the winter months, the trail bursts forth in the spring. Especially in May and June, the woodland floor abounds with many wildflower species. In late summer, another flush of wildflowers appears.



Butterfly on Partridgeberry

Near the trail's beginning are several large clumps of Christmas fern amidst masses of partridgeberry and running pine (*Lycopodium digitatum*) carpeting the forest floor. The trail then climbs gently, following a very old roadbed which served as part of a pre-Revolutionary network of roads connecting New Kent Courthouse and Williamsburg to Plum Point, where a ferry carried cargo and passengers to West Point. Due to erosion, this roadbed is considerably lower than it was 200 years ago, leaving high embankments on both sides. Along these embankments grow sensitive fern, netted-chain fern, ebony spleenwort, spring beauty, pennywort and a most unusual looking fern relative, adder's tongue (*Ophioglossum vulgatum* var.

pycnostichum). Many old grapevines wind up the trees and gracefully hang down.

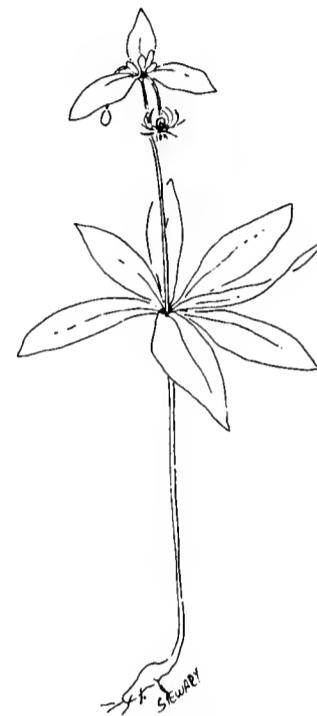
As the trail levels off, the dwarf rattlesnake plantain (*Goodyera repens*) can be found, along with a small colony of the lily-leaved, large twayblade (*Liparis lilifolia*). If it were not for the large leaves of this twayblade species, it would be most difficult to locate because its brownish-maroon blooms easily blend with the fallen leaves of the past winter. Soon, royal fern and yellow stargrass (*Hypoxis hirsuta*) come into view.

Passing spicebush and many common violets, the trail descends into cool, moist bottomlands where several crystal-clear streams meander. Along the edges of the streams are large masses of the light and dainty New York fern. Beyond this damp area, Virginia heartleaf (*Hexastylis virginica*), spotted wintergreen (*Chimaphila maculata*), princess pine (*Lycopodium obscurum*), bluets (*Houstonia caerulea*), large houstonia (*Houstonia purpurea*), solitary pussytoes, alumroot, broad beech fern (*Thelypteris hexagonoptera*), and several dense clusters of Indian pipe can be found. On the embankments, golden ragwort borders many of the streams.

Leaving the main trail, you descend into what I consider the most interesting portion of the trail. Here there are hillsides containing shell marl deposits, mixtures of clay with carbonates of calcium and magnesium. During the 1920s and 30s, farmers mined this marl for lime. A large number of species thrive in this area. Mayapple, skullcap, meadow rue, bear's paw (*Polymnia uvedalia*), columbine, black-eyed Susan, beardtongue, round-lobed hepatica, puttyroot (*Aplectrum hyemale*), and the somewhat rare fern known as walking fern (*Camptosorus rhizophyllus*) are abundant. In the fall, autumn coral root (*Corallorhiza odontorhiza*), purple cliffbrake (*Pellaea atropurpurea*), and the common grapefern can also be located.

As the trail slowly ascends to somewhat drier areas, large numbers of pink lady's slippers can easily be found. A few plants of ground cherry, with their large yellow bloom and dark brown throat, are present but locating them is somewhat difficult. Farther along are a few great blue lobelia and ruellia and several masses of a less common member of the wintergreen family, pipsissewa (*Chimaphila umbellata*). Near the trail's end, there are blue curls,

crane-fly orchid (*Tipularia discolor*), Indian cucumber root, speedwell, striped gentian (*Gentiana villosa*), slender ladies' tresses (*Spiranthes gracilis*), and a large open area where there must be literally thousands of spring beauty.



Indian cucumber root

For those interested in observing shrubs and trees, the Chesapeake Trail offers a variety of species. There are American and slippery elm, Virginia and loblolly pine, yellow poplar, American sycamore, hackberry, mockernut, black walnut, sweet gum, highbush blueberry, American beech, strawberry bush, red maple, flowering dogwood, eastern redbud, green ash, sweetbay, sassafras, wild azalea, Hercules club, American holly, and black, white, northern and southern red oak.

In addition to plants, there is a considerable variety of wildlife, including wild turkey, deer, squirrel, raccoon, opossum, skunk and lizards. A large number of bird species can be seen and heard, as well.

The Chesapeake Trail offers something for all nature enthusiasts. It is well-maintained and there is sufficient parking, but you will not find any picnic areas. I make a practice of visiting it several times a year.

The well-marked parking area for the Chesapeake Trail is located on VA Route 33, just north of its junction with VA Route 30. If approaching the area from I-64, use the West Point exit.

Patrick Baldwin
John Clayton Chapter

FROM NEAR AND FAR

Heritage Recognized

The Virginia Natural Heritage Program's work to document rare plant and animal species is featured in "Detectives of Diversity," *The Nature Conservancy*, January-February 1992. The work that VNPS members Chris Ludwig and Chris Clampitt do for the Heritage Program is explained. The article describes how Ludwig, who writes about Virginia's rarest plants for the *Bulletin*, located two rare plants, golden puccoon, *Lithospermum carolinensis*, and hoary scurfpea, *Psoralea canescens*, by "following in the footsteps of... Merritt Lyndon Fernald... a Harvard botanist who explored the flora of southwest Virginia between 1933 and 1946." Clampitt, VNPS First Vice-President, runs the mapping and image processing system, which converts biological and conservation data into maps showing the locations of rare and endangered species and ecosystems, for the program.

NC's New Look

North Carolina's Department of Transportation is beginning a roadside management program referred to as "brushy grassland habitats", reports Ken Moore in the *North Carolina Botanical Garden Newsletter*, March-April 1992. The new management practices will be used to encourage succession of plant communities exhibiting characteristics of the natural flora in various parts of the state. A reduction in the number of mowing cycles and areas being mowed will result in "shaggier" shoulders.

Moore encourages supporters of the new look and lower maintenance techniques to voice their support to the DOT, as criticism is already being expressed by some who prefer a closely mown appearance.

Persons interested in the original proposal recommending roadside successional habitats may receive a copy by sending \$3.50 to Roadside c/o NCBG, UNC-Chapel Hill, Box 3375, Totten Center, Chapel Hill, NC 27599.

Minnesota Passes Tough Wetlands Law

In 1991, the Minnesota state legislature passed one of the toughest wetlands protection laws in the country. Under the new regulations, landowners and developers must create, at their own cost, two acres of wetlands for every acre they destroy. The law also allocates \$15 million for wetland restorations on state easements and in urban areas, and grants permanent protection to 171,000 acres of peat bogs in northern Minnesota.

Long Lived Lichens

A small lichen colony on Ellesmere Island, in Canada's High Arctic, is one of the oldest living things on Earth states Fred Bruemmer in his article, "In Praise of the Lowly Lichen", *International Wildlife*, December 1991. The author makes this summation from the fact that this lichen grows at the rate of about two inches in diameter every thousand years.

Lichens are long-lived pioneer species which are very sensitive to atmospheric pollution; their decline can indicate a decrease in air quality in an area. Historically, "the food of the starving", one species is believed to be the proverbial "bread from heaven."

Colossal Fungi

If the lichen colony described above is among the oldest living things on Earth, a fungus discovered in Michigan is its contemporary, as well as one of the largest living organisms on the planet. *The New York Times*, April 5, 1992, carried a report of the discovery of this mostly invisible, aged giant in "The Fungus That Ate Michigan."

Through genetic testing, researchers have established that the DNA of a colony of *Armillaria bulbosa*, a common mold which forms button mushrooms on rotting wood, extends for 30 acres throughout the soil near Crystal Falls, MI. They estimate the fungi may have been born at the end of the last Ice Age. It weighs in the neighborhood of 100 tons and is still growing.

Mountain Dwarfs

Plant breeders have successfully produced and reproduced enough dwarf mountain laurels to begin offering them for sale. Leaf size is reduced by about half the size of the species, while flowers are about 75 percent of full sized *Kalmias*. Be on the look out for 'Tiddlywinks' -- light pink, 20" high and 30" wide; and 'Tinkerbell'-- deep pink, 30" high and 40" across.

The *Bulletin*

is published four times a year (March, May, August, November) by

Virginia Native Plant Society
P.O. Box 844, Annandale, VA 22003
(703) 368-9803

Nicky Staunton, President
Virginia Klara Nathan, 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 text file on a 5 1/4 inch floppy disk to the Editor at Rt. 3 Box 119-F, Floyd, VA 24091.

The deadline for the next issue is July 10.

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

VNPS Membership/Renewal Form

Name(s) _____

Address _____

Individual \$10 Senior (60 or over) \$5 Sustaining \$100

Family \$15 Senior Family \$10 Life \$250

Patron \$25 Student \$5 Corp. sponsor \$125

Supporting \$50 Associate (group) \$25; delegate _____

To give a gift membership: Enclose dues, name and address.

* Membership fees will increase on June 1, 1992.

* Forms received after May 31, 1992 will be charged new rates.

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

Photography Tips Shared at Winter Workshop

Wildflower Photography was the theme for the 1992 VNPS Winter Workshop, held on Saturday, March 21, at the University of Richmond. This popular subject drew over 70 people to hear three fine photographers discuss their methods and techniques for capturing images of our native flora.

Kent Minichiello, of Potowmack Chapter, opened the session with a discussion and visual demonstration of "Approaches to Nature Photography." Kent made the point that the photographer should think first of his purpose and then take his pictures. There are other goals besides producing a beautiful image. If the purpose is to document the plants of a particular area, then photographs of the total habitat, the near habitat, the entire plant, the leaves, the flowers, and even the fruit are needed. If the purpose is to develop a slide show about a particular area, the photographer should remember to take slides of the landscape, to provide ecological information, and to show varieties of color, form and scale. Kent illustrated his talk with slides of his own work done in the Wind River Range in Wyoming, in the Great Smoky Mountains, and other places.

Ted Scott, of Jefferson Chapter, discussed and demonstrated techniques and equipment used in "Close-up Photography." Ted showed several different methods of doing macro-photography and discussed the advantages and disadvantages of each. Included in his demonstration were screw-on diopters, teleconverters, extension rings, zoom lenses with macro mode, and macro lenses. Ted recommended a 50 or 55 mm macro lens if only one lens is affordable, a 105mm lens so the photographer can get farther away from the subject, and a 200 mm macro lens for working with

insects. He discussed the problem of motion being magnified when the lens is wide open and suggested that flash may become necessary if the subject is moving. Ted showed slides of insects at various magnifications (1/2, 1, 2, and 4 times life size) to illustrate his talk.

Hal Horwitz, of Pocohantas Chapter, spoke on "How I Do It." Hal discussed his purposes and methods of wildflower photography. He emphasized the importance of visualizing a photograph before using the camera. Do you want a habitat shot or a close-up of the flower structure? Each shot requires very different lighting, lens opening, closeness, etc. You may need a series of shots, for no one picture can capture all the aspects of a plant. As to his techniques, Hal said he keeps it simple. He has settled on one type of film (Fujichrome 50 ASA), uses a tripod but not flash, always exposes at different settings (bracketing), and takes lots and lots of pictures. Hal illustrated his talk with slides of native plants of Virginia taken at different distances and different exposures.

In the afternoon session, workshop participants had an opportunity to meet with the leaders, to ask questions about their own particular interests, and to practice using the various types of equipment. Many participants then went to a sneak preview of Hal's new exhibit of "In Praise of Wildflowers" at the Crestar Bank Gallery in Richmond.

Cris Fleming
Education Chair

The 1992 Winter Workshop, the fourth VNPS educational workshop held in March, was organized by Education Chair Cris Fleming. Many thanks go to John Hayden of the University of Richmond for providing accommodations and arranging logistics, and to the Pocohantas Chapter for providing delicious refreshments.

Photo Contest

Wildflower photographers can compete for prize money and the chance to have their photos in a traveling exhibit by entering The Native Beauty of America Photo Contest sponsored by the National Wildflower Research Center. This contest has two categories: home or commercial native plant landscapes and wildflower vistas. Each entry must be a 35mm slide accompanied by check for the \$15 entry fee. Entries must be postmarked no later than June 15, 1992. FMI: Photo Contest, National Wildflower Research Center, 2600 FM 973 North, Austin, TX 78725; 512 929-3600.



A Reminder...

The VNPS dues increase will take effect June 1, 1992. Dues received on or before May 31 by a chapter or the Society membership chair will be accepted at the "old" rates. Dues received after that date should be according to the new rates below:

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



Virginia Native Plant Society

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Bulletin

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

Vote for Virginia's Future: Vote for the Parks and Natural Areas Bond Referendum

Virginia is the fifth fastest growing state in the country, but it ranks 47th in state park acreage per capita. Throughout the Commonwealth, our natural landscapes are disappearing at an alarming rate with some 70 square miles per year being converted from a natural condition to residential, industrial and commercial purposes.

Our state ranks third in the nation for the number of globally rare plant and animal species found. Twenty-eight percent of our native flora is on the Department of Conservation and Recreation's rare plant list. Over 700 natural areas have been identified in Virginia, only 76 of which are currently protected.

In November, voters will have a chance to help improve these standings by voting for a \$95 million bond package which would provide funding for acquisition of ten new natural areas, four new state parks, and much needed maintenance in existing areas.

The ten natural areas proposed for acquisition support a variety of globally rare species. Diabase glades in Loudoun County; wet prairies and sinkhole ponds in the Shenandoah Valley; wind swept summits, spring-fed wetlands and savannahs, and prairie-like openings presenting a dazzling display of late summer wildflowers and tall prairie grasses in the southern Blue Ridge Province; limestone glades and caves in southwestern Virginia; and freshwater tidal marshes and old-growth bottomland hardwood forests in the southeast section, are but a few of the treasures to be secured with funds provided by the bond. State park acquisitions are planned for the James,

Shenandoah, and Rappahannock Rivers, and a fourth park is proposed for Lee County in southwest Virginia.

Bond funds will be used to provide public access to our existing eight natural area preserves and improvements to state parks, to include 55 public use facilities, 21 road and parking lot projects, and 25 water/sewer projects. Public access projects for new parks and natural areas will include 31 new public use facilities, 24 educational/interpretive exhibits, and 13 staff residences.

Passage of the bond will bring economic growth to rural Virginia through construction and tourism. State parks and natural areas currently account for \$80 million in revenues generated by the tourism industry.

What can members of the Virginia Native Plant Society do to ensure passage of this important referendum? As informed citizens, we can advise our families, friends and associates -- all who have an interest in Virginia's future. We can help them understand that this bond referendum is the most important statewide issue for natural areas and state parks since the 1970s, and it will definitely be the most important issue to be decided in the 1990s. These areas and facilities are badly needed in Virginia. We need to begin their acquisition now.

Tom Smith, Director
Virginia Natural Heritage Program

If you need more information on this bond referendum, contact the Department of Conservation and Recreation, Division of Natural Heritage, at 804 786-7951.

Virginia Species Listed as Threatened

On June 19, 1992, sensitive joint-vech, *Aeschynomene virginica*, was formally determined to be a threatened species under the Endangered Species Act and added to the Federal List of Endangered and Threatened Wildlife and Plants by the U.S. Fish and Wildlife Service. Now Federal agencies must ensure that actions they fund, authorize, or carry out are not likely to jeopardize the continued existence the species. Listing the species as threatened also provides for the development of a recovery plan. Sensitive joint-vech was featured in *Virginia's Rarest Plants* in the Fall 1989 *Bulletin*. At that time, it was already a candidate for Federal listing.

An annual legume which can grow up to six feet in height, sensitive joint-vech requires the unique growing conditions which occur along segments of river systems that are close enough to the coast to be influenced by tidal action, yet far enough upstream to contain fresh or slightly brackish water. The present known distribution includes six occurrences in Virginia and six other sites: two in New Jersey, one in Mary-

(continued on page 8)

Annual Meeting September 11-13 Roanoke and the Blue Ridge

Deadlines approaching fast.
Register and secure your accommodations today. See pages 3, 4 & 5 for details.

**VNPS FISCAL YEAR 1991
INCOME STATEMENT**

INCOME	
DUES, MEMBERSHIP	\$7,608
DONATIONS	\$3,498
SALES, GIFTS & BOOKS	\$296
AUCTION SALES	\$1,188
FEES, ANNUAL MEETING	\$1,828
INTEREST INCOME	\$1,122
OTHER INCOME	\$150
TOTAL INCOME	\$15,690
EXPENSES	
ADMINISTRATION, SOCIETY	\$2,705
INSURANCE	\$810
MEMBERSHIP	\$1,785
TREASURER	\$287
PUBLICATIONS, PUBLICITY	\$3,679
FUNDRAISING	\$963
COSTS, GIFT & BOOK SALES	\$15
CHAPTER DEVELOPMENT	\$460
EDUCATION	\$514
CONSERVATION	\$765
BOTANY	\$174
HORTICULTURE	\$146
ANNUAL MEETING	\$1,499
REGISTRY PROGRAM	\$505
WILDFLOWER OF YEAR	\$1,022
TOTAL EXPENSES	\$15,329
NET INCOME	\$361
SUMMARY BALANCE	
TOTAL ASSETS	\$15,860
LIABILITIES	
CURRENT LIABILITIES	\$63
LONG-TERM LIABILITIES	\$2,600
UNCLASSIFIED LIABILITIES	\$433
TOTAL LIABILITIES	\$3,096
NET WORTH	
TOTAL NET WORTH	\$12,764
TOTAL LIABILITIES AND NET WORTH	\$15,860

ROBERT K. HERSH
3213 N. JOHN MARSHALL DRIVE
ARLINGTON, VA 22207

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, 1991, 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, 1991, and the results of its operations for the year then ended in conformity with generally accepted accounting principles.

Robert K. Hersh
Certified Public Accountant
May 29, 1992

FROM THE PRESIDENT

Green appears to be summer's color. As summer's green leaves join winter's evergreen needles, we think of life and coolness. Manassas, Virginia, is offering residents a new program designed to help cool their homes with natural shade. Area nurseries are offering a discount on trees from a list approved by the city arborist. Hurrah! Most of the suggested trees are native. A second incentive being offered is a \$10 per tree electric utility bill credit if the purchased trees (selected from the list) are planted as suggested, and approved by the arborist. Tree Power!

Rampant growth of some plant species also turns summer green. To prepare an exhibit on exotic invasive plants for the Environmental Literacy Conference, recently sponsored by the Council on the Environment (account on page 10), kudzu, honeysuckle, bittersweet, ailanthus and multiflora rose were easily found. All of these specimens, growing together in one spot, photographed as a unmanageable green mess! A recently identified scourge, mile-a-minute vine, *Polygonum perfoliatum*, was invisible, but possibly racing on hidden in the tangled growth. Searching among the rampant growth for mile-a-minute vine and purple loosestrife, both of which are invading Virginia, was a challenge.

Several years ago, before I knew of purple loosestrife and its threat to Virginia's natives, butterflies and bees drew my attention to a small group of magenta spires located in Broad Run. Recently I noted the colony's progress toward Broad Run waterway. The lythrum is using a roadside ditch to slowly and unrelentingly travel. Fishermen, casting lines for fish in Broad Run, cannot hear the approach; but, if unchecked, the fishing will never be the same as the water passage fills in with the loosestrife.

Many pleasurable green experiences also spring from walking through spring growth. On the day I went to see showy lady's slippers at Reddish Knob, I also saw turkey beard, a single long-bracted orchis, blue lupines, and both *Clintonia borealis* and *C. umbellata* in bloom. Experiences such as these are a glimpse of what being in VNPS is about.

A recent conversation with a fifth grade student comes to mind. As a science project, her environmentally-friendly teacher had suggested a telephone interview about wildflowers. The student's questions led to, "Why should we save wildflowers?" Biodiversity, food and habitat preservation for wildlife and mankind, and the medical uses of plants were offered as reasons, and we ended our interview.

Wait! There was a glaring omission in my answer to the last question. Wildflowers also nurture our spirit and senses. Their beauty alone can leave one nearly breathless. This mustn't be taken for granted. Curiosity can be piqued by a glimpse of color or a closer look, or the identification of a botanical find and the discovery of its special traits, or even learning whether it is native or alien.

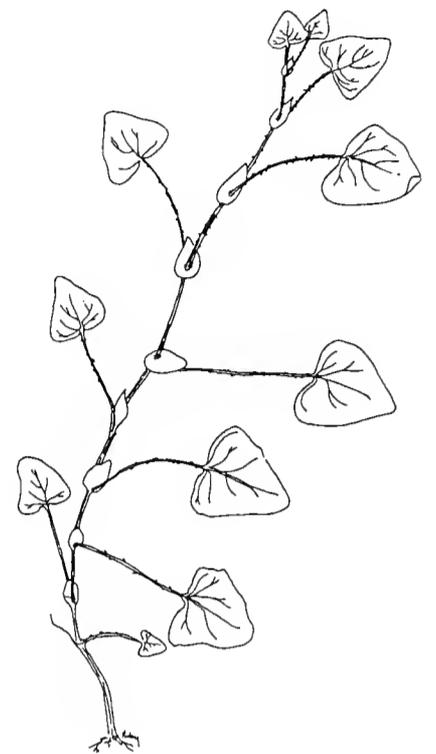
And, there we have it ... why we protect or "control" plant species. All senses and heart are involved with this decision, and the "Why?" is truly answered -- to keep this part of Mother Earth unique and green!

Nicky Staunton

P.S. Don't forget; it is our Society's 10th birthday and we want to celebrate with you September 11-13 in Roanoke. At no other time can Society members from all our nine chapters share such special events -- guest speakers, the exchange of silent auction items, fantastic fieldtrips in the host chapter's backyard... This isn't a Board of Director's Annual Meeting; it is YOUR Annual Meeting. Come to the Blue Ridge chapter area and gather wildflower memories with all of us.

Correction

Through an oversight, part of the VNPS standard for botanical nomenclature was omitted from the report on guidebooks for Virginia's wild plants in the May *Bulletin*. The *Atlas of the Virginia Flora* is the VNPS standard; The *Manual of Vascular Plants of Northeastern United States and Adjacent Canada* is consulted for species not listed in the *Atlas*.



Mile-a-minute vine

Revisions Enclosed

Inserted in this *Bulletin* is a copy of the bylaws revisions which will be voted on at the Annual Meeting on September 12. Please take a moment to review these changes.



Blue Ridge Native Plant Communities

Virginia Native Plant Society Annual Meeting Weekend

September 11-13, 1992

Roanoke and the Blue Ridge Parkway



Now is the time to make reservations for the 1992 VNPS Annual Meeting. Members from our nine state-wide chapters will gather to conduct required business, take part in field trips and a silent auction, and enjoy two informative lectures, a reception, and a banquet. A exciting full weekend has been arranged by our host chapter, the Blue Ridge Wildflower Society.

Guided field trips are planned throughout the day on Saturday, September 12, and Sunday morning, September 13. Tours will allow VNPS members to become acquainted with natural areas, gardens, and scenic attractions in the Blue Ridge chapter area. Field trips sites include:

- Community Arboretum**, a new arboretum on the Virginia Western Community College campus;
 - Mill Mountain Wildflower Garden**, a unique public garden featuring native plants, on top of Roanoke's Mill Mountain;
 - Wildflowers/Rhododendron Collection**, world-class rhododendrons and extensive gardens at the home of Paul James;
- Three scheduled stops on the **Blue Ridge Parkway**:
- Smart View Recreation Area**;
 - Rakes' Mill Pond**;
 - Peaks of Otter Trails**.

Weekend Schedule of Events:

Friday, September 11

7:00 p.m. -- 10:00 p.m. **Gathering, Greetings, and Great Slide Show** featuring regional late summer wildflowers, at Whitman Auditorium (Business Science), Virginia Western Community College. Arrive early to stroll through the Community Arboretum. At 8:00 p.m., Dorothy Bliss, VNPS Registry Co-Chair and retired Professor of Biology at Randolph-Macon Women's College, will give an illustrated talk entitled *"Invasive Exotics: A Threat to our Native Wildflowers."*

Saturday, September 12

8:30 a.m. -- 4:00 p.m. **Field Trips and Children's Program**. See box on page 5 for details about the children's program.
 5:00 p.m. **Social Hour, Registration, and Auction Preview**.
 5:30 p.m. **Annual Business Meeting** including bylaws revisions and election of officers.
 6:00 p.m. -- 7:30 p.m. **Silent Auction and Social Hour**.
 7:30 p.m. -- 10:00 p.m. **Banquet and Speaker**. Gwynn Ramsey, Professor of Biology and Curator of the Herbarium at Lynchburg College, will speak on *"A Botanical Eden: James River Gorge of Virginia."*

Sunday, September 13

9:00 a.m. -- 2:00 p.m. **Board Meeting** at Kniseley Center Library, VWCC. **All Society members are invited to attend.**
 9:30 a.m. -- 12 noon. **Peaks of Otter Guided Trail Walks**.

Please make reservations for the Annual Meeting by returning the registration form below by **September 1**. Members who register promptly will be sent a packet containing further details, including pertinent maps. For additional information, call Nicky Staunton at 703 368-3943 or Hugh P. Smith at 703 774-8392.

VNPS ANNUAL MEETING REGISTRATION FORM

Number of adults attending activities _____ X Registration fee of \$5 each = \$ _____
 Number of people attending dinner _____ X Dinner cost of \$17 each = \$ _____
 Total Enclosed = \$ _____

Number of people attending field trips _____ Sat. a.m.; _____ Sat. p.m.; _____ Sunday a.m.
 Ages of children interested in children's program _____, _____, _____, _____, _____ years.

Name _____ Phone _____
 Address _____

Make checks payable to VNPS. Dinner reservations must be received by **SEPTEMBER 1**. No reservations will be held without payment. Early field trip reservations will greatly aid the host organization, but some late reservations for outings may be made Friday, Sept. 11.

Send to: Annual Meeting, VNPS
 P.O. Box 20385
 Roanoke, VA 22003



Annual Meeting of the Virginia Native Plant Society

September 11-13, 1992

SLATE OF CANDIDATES

The following slate of candidates is proposed by the 1992 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, 1992, and to fill existing vacancies in other classes.

Board of Directors

Class of 1994

CORRESPONDING SECRETARY: Jackie Libeau. Prince William. Jackie was appointed to fill this position in 1991, a short time after she became actively involved in the Society. She is a Virginia Master Gardener and has been a member of the Prince William Tree Commission.

PUBLICATIONS CHAIR: Mark Gatewood. Shenandoah. Mark has been a park naturalist and outdoor educator, as well as a writer and editor for the National Park Service in Ohio. Currently, he is Buildings and Grounds Superintendent at the Museum of American Frontier Culture in Staunton.

Class of 1995

EDUCATION CHAIR: Tim Williams. Jefferson. Tim has been Botany Chair of Jefferson chapter for two years. Although he works as an electronics engineer, his formal training is in botany. He is a part-time instructor of field botany at Piedmont Community College.

MEMBERSHIP CHAIR: Phoebe White. Piedmont. Phoebe has been Membership Chair since 1983. She is a charter member of the Society and Secretary of Piedmont chapter.

RECORDING SECRETARY: Liz Smith. Potowmack. Liz has held the position of Recording Secretary since 1988. She is an active member of Potowmack chapter as an officer and chair of various committees.

REGISTRY CHAIR: Dorothy Bliss. Blue Ridge. Dorothy was VNPS Botany Chair for two terms and initiated the Wildflower of the Year program. She co-chaired the Registry Committee this year and serves as Lynchburg area coordinator for Blue Ridge chapter.

TREASURER: John White. Piedmont. John has been VNPS Treasurer since 1985. He is a charter member of the Society and a Director-at-Large for Piedmont chapter.

DIRECTOR-AT-LARGE: Holly Crusier. South Hampton Roads. Holly was appointed last spring to complete an unexpired term as Director-at-Large. She is a founding member of South Hampton Roads chapter and the chapter's membership chair. She is a landscape design consultant and an instructor for the Virginia Master Gardener program.

DIRECTOR-AT-LARGE: Cris Fleming. Potowmack. Cris has just completed two terms as VNPS Education Chair. She teaches native plant identification for the USDA and leads field trips for the Smithsonian Resident Associates.

1993 Nominating Committee (One-Year Term)

Doris True. Shenandoah. Doris served on the Nominating Committee this year. She has been Secretary of Shenandoah chapter and has assisted with the VNPS Registry program.

Fanny R. Williams. John Clayton. Fan served two terms as President of John Clayton chapter. She has led the chapters' involvement in several highly-visible wildflower plantings.

Rebecca White. South Hampton Roads. Becky is a founding member of South Hampton Roads chapter. She has just completed two terms as VNPS Director-at-Large and one year as Nominating Committee Chair.

Rebecca White, Chair (South Hampton Roads)
Gay Bailey (Jefferson) Dorna Kreitz (Potowmack)
Mary Painter (Piedmont) Doris True (Shenandoah)
1992 Nominating Committee

PROXY, 1992 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 10 to:
Corresponding Secretary, VNPS,
P.O. Box 844, Annandale, VA 22003

PROXY, 1992 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 10 to:
Corresponding Secretary, VNPS,
P.O. Box 844, Annandale, VA 22003

Annual Meeting of the Virginia Native Plant Society

September 11-13, 1992



Please Give to the Society Auction

The much enjoyed, annual gala auction will be held September 12 at the VNPS Annual Meeting banquet. As in past years, it will be a silent bid auction featuring your donations. Please consider some items you might contribute to this critical fund-raising event for the Society -- a jar or two of your home-made jelly, relish or pickles; a fantastic field guide or book; plants from your garden or favorite nursery; gardening tools; trekking togs; a sample of your special art or craft; stationery, prints or small works of art -- most anything with a nature theme ...

Use your imagination! The greater the number of items up for bid -- the more enjoyable the auction, so we hope all members will look for, find and donate items this year.

If you have a donation, please contact your chapter auction chair or Hugh P. Smith, 4363 Kirkwood Drive, Roanoke, VA 24018; phone 703 774-8392 (write prior to September 12 or phone after September 1). If writing, please send a description of the item(s), the name of the donor, and the approximate value of each item. Submit this information by September 12.

Please have donations at the site of the auction, Holiday Inn/Tanglewood between 8:30 a.m. and 2:00 p.m. on Saturday, September 12. Auction items may be brought to the social gathering at VWCC on Friday evening, September 11. Donors who will not be able to attend the meeting, but wish to support this fund-raiser for VNPS, may send contributions with a chapter member or mail them ahead of time to Hugh P. Smith at the address above.

The continued success of the auction greatly depends upon your backing. Thank you for your consideration and contributions.

MEETING ACCOMMODATIONS

The **Annual Meeting Center is Holiday Inn/Tanglewood**. The special rate for VNPS members is \$49 per room per night (up to 4 persons per room), taxes not included. Be sure to specify that you are a VNPS member to qualify for this rate.

Contact the Holiday Inn as soon as possible to make your reservations. Fifty rooms will be held for the Society only until August 29. After that date, rooms may not be available.

Holiday Inn/Tanglewood, 4468 Starkey Road SW (Route 419), Roanoke, VA 24014; phone 1-800-HOLIDAY Extension 640 or 703 774-4400.

CHILDREN'S PROGRAM

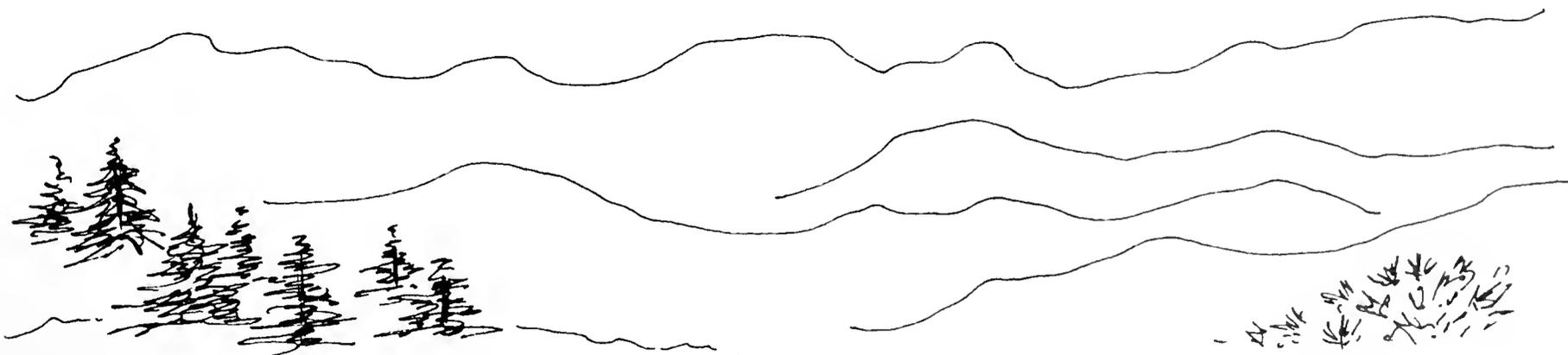
After the resounding success of the children's program last year, special children's activities will again be offered for VNPS members' children. The program will be held on Saturday afternoon, September 12, during the same time as afternoon field trips. Science educators leading the activities have experience conducting entertaining educational programs for the Science Museum of Western Virginia, Honey Tree Early Learning Center, and Virginia Tech's Fisheries and Wildlife Department.

To take advantage of this program, please be sure to indicate on your registration form the number and ages of the children who will be attending, so that appropriate activities will be available.

The annual meeting of the membership of the Virginia Native Plant Society will be held on Saturday, September 12, 1992 at Holiday Inn/Tanglewood, in Roanoke, Virginia, to vote on changes in the bylaws and to elect certain officers, directors, and members of the Nominating Committee.

Those persons who have paid dues for the 1991-92 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 page 4 to Jackie Libeau, Corresponding Secretary, VNPS, P.O. Box 844, Annandale, VA 22003. Proxies must be received by September 10, 1992. Each family membership is entitled to two votes, other memberships to one vote.

Jackie Libeau
Corresponding Secretary



For Wildflower Gardeners

Fifteen VNPS members from Piedmont, Potowmack and Prince William chapters toured Mt. Cuba Center for the Study of Piedmont Flora near Greenville, Delaware, on May 1. One of the goals of the nine-year-old center, to increase the public's appreciation for the beauty and value of piedmont flora, is accomplished with tours such as ours. Mt. Cuba will be open to the public in the future, but presently tours (with advance registration) are limited to spring weekends.

Upon arrival our group received a "Checklist of Native Plants Blooming at Mt. Cuba in May" that listed an impressive 150 trees, shrubs and herbaceous plants. The tour began through a woodland underplanted with rhododendrons, hydrangeas, dogwoods, viburnums and serviceberries. Both sides of the widely mulched paths were planted with species native to woodlands of the piedmont. In some areas, a single species, such as wood poppy, mayapple or Jacob's ladder, formed large drifts among the trees and shrubs. The woodland garden contained nine trillium species, including a locally occurring variation of *Trillium erectum* which bore striking white flowers with dark red centers. Huge clumps of twinleaf and large-flowered bellwort with bright yellow flowers were standouts.

A beautifully landscaped water garden consisting of a series of ponds and waterfalls was planted with water loving natives that include swamp pink, marsh marigold, Barbara's buttons, and strategically placed clumps of skunk cabbage. Several native shrubs, including *Rhododendron Vasevi*, *Fothergilla major*, and *Itea virginica*, was underplanted with woodland phlox and foamflower.

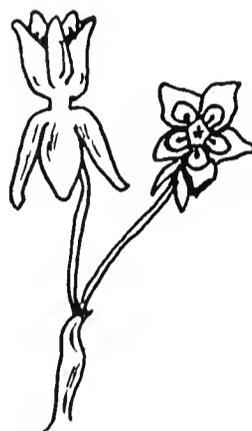
In addition to sharing its gardens with the public, the Center's goals include learning to propagate natives that are threatened by collection, such as orchids and trilliums, and evaluating natives, selecting superior forms for distribution to the nursery trade. In recent years, Mt. Cuba Center has introduced the following:

***Aster novae-angliae* 'Purple Dome'**, an 18-inch tall semi-double form of the familiar violet-purple New England aster, can spread to 30 inches across.

***Heuchara americana* 'Garnet'** is a wine-colored, cold hardy, drought tolerant selection of our familiar alumroot. It doesn't need frequent division to stay healthy as other alumroots, including 'Palace Purple', do.

Butterfly Weed Reproduction

Butterfly weed, Virginia Wildflower of the Year 1992, provides an opportunity to see one of the unique reproductive strategies in plant biology. Typical of the milkweeds, butterfly weed has radially symmetrical flowers with five sepals and five petals, five stamens each with two anthers, and a single style and stigma, but they are not quite that simple. Once you have found the plant in bloom, examine the flowers closely to identify the unique structures and unravel their complexity.



Flower, side and top view

Sepals are hidden underneath the strongly reflexed petals. Above the petals and matching them in color, the filaments of the stamens are fused and modified to form an unusual crown, or corona. Each petal-like portion of the corona has a horn curving upward from inside, arching toward or over the center of the flower. The anthers, located below and to one side of each corona segment, adhere to the stigma forming a specialized central structure called the gynostegium.

Not only stamens and stigma are modified. Pollen is not in individual

***Solidago sphacelata* 'Golden Fleece'** forms a ground-hugging clump of foliage with 18- to 24-inch graceful wands of yellow in late summer and fall.

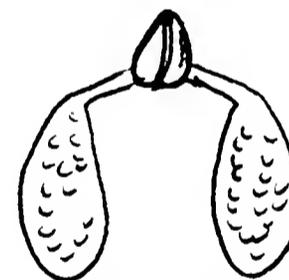
***Spirantes odorata* 'Chadd's Ford'** is the first native terrestrial orchid to be produced on a commercial scale. It bears fragrant white blossoms on 18-inch spikes in fall.

Watch for these plants and future Mt. Cuba introductions at local nurseries or through mail order catalogs. VNPS's local and mail order nursery source lists are available by sending a SASE to VNPS, P.O. Box 844, Annandale, VA 22003. Address your request to my attention, if you're looking for one of the plants above.

Nancy Arrington
Horticulture Coordinator

grains as we see in most plants but is united into a waxy mass called a pollinium. A pollinium is hidden inside each anther and pollinia from adjacent stamens are joined by a dark colored structure called a gland. In order to pollinate a butterfly weed flower, an insect must extract the pollen containing masses, or pollinia, from the slits in adjacent anthers by hooking one of the glands precisely in its central slit and then deposit the pollinia on another flower precisely so that one of the joined pollen masses slips into a similar slit to reach the stigma of the second flower. You may often see loose pollinia adhering to the corona surface, but only a careful search discloses one reinserted.

Nectar is produced in the base of each corona segment and attracts many insects besides those that pollinate butterfly weed. While butterflies visit to feed on the nectar or deposit their eggs, they are not the pollinators. Only wasps which have the correct size hooks or spurs on their legs can accomplish the transfer of pollen in these plants. Only when the wasps happen to maneuver themselves and the pollinia into just the right position does pollen successfully produce seeds. Occasionally, small wasps attracted to the nectar will be caught in the gland's slit and, unable to pull themselves or the pollinia free, will become trapped and die.



Joined pollinia

Considering the small size of the pollinia, the accidental nature of such a "catch" by the insect's leg, and the difficulty of inserting pollinia from one flower into the slit of another so that it reaches the stigma, it is apparent why such large clusters of blossoms produce only one or two fruits or pods. How can these plants survive, much less be so widespread? Look at how many seeds each pod contains, each with its own aerial transportation device. A many seeded fruit, combined with wind dispersal, effectively overcomes the disadvantage of such a complex pollination mechanism.

Catharine Tucker
Botany Chair

Finding Wildflowers in Virginia

Blue Ridge Parkway Milepost 136-176

The VNPS Annual Meeting Weekend, September 11-13, will provide you an opportunity to visit some of our favorite places on the scenic Blue Ridge Parkway. Heading south from Roanoke on the Parkway, starting at Adney Gap Junction, Milepost (MP) 136, elevation 2690', you can feel the temperature drop a few degrees, as it is always cooler along the Parkway.

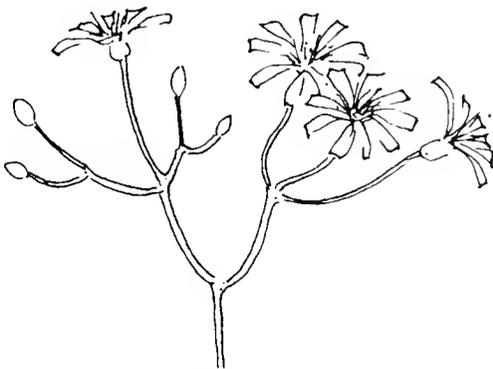
For the next several miles, you can see farm fields full of the widely known "Bent Mountain" cabbage. Driving along, watch for wild turkeys, deer, rabbits and groundhogs. They may be in fields or along the sides of the road, or even cross in front of your car.

In spring, summer and fall, numerous wildflowers can be spotted from the road. In September, late summer flowers make the drive very colorful with lots of yellows, purples and whites of wildflowers such as wood aster, black-eyed Susan, rosinweed, green-headed coneflower, common and swamp milkweed, New England aster, fleabane, silverrod, liatris, jewelweed, Joe-Pye weed, yarrow, white snakeroot, boneset, woodland sunflower, crown-beard, ironweed, black cohosh, Queen Anne's lace, great lobelia, cardinal flower, closed gentian, ladies' tresses, several types of goldenrod, and many others.

The first of the more interesting overlooks is at MP 139, elevation 3015'. The view of Cahas Knob, which is really a free-standing mountain with an elevation of 3560', is worth a stop. Next is Devil's Backbone Overlook, MP 143.9, elevation 2708'. The backbone is a sheer, knife-like spur jutting out to the right between the overlook and Pine Spur. Large areas on the steep sides of Devil's Backbone are bare but for a scant cover of lichens and moss. There is a long view of Backwater Valley with Grassy Hill, a low sway-backed ridge to the right, and Cahas Knob on the left.

Pine Spur Overlook, MP 144.8, elevation 2709', is well named for its many white pines. The pines found here and along the Parkway well into North Carolina are the tallest trees in the highlands. Mature trees may be over 100 feet tall; a few reach 150 feet.

Smart View Overlook and Recreation Area, MP 154.1, elevation 2564', contains 500 acres with hiking trails, a large picnic ground with a shelter, comfort stations, drinking fountains, and a cabin exhibit. The picnic area is located in a medium to mature oak forest. It has a paved road suitable in spots for wheelchair use and plenty of parking. A 2.6 mile loop trail circles the site. The trail may be walked in two parts. A 1.4 mile section begins near the parking area, just before the wooden entrance gate, and passes through a



forest of huge white and northern red oaks, before arriving at Trail Cabin. The 1.2 mile part extends from the cabin through cove hardwoods before entering an open field and returning to the entrance. A small pond at the trail head contains water lilies, and interesting wild plants grow around the water.

Uphill from the pond and facing the "Smart View" itself is Trail Cabin, built in the 1890s of rough-hewn logs. It is typical of the one-room dwellings of pioneers two centuries ago. A spring flowing from beneath a nearby yellow poplar supplies water for both man and wildlife. Participants on all three field trip options at the Annual Meeting will get a chance to enjoy Smart View as it is where we will picnic for lunch.

After lunch, some may wish to go beyond Smart View to Rakes' Mill Pond Overlook, MP 162.4, an interesting spot beside a large pond with shade trees and the sound of water falling over the dam. Until recently, there was a nice meadow beside the stream above the pond that was a favorite wildflower walk for the BRWS. In mid-summer, we could find grass-pink orchids, grass-of-Parnassus, Indian paintbrushes, and many, many, interrupted ferns, Canada and turk's cap lilies, plus another 50 to 75 wildflowers.

That was before beavers moved in about three years ago and built dams which caused flooding of the meadow. We made a check visit on July 12 in which only one Canada lily was found, no Indian paintbrushes, and no interrupted ferns. The beavers have altered the area to the detriment of the wildflowers.

If you have the time, don't miss Mabry Mill, MP 176, which is recognized as the most popular attraction on the Parkway. The mill's wooden waterwheel still turns, ducks swim in the pond, and nearby a self-guided tour features exhibits (often staffed by demonstrators in period costumes) which include a saw-mill, a blacksmith shop, a soap-making kettle, a moonshine still, and a log cabin. There is also a coffee shop and craft store.

We, along with the other members of the Blue Ridge Wildflower Society, are looking forward to sharing some of our favorite places on the Blue Ridge Parkway with you. See you in September.

Sam and Dora Lee Ellington
Blue Ridge Chapter

Coming Events

Aug. 22 -- **Native Wildflowers: Habitat Gardening for the Future.** Lecture by David Northington of the National Wildflower Research Center at Ameriflora '92 in Columbus, OH. FMI: Sherran Blair, phone 614 239-4680.

Aug. 27 -- **The Role of Native Plants in the Landscape Symposium** in Stvenson, MD. Speakers include Richard Lighty of the Mt. Cuba Center for the Study of Piedmont Flora and William Brumbach of the New England Wildflower Society. FMI: Irvine Natural Science Center, phone 410 484-2413.

Sept. 12 -- **Bayscapes: Workshop and Field Trips** in Richmond, VA. Presented by The Alliance for the Chesapeake Bay & U.S. Fish and Wildlife Service. Workshop covers environmentally-sound landscaping principles for homeowners. Field trips include the James River and Byrd Park. FMI: Billy Mills, phone 804 775-0951.

Sept. 14-18 -- **Fourth Annual International Wetlands Conference**, to be held in Columbus, OH. FMI: William Mitsch, Ohio State University, phone 617 292-9774.

Sept. 17-19 -- **Fall Wildflower Workshop** in Cashiers, NC. Walks, field trips, and demonstrations sponsored by North Carolina Botanical Garden and the University of North Carolina. Led by C. Ritchie Bell and Anne Lindsey Bell, with Ken Moore and Jim Ward of NCBG. FMI: UNC Alumni Enrichment Program, phone 919 952-1208.

Sept. 26 -- **Air/Energy '92 Conference** in Richmond, VA. A conference to explore practical measures to clean the air and reduce damaging impacts of energy use. Presented by Conservation Council of Virginia, of which VNPS is a member. FMI: David Chuse, phone 703 937-4919.

Oct. 27-30 -- **Rediscovering America: Natural Areas in the 1990s Conference** at Indiana University, Bloomington, IN. The 19th Annual Natural Areas Conference and the 14th Annual Meeting of the Natural Areas Association. Topics include: natural areas conservation and protection, rare species inventory, management and recovery, and restoration of ecological communities. FMI: Natural Areas Conference, Division of Nature Preserves, 402 West Washington Street, Indianapolis, IN 46204; phone 317 232-4052.

Three Presidents Look at Ten Years

The Beginnings

I well recall the "germination" of the Virginia Wildflower Preservation Society, as it was originally named, at a gathering at the American Horticultural Society's River Farm. Months of phone calls and letters had led to that organizational meeting in the fall of 1981, the first of several throughout Northern Virginia that drew together a nucleus of charter members.

Almost simultaneously, Nancy Arrington of Manassas had also begun to organize a band of wildflower enthusiasts. Her willingness to merge the local wildflower society she envisioned into a statewide organization with the same goals was an important step forward for VWPS.

When the Commonwealth chartered VWPS in April 1982, we had 19 members. A year later we had two chapters and 67 members. From that beginning, many lasting friendships and remarkable volunteer accomplishments have emerged out of our common interest in Virginia's native flora.

Our initial Directors and advisers included leading native plant advocates as well as talented amateurs. Their efforts were grounded in essentials: incorporation, non-profit status, bylaws, and member activities and benefits. The *Bulletin* was issued (in hand-script), and educational publications were developed for distribution to all who were interested. Links were created with government agencies and developers to enable plant rescues as population burgeoned. Recognition was forthcoming -- most memorably, an award as the outstanding volunteer organization in the Washington area, presented by Barbara Bush.

What I enjoyed most as president was identifying and working with the resolute individuals who coordinated development of our chapters. Each chapter reflects a unique human chemistry rooted in the traditions and physiography of its region. In our people, as in our natural communities and the lay of our land, Virginia's strength lies in its diversity.

Mary Painter, Founder
President through 1985

Taking Stock

As I look at the Virginia Native Plant Society now, the newspaper advertisement that caught my eye eleven years ago seems very remote. How far we have come! From a fledgling organization at Virginia's northern tip, we've grown to nine chapters serving more than half the state. From those beginning efforts to

mobilize people to preserve wildflowers, we've evolved a broader, more clearly focused program of education and conservation.

Wildflower Weekend became Wildflower Week, then a two-month Wildflower Celebration. The annual meeting has grown from an afternoon to a festive weekend. The Winter Workshop, at first an exchange of ideas among chapter leaders, is now an opportunity for all members to learn and get acquainted. Slide programs and publications have gained in range and professional polish.

We can point to substantial accomplishments in conservation: additional species listed as endangered, some hard-won funding for the state's endangered plants program, the Registry, this year a cooperative effort against invasive exotics. That word "cooperative" has become increasingly important as VNPS has built constructive working relationships with government agencies, private organizations, and conservation coalitions. And that doesn't even touch the solid programs chapters have created.

From this bird's-eye view, the contributions of initiators, teachers, presiders, field botanists, writers, and advisers are easy to see. Less visible but equally important are those of the dozens who have kept membership and financial records, taken minutes, prepared mailings, arranged events, systematized procedures, and so on and on. From the work all these dedicated individuals have done together the next ten years will grow.

Mary Pockman
President 1985-1988

The Future

When the Virginia Wildflower Preservation Society became the Virginia Native Plant Society, we expressed our continuing purpose in the phrase "conserving wild flowers and wild places." There are as many ideas for doing that as there are members -- and our membership is well over a thousand and growing.

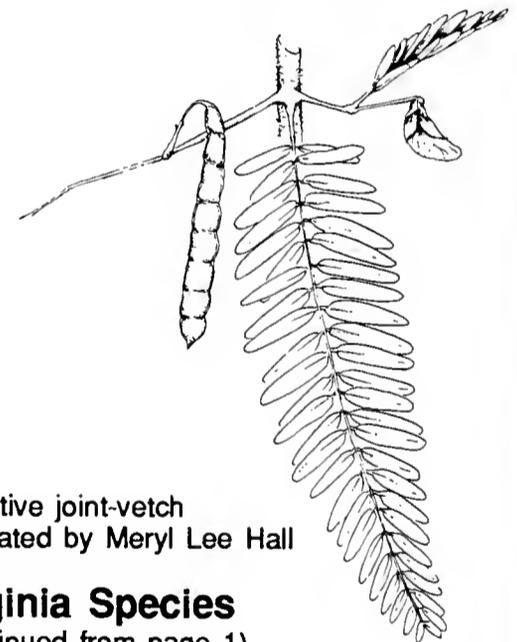
We plan to continue producing strong educational programs and informative publications for members and the public. Outreach to Virginia's youth ranks high among our priorities, so that Virginia's floral heritage will be an integral part of Virginia's future. The Commonwealth needs a "Flora of Virginia", which we hope to encourage and facilitate. New sites will be added to our Registry.

The VNPS must continue to speak out for Virginia's flora, and to build positive relationships with like-minded organizations. We want to be effective in working with the government bodies charged with protecting natural resources, persuading the business community to retain significant natural areas, leading the way toward wise landscape use of native plants. Those responsible for managing Virginia's lands need to know VNPS members as a knowledgeable, reasonable, and enthusiastic resource.

Our members' talents are many and each of us must willingly share some precious time in efforts on behalf of Virginia's native plants. In muck boots on field trips, with trowel in hand creating display gardens, by telephone and typewriter making our voices heard, we can each use our own talents. Let your chapter and the VNPS Board and committees know how you think our energies can best be directed.

HUZZAH for the vision of our founder, members, and friends! And a double HUZZAH for Virginia's native plants. May they live long!

Nicky Stauton
President 1988 to date



Sensitive joint-vetch
Illustrated by Meryl Lee Hall

Virginia Species

(Continued from page 1)

land, and three in North Carolina. Virginia is considered the stronghold of the species' current distribution, having an estimated 5000 plants along six river systems: the Chickahominy, the James, the Mattaponi, the Pamunkey, the Potomac, and the Rappahannock. The historic range of the species included Delaware and Pennsylvania.

The primary threat to sensitive joint-vetch is habitat alteration by dredging, filling, and bulkheading. In Virginia, existing plants are potentially threatened by factors related to land development, including several proposed residential developments and water supply projects.

FROM NEAR AND FAR

Stamps of Approval

On July 24, the U.S. Postal Service issued fifty commemorative wildflower stamps at the Ameriflora '92 gardening exposition in Columbus, OH. First-day covers featured wildflower information.

Potential in Pawpaws

Science News of the AAAS, 29 Feb 1992, reports on two North American native plants which are being tested for their anticancer properties: Pacific yew and pawpaw. The astringent, unripe fruit of pawpaw, *Asimina triloba*, have been found to contain a group of chemical compounds that suppress cancer cells and also kill insects. Confident of the potential impact of an insecticide based on the compounds found in pawpaws, the researcher has recorded a patent for the substance.

Three in One

Perennial Plants, newsletter of the Perennial Plant Association, Spring 1992, carried three articles pertaining to native flora. In the first, "Collected Plants and the Perennial Trade" is addressed by Bill Brumbach of New England Wildflower Society. He identifies two groups of native plants in the trade: sun-loving perennials, the majority of which are propagated, and species that are usually collected from the wild, primarily eastern woodland species. Noting that under FTC Guidelines it is unethical to sell collected plants without disclosing that they were wild collected, Brumbach points out a loophole: if collected plants are grown in a nursery for at least one growing season, such disclosure is not required. Presently

there are few ways for a nursery which wants to begin ethical propagation of natives to avoid buying the initial stock from a collector. One feasible source: plants rescued from construction sites.

In "Naturalists in the Garden -- Native or Alien?", Cole Burrell discusses a misunderstanding perpetrated in many gardening magazines -- what a native plant really is. Horticulturally, the term "native" is prone to lax interpretation, commonly referring to any indigenous species. In the narrowest interpretation, ecologically, a native plant is one that was present in a given set of growing conditions prior to settlement of a specified region. Burrell feels that gardeners and members of the green industry have a responsibility to protect natural ecosystems from invasive exotic plants. He supports planting the right plant in the right place and using native species where regional character is to be preserved.

Craig Regelbrugge of the American Association of Nursermen writes "Congress Explores the Non-Native Species Issue", which covers the two-year study by the U.S. Office of Technology Assessment on the risks, benefits, management and policy related to non-indigenous plants. The questions being asked: What are the economic and environmental risks posed by intentional and accidental introductions of exotic species into the U.S.? What are the major pathways for introductions? What responses may minimize, control or eradicate unwanted exotic species? Regelbrugge points out that nearly all our food and fiber plants as well as many useful and well-mannered horticultural plants are not

native, but the nursery industry would be wise to show some sensitivity to the complex issue of invasive species.

Bad Publicity

The distribution of non-native, often pestiferous thistles (musk, curled and Canada), continues to expand in Virginia. One of the primary means of seed dispersal is mowing operations along interstates and primary highways reports Robert Wright of Shenandoah chapter. Two species of boring thistle weevils can be used to biologically control these thistles. The method has been used along Virginia highways but it is expensive, so VDOT also employs herbicides.

The distribution of musk thistle by another means should concern us, too -- a photograph of naturalized musk thistle on the back cover of "Virginia's Mountain Playground", a promotional brochure being used to promote Skyline Drive in Shenandoah National Park. Wright, who is researching the spread of non-native thistles in the state, reminds us that musk thistle appears on the noxious weeds list for Virginia. The two other photos of plants in the brochure also depict alien species: Asian day flower and sweet pea.

Do we really want these plants used to promote one of our natural wonders? Society members can voice their opposition to the use of these plants to advertise the Park and suggest the use of native species by writing to the Park Manager, Shenandoah National Park, Luray, VA 22835, and the concessionaire, ARA Virginia Sky-Line Co., P.O. Box 727, Luray, VA 22835.

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

VNPS Membership/Renewal Form

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

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Make check payable to VNPS and mail to:

VNPS Membership Chair, Route 1, Box 381, Delaplane, VA 22025

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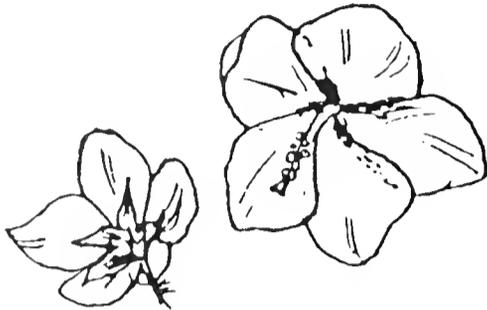
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The deadline for the next issue is October 10.

Chapter News

Logo Chosen

South Hampton Roads chapter has picked seashore mallow, *Kosteletzkya virginica*, as their chapter logo. The species is native to east coast salt marshes having brackish water.



Seashore mallow

For the Children

Members of Shenandoah chapter have been busy with the children. Its slide program, "Our Wonderful Weeds", was well received as part of the children's activities during Wildflower Week at Shenandoah National Park. A copy of the program has been placed in the Rockingham County School System's media center for classroom use. The chapter also gave advice to Mt. Clinton Elementary School on laying out and planting a nature trail. Members are encouraged to bring young people -- children, grandchildren, friends, ... to join in on the fun of discovery on chapter sponsored field trips.

Trail Improved

Prince William chapter has donated money to be used for markers along the Northern Virginia Community College nature trail. Members also have participated in several work sessions to upgrade the trail.

Society News

Registry Plaque Presented

On May 7, Doris True, Jacob Kagey, Dwight Shull (all of Shenandoah chapter), Loren Staunton (of Prince William chapter), and VNPS President Nicky Staunton traveled to Augusta County to visit the second VNPS Registry site and presented a Registry plaque to the property's owner, Dr. Robert Mueller. The visit was planned to coincide with the blooming season of buckbean, *Menyanthes trifoliata*, which is known in only two locations in Virginia.

On that spring day, the view was impressive. The buckbean was surrounded by blooming marsh marigolds and the leaves of swamp lousewort. Overlooking the marsh from a nearby hillside were blooms of goldenseal and a beautiful colony of Robin's plaintain, living against a background of exposed rock.

Society Visible at Educators' Conference

On June 22-24, the Environmental Literacy Conference sponsored by the Council on the Environment was held at Wintergreen Resort. The annual conference provides a forum for sharing the latest information on environmental research and generating new ideas among educators. This year, workshops, field trips, and sessions included topics such as conserving biodiversity and protecting endangered species.

Conference coordinator Ann Regn (Jefferson) reports that this year's conference was attended by over 250 environmental educators and members of various environmental groups. VNPS was well represented: Claudia Thompson-Deahl (Prince William) spoke

on doing planting projects with children; Doug Coleman (Jefferson) discussed the natural history of the Wintergreen area; and several other VNPS members attended the conference. The Society displayed an exhibit on invasive exotic plants at the event.

Slides Requested

For a program he's preparing, Conservation Chair Ted Scott needs good slides showing invasions by porcelain-berry, *Ampelopsis brevipeduncula*, and mile-a-minute vine, *Polygonatum perfoliatum*. He wants to show situations where these plants are obviously out of control (not plant characteristics seen close up). Scott can be reached at 12493 Spicewood Road, Orange, VA 22960-9711; 703 672-3814.

Multiple Memberships

A member of one chapter of VNPS may have membership(s) in any other chapter (or chapters) they desire. Many Society members, who live in different parts of the state during certain times of the year, have taken advantage of this opportunity. Other members enjoy a particular chapter's newsletter and join a second chapter in order to receive that chapter's communications.

To apply for membership in another chapter, it is best to write directly to that chapter, enclosing a check for half of your normal dues. (Your chapter officers can supply you with the addresses of other chapters.) Alternatively, you may send your membership requests to the VNPS Membership Chair with your annual renewal, enclosing a separate check in the amount of half your dues, for each chapter you choose to join.



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

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Two Sites Added to Registry

Wild Bergamot Virginia Wildflower of the Year 1993



The VNPS Botany Committee has chosen the fragrant and easy to cultivate, lavender wild bergamot, *Monarda fistulosa*, as Virginia Wildflower of the Year for 1993. From mid-summer to early September, patches of wild bergamot create lavender-pink clouds of blossoms over meadows and roadsides throughout most of Virginia. Attractive to bees and other insects, individual tubular flowers are borne in pincushion heads at the summits of square stems with opposite leaves typical of the mint family. The fragrance, too, is typical of mints, though mellower than peppermint. Since the aromatic oils do not dissipate when the plants die down in fall, watch for the thumbnail sized heads on dried stems in old fields and along roadsides and edges of woods this winter. Crush them and their fragrance will remind you of the pink clusters to come on these perennial plants next year.

Easy to grow in the garden, easy to find in the wild, you will have ample opportunity to observe the unique features of the flowers and flower clusters, and enjoy the pleasure of both sight and smell of these attractive flowers during the coming year.

Wild bergamot is the fifth in the VNPS Wildflower of the Year series; butterfly weed was chosen in 1992. Now we will focus on and learn more about the habitat, life history, and horticultural potential of the lavender wild bergamot. Watch the *Bulletin* for articles about this native plant during the coming year.

Catharine Tucker
 Botany Chair

On September 12, two new VNPS Registry sites were disclosed and acknowledged by Society members at the Annual Meeting in Roanoke.

Westvaco's Buffalo Creek Nature Area, a seventy-five acre natural area preserve in Bedford and Campbell counties, was accepted into the VNPS Registry. Westvaco Timberlands Division Area Supervisor Trenor Hypes attended the banquet and accepted a Registry plaque and a framed print of dwarf ginseng, *Panax trifolius*, a unique find in the Nature Area.

Buffalo Creek Nature Area is an easily accessed public area which straddles Route 24 near Evington. One section is bisected by a five and one-half mile trail which can be leisurely traveled in about three hours. The trail leads through six distinct plant communities: open field, bottomland hardwood forest, hollows, upland hardwood forest, Virginia pine forest, and hemlock forest. Wildflowers are prolific in the Area; peak bloom time usually occurs from the end of April through the beginning of May.

The Cahas Mountain property of Paul James, first president of Blue Ridge chapter, also was registered and recognized by VNPS members. This 100-acre mountainside in Franklin county has been the site of numerous chapter hikes and several field trips during the Science Museum of Western Virginia's Annual Wildflower Pilgrimage. As he accepted a Registry plaque and a framed print of one of his prime botanical interests — rhododendrons, James invited Society members to tour the site, particularly in spring when it becomes a virtual explosion of wildflowers in bloom.

The announcement of these two Registry sites was especially fitting at the Annual Meeting hosted by the Blue Ridge Wildflower Society, as both are located in the Blue Ridge chapter area and well known to chapter members. The prints presented to the owners of the newly registered sites were photographed by Chapter member Bobby Toler.

Virginia Klara Nathan
 Blue Ridge Wildflower Society

Will Lythrum Be Listed as Noxious Weed?

In the March *Bulletin*, I wrote of our Society's concern about the purple loosestrifes, *Lythrum salicaria* and *L. virgatum*, along with their numerous cultivars. Several organizations and state agencies are fearful of these plants spreading into wetlands along streams flowing into major estuaries in the eastern part of Virginia. Should this happen it could be a major threat to much of the wildlife food in those wetlands and, therefore, have drastic consequences on waterfowl and other wetland inhabitants.

To act on these concerns the Virginia Joint Venture Board* has

requested a hearing before the Virginia Board of Agriculture and Consumer Services to present this information, along with supporting statements from the Division of Natural Heritage of the Department of Conservation and Recreation, and the Virginia Native Plant Society, to ask for restrictions on the sale of purple loosestrife plants through the nursery trade. Opponents to such an action would be given an opportunity to express themselves at such a hearing.

A hearing was set for the Board of Agriculture's May meeting, but later VNPS was advised that due to a heavy
 (Continued on page 6)

FROM THE PRESIDENT

Virginia's highways are lined with invasive exotic plants. Tree of heaven, Oriental bittersweet, Japanese honeysuckle, and kudzu vine are just the most visible. Plants such as these are smothering their host trees, reducing the buffer zones of interstate highways to strips of dead and dying trees.

Some invasive plants have pleasurable aspects ... honeysuckle fragrance on a warm evening and the joy of introducing a child to the tiny sweet drop of nectar produced when the style is pulled from a blossom. Even the sweet smelling musk thistle exhibits a lovely, nodding, magenta powderpuff blossom whose nectar nourishes bees and butterflies and whose seeds feed many goldfinches.

So what harm are these plants if they move in? The answer is plenty of harm. Native plants which better feed our wildlife and give our country regional biodiversity are being choked out by exotic species. Similarly, a baby cowbird in a sparrow's nest takes over; crowded out the host's babies die, like the skeletal hosts of the invasive plants overtaking highway margins.

The Virginia Native Plant Society is proud to be partners with the Division of Natural Heritage in producing fact sheets on invasive exotic plants. Our first (a copy of which is enclosed in this *Bulletin*) addresses purple loosestrife, *Lythrum salicaria*, a popular, showy garden plant with a threatening side. Known as an invasive "escapee" in several parts of the nation, it closes up waterways and chokes out diverse native plants as it flourishes. Several states have documented the detrimental effects of lythrum gone wild.

A hardy perennial, purple loosestrife rampantly takes over its watery environment just as the musk thistle does fields. Musk thistle, already listed as a noxious weed, can be controlled to some extent by thistle weevils and mowing. However, once allowed to establish in waterways, a lythrum monoculture is nearly impossible to control. The fact that a plant is beautiful in the garden should not be enough to keep it from being listed as noxious weed when its potential effect on native wetland habitats is so devastating.

Under the direction of Conservation Chair Ted Scott, VNPS is proposing that purple loosestrife be listed as a noxious weed by the Virginia Department of Agriculture and Consumer Services (VDACS), which is empowered to so list a plant. The opportunity exists for VDACS Board to receive information about purple loosestrife at their December meeting. We are optimistic that the Board will "hear our case." (See Lythrum article on page 1.)

Use the enclosed fact sheet to educate yourself and your favorite gardeners, landscapers and nurserymen. (Additional fact sheets to distribute can be obtained from VNPS.) You will be helping to preserve Virginia's wild flowers and wild places.

Nicky Staunton



Lythrum salicaria

Remembering a Terrific Tenth....

A spirit of happy anticipation was evident as the 10th Annual Meeting of VNPS began Friday evening, September 11, in Roanoke. All members of Blue Ridge Wildflower Society, who planned all year for the event, are truly thanked for succeeding with a difficult task.

On Friday before dark, visitors admired the new Community Arboretum at Virginia Western Community College. Delicious refreshments, intense native plant conversation, and visits with friends were enjoyed as plans for Saturday's field trips were explained. A superb wildflower slide show, compiled by Bobby Toler, Frank Coffey, and others, preceded the evening's informative program on invasive exotic plants presented by Dorothy Bliss. The program showed me a plant, cinnamon vine, *Dioscorea batatas*, I should have known was an invasive intruder when it pushed through a new asphalt drive!

The field trips brought rave reviews Saturday evening during the pre-Auction reception. Talk about grass-of-Parnassus, stiff gentian, asters, and stretching across water to photograph them filled the hour. Visitors to Paul James' gardens were in awe of the

landscaping on his property. Parents expressed appreciation of Jan Dowling and Vicky Keenum who engaged the youngsters Saturday afternoon.

Our Silent Auction was composed of more gifts than ever and each of you is thanked ... those who donated items and those who bid on and bought them. This major fund raiser brought in nearly \$1000 for the Society. Great appreciation is heaped upon Hugh and Bunnie Smith and their helpers at the Auction. The amount of work involved in handling 200 items is immense. We are grateful for your long hours. Thank you.

There were special surprises during the evening ... Frank Coffey's band for one! Frank, president-elect of BRWS, enlivened our evening with jazz tunes.

Two new VNPS Registry sites were disclosed and applauded: Westvaco's Buffalo Creek Nature Area and the Cahas Mountain property of the Paul James family.

A brief business meeting accomplished election of new officers as nominated and approval of the amended bylaws. A sincere thank you to David Freeman, of Arnold and Porter Law Firm, Washington, D.C., for his pro bono

work in making the recommendations.

Certificates of appreciation, designed by VNPS artist Barbara Stewart, were presented to Board members leaving office and others who have donated much time and energy to our Society.

Gwynn Ramsey showed us "A Botanical Eden: The James River Gorge of Virginia" from the air and ground. The area's history, geology and influences of man, canal and trains were shared as well as some train sounds created by Dr. Ramsey's skilled harmonica playing!

VNPS Past Presidents Mary Painter and Mary Pockman and myself closed the evening with a few memories of the Society's past ten years.

Some members took advantage of a guided walk around the Peaks of Otter, while the Board met on Sunday morning. When Lauren and I stopped at the Peaks of Otter Lodge for lunch, we met up with several Society members and recollected what a wonderful weekend it had been.

Thank you all for attending. Special thanks to our BRWS hosts, for a rich, three-day visit to the mountains of Southwest Virginia.

Nicky

1992 VNPS Annual Meeting Highlights

A Botanical Eden: James River Gorge

Dr. Gwynn Ramsey, Professor of Biology and Curator of the Herbarium at Lynchburg College, presented a program on the James River Gorge, Saturday evening, at the VNPS Annual Meeting.

Dr. Ramsey described the James River Gorge as the area between Snowden and Glasgow which is a river distance of about four and one-half miles. This 3585-hectare study area includes the James River Gorge Watersheds between Snowden and Glasgow, the James River Face Wilderness, and portions of Amherst, Bedford and Rockbridge Counties.

Ramsey's interest in the flora of the region was kindled after learning that the Bedford County populations of Carolina hemlock on the south side of the Gorge were at their northern-most known distributional limit in Virginia. Later, the finding of clammyweed, *Polanisia dodecandra*, and the 1987 discovery of the rare Kankakee mallow, *Iliamna remota*, downstream from the Gorge, refueled Ramsey's desire to conduct a

comprehensive floral survey of the area, on which he has spent much of the past fifteen years.

A comparison of the James River Gorge species diversity and unique floristic composition with other eastern U.S. gorges reveals that it is unequalled. To date, 961 species of vascular flora have been found in the Gorge, making it truly "a Botanical Eden."

Some ecological factors that contribute to the diversity of this region's flora are the geohydrological history of the James River and its tributaries; the age, composition and stratigraphy of the native rock; steep topographic gradients; complex edaphic and geological mosaics; and atmospheric phenomena. These various conditions and disturbances by man have resulted in a variety of plant habitats including: frequently disturbed floodplains and exposed or eroded riverbanks; loamy floodplain woods; railroad beds; old canal towpaths and abandoned packet boat sluices; borrow pits, masonry stonework, and miscellane-

ous disturbed areas; exposed rock outcrops and barrens; well-drained wooded slopes; seasonal depression ponds; drippy rocks and springy outcrops.

Because of the habitat diversity and perhaps because of the various human disturbances, plant species normally associated with the coastal plain have been found here as well as a number of rare species. Interestingly, some common mountain species are absent.

Ramsey, who is a member of The National Association for the Preservation and Presentation of Storytelling and The Virginia Folklore Society, punctuated his presentation with poetic interjections. At one point, as we viewed a slide of the railroad, the sounds of his pulsating harmonica made me feel as though I were standing on the tracks as a coal bearing locomotive was about to round a bend and bear down on the audience.

Frank Coffey
Blue Ridge Wildflower Society

About Those Fabulous Field Trips

Those attending the 1992 Annual Meeting were offered a variety of excellent field trips in the Roanoke area.

On Saturday morning, VWCC biology instructor Rich Crites proudly served as guide through the Community Arboretum on the campus of Virginia Western Community College. Portions of the Arboretum are already completed: a shade garden, a collection of conifers, an herb garden, annual beds, and a rock garden. Future additions planned are a perennial garden and a wildflower planting by Blue Ridge chapter.

The mountainside gardens at the home of Barbara and Paul James were visited by about forty people. With Paul's impressive collection of rhododendrons, the most spectacular display occurs in spring; there were, however, many late summer and autumn plants to see. Asters, goldenrods and coneflowers were blooming in the meadow at the foot of the mountain. Ebony spleenwort, Christmas and cinnamon ferns, as well as cardinal flower, were beside the pond. In the rock gardens, native plants in bloom included bleeding heart, grass-of-Parnassus and mistflower. Also admired were a collection of tiny alpine plants and plants from foreign countries.

Transforming this mountain into a botanical garden has truly been Paul's labor of love. Along with Paul, Dora Lee and Sam Ellington served as guides, sharing their botanical and horticultural knowledge and plant lore.

Dorothy Bliss lead a group of eleven

on a morning walk around Abbott Lake at Peaks of Otter. The bluish fruits of silky dogwood and the scarlet berries of northern Jack-in-the-pulpit were viewed. Sensitive, bracken and marsh ferns were found near the Lake. On Elk Run Trail, many other ferns were identified.

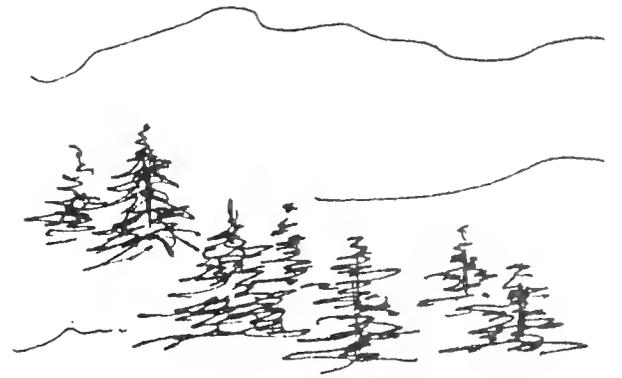
Blue Ridge chapter member Sam Gamble attended the field trip led by former Parkway interpreter Butch Kelly and submitted the following account:

Like Euell Gibbons, *Stalking the Wild Asparagus*, Kelly led twenty-two eager stalkers south on the Blue Ridge Parkway for a "Leisurely Investigation of Wildflowers and Scenic Overlooks along the Parkway to Smart View." The first stop was Bent Mountain Elementary School off Route 221. The roadside and pasture offered twenty-seven species, including winterberry and one of those invasive exotics, reed canary grass.

The second stop for the group was at MP 148 on the Parkway. Along the road, seventeen species were identified. The standouts were monkshood, basalmint and clammy cuphea.

At Smart View, where several VNPS groups convened and converged for lunch, six species were added to the morning's tally. Water lilies floated in the pond while ladies' tresses grew upland.

For most, the trip ended at Rake's Mill Pond where roadside and wetland species were investigated. A few carnivorous sundews were discovered in the marshy area which is rapidly changing as beavers dam the feeder



streams. From the road, one could see a beaver lodge, but it took a scramble across the creek for a photo of blue closed gentian! --S.G.

Sunday morning twenty-eight people met at Peaks of Otter to accompany botanist Gwynn Ramsey on a climb up Harkening Hill. This group included two other professional botanists as well as quite a few knowledgeable amateurs. The exchange of facts and folklore provided stimulating discussions and a wonderful atmosphere of camaraderie.

We enjoyed seeing the distinctive "doll's eyes" fruit of white baneberry and the bright red berries of mountain ash. Children in the group enjoyed discovering why Virginia knotweed is also called jumpseed. As we passed through great masses of white snakeroot, the Ellington's reminded us that this was the plant that caused milk sickness which resulted in many deaths during pioneer days.

This final field trip was a perfect ending to a wonderful weekend with friends who share an interest in preserving our native plants for future generations to enjoy.

Sandra Elder
Blue Ridge Wildflower Society

For Wildflower Gardeners

Shrubs that Shine in Fall

Hardly noticed through spring and summer, beautyberry and strawberry bush deserve a prominent spot in the garden because of their colorful and unusual fall fruit.

Beautyberry, *Callicarpa americana*, is named for the clusters of one-third inch, vivid magenta berries that encircle its stems at 4- to 6-inch intervals. This 4- to 8-foot, multi-stemmed shrub grows in woodlands throughout the southeast, including Virginia's coastal plain. The berries are most prominent after the leaves fall which is usually in mid-October. They remain attractive until birds or a hard freeze get them which can be as late as Thanksgiving.

Take care to locate beautyberry where its stunning fruit will be highlighted. Use a background of evergreens or a suitably colored fence or wall; avoid colors it will clash with such as red and orange. Berries will be most abundant when beautyberry is grown in full sun in deep organic soil with adequate moisture; however, this shrub is adaptable to poor soil, is drought tolerant, and thrives in half shade. Cut stems back almost to the ground early each spring since flowers and fruit appear on new wood.

Strawberry bush, *Euonymus americanus*, is named for the pinkish-red, warty fruit that is about 1-inch across and forms in September and October. Another common name, hearts a bustin', refers to the pods which open to reveal bright orange seeds. This widely branching, 3- to 6-foot shrub grows in moist woodlands from New York to Florida. It occurs throughout Virginia except for a few mountainous counties where the more northern species, *E. atropurpureus*, grows.

In its native habitat, strawberry bush tends to be sparse and lanky, but in good garden soil and a few hours of direct sun, it grows denser and produces more berries. Plant it near a path or walkway where its showy fruit can be appreciated up close. Green stems are colorful throughout winter.

Both of these shrubs can be grown from seed, and cuttings root easily. Plants probably won't be available at your local nursery but can be ordered from native plant nurseries.

Nancy Arrington
Horticulture Coordinator

(Excerpted from an article in Wild News, newsletter of Prince William Wildflower Society)

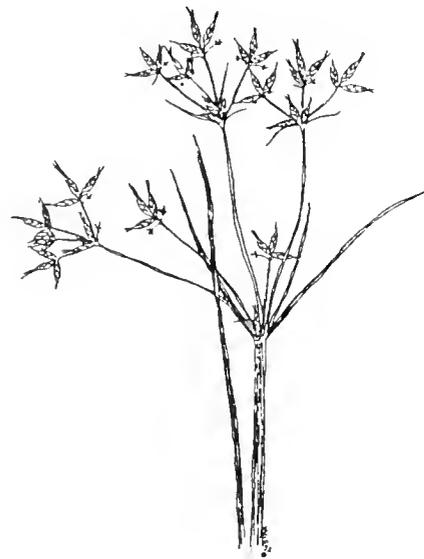
VIRGINIA'S RAREST PLANTS

Cyperus dentatus, Toothed Sedge

Only one extant population of *Cyperus dentatus*, toothed sedge, is known for Virginia. This population occurs in one of the numerous acidic sinkhole ponds which are located at the western foot of the Blue Ridge in Augusta and Rockingham counties. These ponds support over thirty rare plant species, including *Helenium virginicum* (Virginia sneezeweed) and *Eriocaulon septangulare* (white buttons), both of which have been discussed previously.

The sinkhole ponds are seasonally inundated. They are usually filled with water during the winter and spring months, but draw down, and may be partially or completely dry during the summer and fall. *Cyperus dentatus* is able to tolerate such fluctuations in water levels. In the main part of its range, from Quebec and Nova Scotia south to Delaware and Maryland, it often grows on sandy or gravelly shores where water levels may also fluctuate.

Cyperus dentatus is a member of the sedge family (Cyperaceae). In this family, petals and sepals are replaced by small bracts called scales as the most conspicuous part of the inflorescence. Toothed sedge has scales



Cyperus dentatus

Illustrated by Megan G. Rollins

with prominent tips, which give the inflorescence a jagged or toothed appearance. This explains the origin of both the Latin and common names of the species.

The fruits of members of the sedge family are called achenes. *Cyperus dentatus* often produces bulblets or leafy tufts in place of achenes. The inflorescence may bend over to the ground, allowing the bulblet or leafy tuft to root and

produce a new plant. This process is called proliferation and is an asexual or vegetative method of reproduction.

In 1989, the Virginia Endangered Species Symposium recommended State listing for toothed sedge as endangered. Although the species has not yet received formal listing, it is on the Virginia Natural Heritage list of rare plants and is ranked G5/S1 to reflect its common global distribution (G4) and extremely rare state status (S1). Although not protected regulatorily, the one known Virginia population is currently protected by a management agreement between the landowners and The Nature Conservancy.

Allen Belden, Jr.

Virginia Division of Natural Heritage

New Acquisitions

Two Preserves in Southwestern Virginia

The Nature Conservancy recently obtained two tracts which increase their holdings in southwestern Virginia. Appalachian Power Company donated 90 acres adjacent to Bottom Creek Gorge Preserve, expanding the Preserve to over 1700 acres. The plot contains the state's second highest waterfalls and a virgin stand of Carolina hemlock.

The second parcel, Beech Grove Cliff, in Lee County, is considered to be one of the most significant botanical areas in the state. The 100-acre site is primarily open woodland with limestone glades and cliffs overlooking the Powell River Valley. It is home to a unique assemblage of plants and an excellent representative of a hurricane bridge limestone formation. The Beech Grove

Cliff property protects part of one of the two known sites for the newly discovered Leo's clover, *Trifolium* sp. 1.

Kiptopeke State Park

This summer Kiptopeke State Park opened to the public. The first state park purchased since 1982, it is located two miles north of the southern tip of Virginia's eastern shore, making it the first state park on the Eastern Shore. The 1992 General Assembly authorized the sale of \$8.5 million in bonds to buy the site, which was previously a privately-owned campground. The 375-acre facility offers fishing, boating, swimming, picnicking, hiking, biking and camping. The wooded areas are important stopovers for migrating neotropical song birds.

Invasive Exotic Plant Species of Virginia

Purple Loosestrife (*Lythrum salicaria*)

Description:

Purple loosestrife is an herbaceous perennial characterized by long showy spikes of magenta flowers. Usually under 4 feet in height, the plant may reach up to 10 feet tall in nutrient-rich habitats. Purple loosestrife has flowers with 5 to 7 petals which occur in dense clusters on terminal spikes and which bloom from June to September. The leaves are usually opposite or in whorls of 3, lance-shaped, and without teeth. The plant is a member of the loosestrife family (*Lythraceae*) and may be confused with other members of that family, particularly with the native winged loosestrife (*Lythrum alatum*), which is rare in Virginia. Winged loosestrife, however, is generally smaller in height (averaging about 2 feet), has alternate leaves on the upper portion of the stem, and has fewer, more widely-spaced flowers. Purple Loosestrife is virtually indistinguishable from another Eurasian species, *Lythrum virgatum* and its cultivars.

Habitat:

Purple Loosestrife occurs in a variety of wetland habitats, including marshes, river banks, and the edges of ponds and reservoirs.

Distribution:

A native of Eurasia, purple loosestrife was introduced into the northeastern U.S. and Canada in the early 1800's. The plant has subsequently spread westward and southward through most of the temperate North America. Purple loosestrife is infrequent and widely scattered throughout Virginia, where it may be

near the southern limit of its climatic tolerance.

Threats:

According to most reports, purple loosestrife crowds out native wetland vegetation, such as cattails, grasses, sedges, and rushes. The plant thrives in disturbed wetlands and may, in fact, be diagnostic of disturbed or artificial wetland habitats. It often forms extensive monospecific stands in place of a diverse mixture of native species which provide the food and shelter required by many species of native wildlife. Purple loosestrife appears to provide



Purple Loosestrife (*Lythrum salicaria*)

little of value to wildlife.

Purple loosestrife may have achieved its widespread distribution due to its lack of natural predators in North America and its reproductive capabilities. A single stalk may produce as many as 300,000 seeds, and

For more information contact the:

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

or the



Virginia Native Plant Society
P.O. Box 844
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Invasive Exotic Plant Species of Virginia

Purple Loosestrife (*Lythrum salicaria*)

densities of up to 80,000 stalks per acre have been reported. The species also readily reproduces vegetatively from stem or root segments.

Cultivars of *Lythrum salicaria* and a closely related Eurasian species, *Lythrum virgatum*, are widely sold by commercial nurseries. Many of these cultivars are advertised as being infertile. Recent experiments have shown, however, that while these cultivars may be self-incompatible, they are extremely fertile when crossed with wild purple loosestrife populations. Thus, these cultivars may be contributing to the spread of purple loosestrife in the wild, although this has not been conclusively demonstrated.

Control:

Accurate identification through field guides or a knowledgeable person should be made before control measures are undertaken. Early detection of the plant is important as small populations are more successfully controlled than large, entrenched populations.

Small populations of purple loosestrife may be removed by hand pulling. This method should be avoided after flowering so as not to scatter seed. Pulled plants should be bagged at the site so that fragments

are not dropped along the exit route. Burning is the preferred method of disposal. Follow-up treatments may be needed in subsequent years to remove new plants which have sprouted from seed persisting in the ground. Digging plants out is not recommended as this creates disturbance, which may favor the spread of the species.

Where mechanical removal is not feasible, purple loosestrife may be removed by spot application of a glyphosate herbicide to individual plants. As glyphosate is a non-selective herbicide, it should be used sparingly so as not to contact the desirable species which may grow beneath the loosestrife. These species will be important for recolonizing the area after loosestrife has been removed. As with mechanical control methods, follow-up treatments may be needed in subsequent years to remove new plants which have sprouted from the seed bank.

Suggested Alternatives:

Suggested alternatives to purple loosestrife for use in the home garden include *Physostegia virginiana* "Summer Snow", and *Physostegia virginiana* "vivid", and *Chelone glabra*.

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BUTTERFLY WEED Its Many Names and Historical Uses

"Chigger weed we called it when I was growing up," my friend explained about butterfly weed. "The flowers were the same color as chiggers, so we thought that's where we got them." Also called butterfly weed because of its attraction for butterflies, this vividly colored wildflower has earned many common names derived from associations or observations about the plants. To one person it may be pleurisy root or orange milkweed; to another, orange root, white root, or chigger weed. One Indian tribe called it "raw medicine" because the root was used raw without boiling. The more common names a plant has, the more common and widely distributed it is likely to be, and the more uses for food or medicine it had among native Americans and those early settlers who found it necessary to "live off the land."

Indians and pioneer settlers used a tea made from the root of this plant to treat pleurisy and asthma. Indians chewed the roots and put the pulp into wounds, or pulverized dry roots and blew the dust into wounds. Crushed roots were applied as a remedy for old, obstinate sores. In one tribe, this medicine was the sole property of one secret society. One member was given the responsibility of digging, preparing, consecrating and distributing the medicine. In one tribe the root was used as a contraceptive; in another, it was used to remove warts! None of these remedies would be listed in the pharmacopeia of today.

Where young shoots of common milkweed are considered edible, butterfly

weed is considered poisonous. The close association of monarch butterflies with butterfly weed is related to this poisonous characteristic of the sap, which is not milky as in other milkweeds. Monarch caterpillars feed on these plants, ingest the sap, and become unpalatable to predators, chiefly birds. Apparently one unpleasant experience is all a young bird needs to learn to leave both the caterpillars and mature butterflies alone.

The sap also provides defense against grazing animals. Pastures dotted with butterfly weed were not necessarily beautiful to farmers. One 50-year-old reference text on weeds suggest these plants, "poisonous to cattle, should be eradicated by deep plowing" followed by a "clean crop." Any shoots coming up after plowing were to be pulled up or grubbed out with a hoe.

Others have found uses for butterfly weed. Seed fluff of this as well as other milkweeds was used as stuffing for pillows or substituted for feathers on hats. When woven into fabric, milkweed fluff looked like soft, fine fur. During World War II, large quantities of milkweed floss were gathered and used as a substitute for kapok in life jackets and similar items for the military.

Perhaps the best use for butterfly weed, if useful it must be, is as an attractive ornament in our gardens and, especially, as a bright splash of summer color in the wild.

Catharine Tucker
Botany Chair

Bruce Peninsula Again and A Gain

VNPS is planning another trip to Bruce Peninsula in Ontario, June 6-13, 1993. The rate will be \$415 per person which covers all food, lodging and boat trips. Participants must provide their own transportation to Canada and during the stay there; however, we will assist in arranging carpooling. This trip is limited to 15 people with those on the waiting list from last year having first priority. Interested parties should submit a deposit of \$50 as soon as possible (first come-first served) to Ted Scott, 12493 Spicewood Road, Orange, VA 22960.

Participants in the 1992 Bruce Peninsula Trip had an exhilarating experience viewing the flora of the Bruce. They also have been responsible for a liberal contribution to the Society. Conservation Chair Ted Scott and botanist Doug Coleman led the trip and, by their careful execution of funds, came up with a surplus. The balance of the money was donated to the Society. Thank you. Your generosity benefits all VNPS members.



NEWFS Seed Offer

New England Wild Flower Society is offering seeds or spores of over 200 varieties of wildflowers and ferns in their 1993 Seed and Book Catalogue. Members of NEWFS will automatically receive the Catalogue in January. Others may send \$2.00 and a self-addressed, \$.52 stamped, #10 (business-size) envelop to Seeds, NEWFS, Garden in the Woods, Hemenway Road, Framingham, MA 01701. All requests for the Catalogue must be received by March 1, as seed sales close March 15.

Wildflower Bibliography

A free, computer-searched bibliography containing 290 wildflower related entries, published 1979 through 1991, is available from the National Agricultural Library. Included in the 52-page publication is information on how to obtain copies of the articles or loan of the books through your local library. To order, send your request for "Q.B.92-45. Wildflowers", along with a return address label, to Reference Branch, Room 111, National Agricultural Library, 10301 Baltimore Blvd., Beltsville, MD 20705-2351.

BayScapes for Sound Landscape Management

According to the Alliance for the Chesapeake Bay, polls suggest that many people in the Bay watershed believe that Chesapeake Bay pollution starts with someone else. In fact, pollution starts with almost all the more than 13 million people who inhabit the Chesapeake's 64,000-square mile drainage area.

A significant amount of that pollution starts with what appear to be innocuous yard maintenance activities. Excessive amounts of fertilizer placed on lawns and gardens may wash into waterways. Misused pesticides may harm both aquatic and land species.

A program which shows the role gardening and lawncare practices have in pollution in the Bay and its tributaries, entitled "BayScapes", is being developed by the Alliance for the Chesapeake Bay

and the U.S. Fish and Wildlife Service's Chesapeake Bay Estuary Program. When completed the program will consist of slide shows, fact sheets, and other information. People interested in receiving BayScapes information when it becomes available may call the Chesapeake Regional Information Service at 1-900-662-CRIS.

Some information regarding environmentally sensitive grounds maintenance practices are available in existing publications. Two good ones, which are also free, are *Baybook: A Guide to Reducing Water Pollution at Home and Save Water, Maintenance and Money...And Help Save the Bay: A Homeowner's Guide to Water-Conserving Landscapes*. Copies of either are available from the Alliance for the Chesapeake Bay, P.O. Box 1981, Richmond, VA 23216.



Exotics, Deer Damage, and Regional Strategy Discussed at ENPA Meeting



Invasive exotics, the impact of deer browsing, and an innovative regional approach to native plant conservation were among the topics discussed at the annual meeting of the Eastern Native Plant Alliance (ENPA) in August.

Virginia's invasive plants program, which VNPS Conservation Chair Ted Scott initiated with the Natural Heritage Program and which he described at the meeting, generated many requests for more information. Noting the number of species on Virginia's list that had been introduced as ornamentals, a working group discussed constructive ways of working with the nursery industry on this issue. Focusing on just one widespread invader, Oriental bittersweet (*Celastrus orbiculatus*), Glenn Dreyer, Director of the Connecticut College Arboretum, assessed methods of controlling it and outlined its biological and ecological differences from the native bittersweet, *Celastrus scandens*.

Many informal conversations turned to deer damage, and another working group reviewed a draft questionnaire developed by Henry W. Art, of Williams College. Art will send the questionnaire to landowners and land managers as part of a study to determine the nature and extent of the problems deer present on public and private land across the U.S. (VNPS members interested in participating may get information through ENPA, P.O. Box 6101, McLean, VA 22106.)

NEPCoP, the New England Plant Conservation Program, was described by Bill Brumback, Director of Conservation for the New England Wild Flower Society. A new program, it brings together representatives of private organizations and government agencies in all six New England states to develop common policies and strategies. Although especially suited to a group of small states, it may offer a model for regional cooperation elsewhere.

The Eastern Native Plant Alliance is a group of organizations, including VNPS, that in diverse ways promote and demonstrate native plant conservation in the eastern U.S. and southeastern Canada. This year's meeting was held at Connecticut College; in 1993 ENPA will meet at the Missouri Botanical Garden.

Mary Pockman
Potowmack Chapter

Lythrum

(continued from page 1)

agenda, it was being rescheduled.

In the latter half of September, VNPS received a letter from the Virginia Department of Agriculture and Consumer Services stating that too many agenda items had resulted in Commissioner Clinton Turner removing the subject from the September agenda, and that it would probably not be placed on the December meeting agenda. We were notified that Commissioner Turner would contact Bud Bristow, Executive Director of the Department of Game and Inland Fisheries, about his opinion that purple loosestrife should not be listed as a noxious weed in Virginia.

Fertile Finding

The nursery industry has held that loosestrife cultivars grown and sold by nurseries are sterile. A thorough research program recently conducted at the University of Minnesota has shown that, while each of the cultivars appears to be self-sterile, each cultivar is both male and female fertile and each will hybridize with the other as well as with the species. Thus "garden-variety" purple loosestrife can contribute to the further spread of this invasive plant which has done much damage to wetlands from New England to Maryland and westward. Lythrum is now naturalized in Virginia. We can undoubtedly expect to see it spread here as it has in the more northern wetland habitats.

The Virginia Board of Agriculture and Consumer Services is the only state body empowered to hear arguments and make recommendations relative to establishing which plants should be listed as noxious weeds under any of the four acts of the General Assembly dealing with the subject. (It is also the group responsible for listing endangered species in the Commonwealth. -Ed.)

Do you know who is the Board member that represents your state congressional district? If not, see the list which follows. Then communicate with your district representative to let him or her know your concerns about Virginia's native flora. If you are concerned about the risks of purple loosestrife in view of what is now known, discuss the pros and cons about listing with your representative and request that this topic be put on the December agenda so Board members can hear all sides of the issue.

Ted Scott
Conservation Chair

(*Virginia Joint Venture Board is a multi-organization and state agency committee organized under the auspices of the Secretary of Natural Resources to implement the North American Waterfowl Management Plan.)

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Virginia Beach, VA 23464
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Lythrum Fact Sheets

Enclosed in this *Bulletin*, is a fact sheet on purple loosestrife. It is the first release in the series "Invasive Exotic Plant Species in Virginia", which VNPS has developed in collaboration with the Department of Conservation and Recreation. If you would like more fact sheets to distribute, they are available by writing: VNPS, P.O. Box 844, Annandale, VA 22003.

FROM NEAR AND FAR

Native Thistles

Piedmont chapter president Jocelyn Sladen reminds us that our two native thistles are non-invasive. Field thistle, *Cirsium discolor*, blooms in mid-summer, later than the invasive musk thistle. It is tall, its flowers are held upright, and it has spiny leaves but smooth stems. The less common pasture thistle, *C. pumilum*, is usually under 30 inches in height and bears large fragrant flowers.

Enlightening

VNPS member Aylene Goddard has made an in-depth study of the flora of Shakespeare's day and reports on the use of rushlights in the Rushlight Club quarterly, Sept. 1992. Rushlights were common illumination devices prior to the advent of electricity. These candle substitutes used the capillary attraction of the pith of soft rush, *Juncus effusus*, to draw up a flammable liquid fuel to the top of the cylindrical stem. Wicking was prepared by deftly peeling off all but a narrow supporting strip of stem. A good rushcandle measured over two feet long and burnt less than an hour.

Guarding the Greens

Rhode Island's "Christmas Greens" law protects *Lycopodium* species, sea lavender, and a number of other ornamentals. Species covered by the law may be collected only by the property owner or with the property owner's written permission; violators risk arrest and fines. Collection of sea lavender for holiday decorations and dried arrangements has had serious impact on populations in salt marshes on the Atlantic coast; it is now protected in five coastal states.

Isotria Uncovered

VNPS member Allen Belden, Jr., and Nancy E. Van Alstine, both of Virginia Division of Natural Heritage, report "Newly Discovered Populations of *Isotria medeoloides* (small whorled pogonia) in Virginia" in the *Virginia Journal of Science*, Summer 1992. Three new populations of the endangered species were found at Marine Corps Base Quantico, located in Prince William, Stafford and Fauquier counties.

Hemlock Havoc

The Avant Gardener, Oct. 1992, reports that the hemlock woolly adelgid is advancing rapidly and getting the best of hemlocks, particularly in the eastern U.S. *Tsuga canadensis* and *T. caroliniana* are susceptible targets, particularly if they are under stress or if the trees are given nitrogen fertilizer. Horticultural oils and insecticidal soap are among the effective pesticides for this pest in landscape situations.

Shrinking Champignons

Mycologists in Europe and the U.S. have noted a decrease in diversity, number and weight of mushrooms at monitored sites. European studies show a negative correlation between the abundance and diversity of fungi and levels of airborne nitrogen, sulfur and ozone, according to an article in *Science*, Vol. 254.

Forest debris decomposition and the resulting nutrient release depend on fungi, as does the symbiotic relationship between roots and fungi. A decrease in forest fungi causes a decline in forest vigor, and visa versa; at this time, it is unclear which comes first.

For Your Library or Gift-Giving

Landscaping with Wildflowers: An Environmental Approach to Gardening by Jim Wilson (1992; Houghton Mifflin Company; \$35 cloth-bound) This new book shows gardeners in every area of the country how to use suitable native plants, appropriately and imaginatively. Wilson, a host of PBS TV show "The Victory Garden", addresses each of the major types of wildflower landscaping--woodland garden, meadow, damp and wet spots, etc. One chapter is devoted to attracting birds and butterflies. A detailed list of nurseries which obtain their plants in an ecologically secure manner is included.

Growing and Propagating Showy Woody Native Plants by Dick Bir (1992; University of North Carolina Press; \$18.95) Bir is a former director of the Cullowhee conference on landscaping with native plants and Extension Horticulture Specialist at NCSU. This manual is a practical, hands-on guide to propagating and cultivating southeastern native trees and shrubs that have ornamental appeal. Flower, fruit, foliage, twig and bark characteristics are described and depicted for more than ninety species.

The Environmental Gardener published by Brooklyn Botanical Garden (1992; \$6.95 softcover) In the usual BBG handbook format, *The Environmental Gardener* is a collection of papers centering around a theme: in this case, reversing the loss of biological diversity by recreating native plant communities in gardens. Available by sending \$6.95 check or money order to Brooklyn Botanical Garden, 100 Washington Ave., Brooklyn, NY 11225.

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

VNPS Membership/Renewal Form

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Check here if you do not wish
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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
February 10.

Chapter News

Creativity Shared

Each year Prince William chapter combines a fall craft sale with its November meeting. Members sell wildflower and nature related craft items, and have an opportunity to do some early holiday shopping.

A photo of rue anemone and one of bluets in the *U.S. Wildflower Postage Stamp Collector's Book*, produced to accompany the wildflower postage stamps, were taken by Prince William Botany Chair Marion Blois Lobstein.

Intern Sponsored

Getting through the "system" can be difficult at times, even when one is trying to offer assistance. Persistence proved to be the key to finding a way for Potowmack chapter to contribute money to pay a summer intern to work on the chapter-sponsored nature trail at Green Spring Gardens Park. Through the dogged efforts of Potowmack Vice-President Nancy Luria and those of Park staff member Brenda Skarphol, a temporary worker was funded by the chapter. In addition to weeding and watering, the intern produced a pamphlet describing the trail, and an interest in native plants was fostered in a university student majoring in horticulture.

Discouraging Monoculture

To increase awareness of the need for safe spaces for denizen wildlife, Piedmont chapter declared 1992 "The Year of the Hedgerow." The group expanded the meaning of the word and promoted "culturing" a variety of non-forested habitats in succession in their activities this year.

In Memory

In September, the John M. Hodgson Memorial Garden Repose was dedicated on the Upper Wolfsnare Plantation in Virginia Beach as a memorial to South Hampton Roads chapter's co-founded and first president.

Member Recognized

Donna M.E. Ware was awarded the John Clayton Chapter Botany Award for 1992 for her extended service to the chapter, especially her involvement in botanical education. Ware co-authored the 1986 edition of the *Atlas of the Virginia Flora* and is Chair of the Flora Committee for the Virginia Academy of Science.

Available from Chapters

Fern Sampler Booklet

A *Fern Sampler of the Eastern United States*, a booklet by Wesley Greene, landscape supervisor at Colonial Williamsburg, is being sold by John Clayton chapter. In this clearly illustrated pamphlet, Greene describes and depicts the primary identification features and habitats of sixteen common ferns. This publication would make a good stocking stuffer or a gift to yourself. Order by sending a \$3.50 check to John Clayton Chapter, P.O. Box 677, Yorktown, VA 23690.

"Do Not Use" Flyer

Prince William chapter is distributing a flyer warning against the use of running cedar, ground pine, and other *Lycopodiums* for holiday decorations. These plant materials are collected from the wild as they are not being grown commercially. In some areas, they are

seriously overcollected. Flyers are intended to be distributed to businesses that have offered ground pine roping and wreaths for sale, and to people and organizations who have used the materials in the past. A sample copy, which may be reproduced and distributed, is available from Prince William Wildflower Society, P.O. Box 83, Manassas, VA 22110.

STRENGTH IN NUMBERS

In September, to try to increase our Society's membership rolls, a letter was sent to members requesting that they do one of three things:

- recruit a new member or members;
- give one or more gift memberships;
- or send a donation in lieu of memberships.

Many thanks to those who have responded to this request. The new members will add strength to our organization, and the donations will help the Society accomplish goals which otherwise would not be realized.

If you have not yet responded, we would be delighted to hear from you now. Please take a moment to think of friends and associates who would be pleased to become members of our organization. The holidays are coming. What a wonderful gift — to include others in the opportunity to share knowledge and enjoyment of our native plants and their habitats, and to protect our natural heritage.

If you have misplaced the envelop and membership brochure that were sent to you, please use the membership form on page 7. If you would rather send a contribution at this time, it would be more than welcome. Donations are fully tax deductible, according to IRS regulations.



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