January 1997

Vol. 16, No. 1

Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

Conserving wild flowers and wild places

Task force threatens Natural Heritage Program

When the Virginia General Assembly was in session earlier this year, legislation was proposed that could have effectively disabled the state's most capable species protection arm, the Natural Heritage Program. A task force ordered by Governor George Allen had recommended that Heritage, along with certain other key government functions involved with natural resources, be consolidated within the Department of Game and Inland Fisheries (DGIF). Such a transfer into a barely compatible department, to be made without funding, seemed a move calculated to cripple species protection in Virginia. Conservation groups led by VNPS and The Nature Conservancy objected and prevailed.

While the action was headed off, the flawed idea did not vanish. Over the past months, the Joint Legislative Audit Review Commission (JLARC), has complied with a request by the General Assembly to review once more the feasibility of consolidation. JLARC's draft recommendations were issued on October 16, 1996. The recommendation that Heritage be removed from the Department of Conservation and Resources (DCR) and placed with DGIF has re-emerged as a key part of the report. Also, the Endangered Plant and Insect Species Program, now falling under the Virginia Department of Agriculture and Consumer Services (VDACS) would be transferred. The entire restructured division

(See Heritage, page 8)

SPECIAL LEGISLATIVE FOCUS
KNOW THE ISSUES
BE ENVIRONMENTALLY AWARE

VNPS supports national strategy for invasive plant management

The Virginia Native Plant Society became a cooperator with the Federal Native Plant Conservation Initiative in 1995. This federal group is an organization of federal agencies actively supported by groups like VNPS, known as cooperators, who have a strong interest in native plants and protecting their habitats.

Native plants are being threatened by the rapid spread of many invasive plants in our croplands, forests, parks, prairies, wetlands and waterways. Invasives crowd out native plants, disrupt ecosystem processes, alter wildlife habitats and cost industry millions annually.

The Native Plant Conservation Initiative has developed a draft National Strategy for Invasive Plant Management.This draft has been developed to serve as a focal point for everyone concerned about invasive plants.

The Strategy's goals, objectives, and opportunities provide a framework of ideas and principles that, when implemented individually or cooperatively, will result in the restoration, preservation and enhancement of our nation's lands.

The Strategy has three goals: prevention, control and restoration. Each goal has one or more objectives with exemplary action items. Three approaches called partnerships, education and research are identified for each objective.

The Virginia Native Plant Society, as a Native Plant Cooperator, supports this Strategy. We believe that it provides the best approach to the problems associated with invasive plants by unifying national resources to support local actions.

From the President

Happy New Year! As we begin a new calendar year let us all rededicate ourselves to our goals of preserving wildflowers and wild habitats. Our natural world is constantly being threatened by developers, unthinking resource extractors and, of course, ourselves. How easy it is to see someone else's abuse of the environment, but sometimes our very own lifestyle places stress on the environment, which in turn supports further thoughtless development or resource extraction. We need to constantly think about the things we do and the wildflowers we all love.

I recently read a short piece by Kevin Connelly. It was taken from Gardener's Guide to California Wildflowers *,1991.*

> ***Growing wildflowers is rewarding if you learn to distinguish these small voices and listen. They whisper the history of where your house stands and where your garden lies, a chronicle of rainy seasons and droughts, fires, and floods stretching back centuries. Tune your senses to these voices, and they will tell you what wildflowers to grow, how and when to plant them and, best of all, why.***

*This year, 1997, will mark the first year we have celebrated a native tree as our Wildflower of the Year. Fringe-tree (*Chionanthus virginicus*) should receive a lot of attention and will be readily available from most nurseries. The Winter Workshop will focus on trees. Read about it in this* Bulletin *and make plans to attend. There are lots of exciting things in the works for this year. Please get involved with your chapter and state-sponsored events. We hope to develop a Web Site on the Internet this year. We are in need of an experienced designer who would be willing to donate some time and effort to this project. Anyone willing to help with this should contact one of the following:*

Dr. Stanwyn Shetler
142 E. Meadowland Lane
Sterling, VA 20164-1144
e-mail: shetlers@nmnh.si.edu

Frank Coffey
P.O. Box 137
Concord, VA 24538-0137
e-mail: fcoffey851@aol.com

And finally, it was with great sadness that I learned of the sudden death of Loren Staunton, Nicky's husband. Not only did Loren and Nicky raise a family together, they were a team or as Nicky often put it "buddies." Loren was a regular participant in all of the Society activities that involved Nicky and was always willing to lend a helping hand to anyone needing it. Loren and Nicky participated in two Bruce Peninsula trips and had planned to participate once again in '97.

I guess Loren's participation really increased when he became a "First Husband" of the Society during Nicky's six-year tenure as president. He continued to make regular trips to the VNPS post office box right up to his untimely death.

I will miss Loren's cheerfulness, sharp subtle wit and helping hands especially at Executive Committee and Board of Director meetings. Loren: thanks for all of your generosity and kindness. VNPS has truly lost a "Buddy."

Your President, Frank Coffey

Attention Members Wanted

The Virginia Native Plant Society is trying to find new ways to increase its membership as well as its presence throughout the state. We want to let more people know about us and the wonderful things we can accomplish. The larger our membership, the better we can educate the public and carry out our conservation efforts.

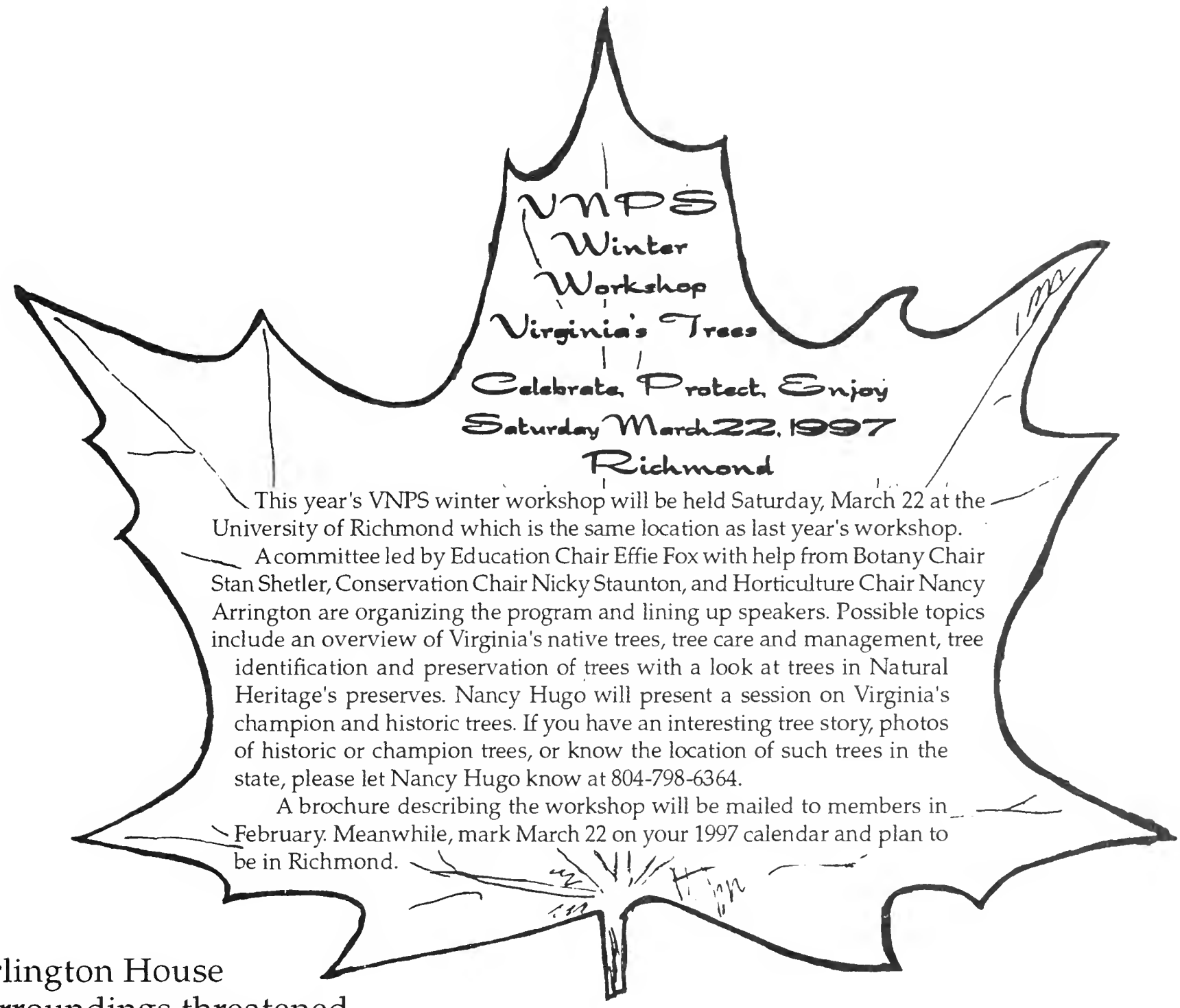
If you have any ideas about increasing our statewide, public exposure, such as through magazine advertisement, or any other ways to publicize our endeavors, please let us know. We are open to ideas and suggestions to help keep our organization growing and expanding. Call Alonso Abugattas, VNPS Public Relations Chair, at 703-358-6535 during the day or 703-528-8808 evenings, e-mail AlonsoLucy@aol.com; fax 703-845-2654 to let your ideas be heard.

Attention Writers Wanted

In order to bring *Bulletin* readers the full flavor of what our statewide society has to offer, the editor is inviting members to consider submitting an article for inclusion in the next, and all future, newsletter issues.

Articles of particular interest would be places to visit--parks, preserves, forests--and enjoy Virginia's native plants. An overview of what might be found there as well as directions and times to visit should be included. There are hundreds of these places throughout the Old Dominion. Share your favorite native plant spot with other chapters.

Other articles could include, but are not limited to, a book or video review, chapter news, or a focus on a specific plant or plant issue. If you have ideas or an article, please contact: Nancy Sorrells, Editor VNPS *Bulletin*, Rt. 2, Box 726, Greenville, VA 24440; or call 540-377-6390; or e-mail: nsorrell@leo.vsla.edu.



This year's VNPS winter workshop will be held Saturday, March 22 at the University of Richmond which is the same location as last year's workshop.

A committee led by Education Chair Effie Fox with help from Botany Chair Stan Shetler, Conservation Chair Nicky Staunton, and Horticulture Chair Nancy Arrington are organizing the program and lining up speakers. Possible topics include an overview of Virginia's native trees, tree care and management, tree identification and preservation of trees with a look at trees in Natural Heritage's preserves. Nancy Hugo will present a session on Virginia's champion and historic trees. If you have an interesting tree story, photos of historic or champion trees, or know the location of such trees in the state, please let Nancy Hugo know at 804-798-6364.

A brochure describing the workshop will be mailed to members in February. Meanwhile, mark March 22 on your 1997 calendar and plan to be in Richmond.

Arlington House surroundings threatened

The Defense Authorization Bill for Fiscal '97 allows the transfer of the last 24 acres of the once 1100-acre Arlington plantation back to the United States Army for additional grave sites at the National Cemetery in Arlington, Virginia.

This threatens Arlington House: The Robert E. Lee Memorial with the destruction of the last forested area sorrounding the historic home. Those 24 acres were to be "set aside in perpetuity" to preserve an appropriate setting for the mansion, home of George Washington's adopted son, George Washington Parke Custis, as well as that of his son-in-law, Gen. Robert E. Lee.

All of this just to provide acreage for grave sites that will totally consume it in just five years. If you wish, you can express your feelings to Governor George Allen, 900 East Main Street, 14th Floor, Richmond, Virginia 23219.

Grant project proceeding on schedule

Work continues on the project, partially funded by the National Fish and Wildlife Foundation, to create a master list of native plants for use in horticulture, landscaping or conservation activities. At a meeting held December 3 in Richmond at the Department of Conservation and Recreation (DCR), Division of Natural Heritage, representatives from the following organizations met to review the list of plants compiled: Dept. of Agriculture and Conservation Services; Department of Forestry; DCR-Division of Soil & Water Conservation; Department of Transportation; DCR-Division of Natural Heritage; Department of Horticulture, Virginia Tech; Virginia Nurserymen's Association; The Nature Conservancy; Lewis Ginter Botanical Garden; Virginia Native Plant Society; and Virginia Chapter of the American Society of Landscape Architects.

The list being reviewed was comprised of some 350 plants, deemed much too many to be realistic. Subcommittees were established to review and prune the list for the four categories: herbs, trees and shrubs, ferns and vines, grasses and sedges. This work is to be completed by mid-February.

Meanwhile, Natural Heritage and VNPS representatives will study how the information can best be organized for effective presentation in brochures.

For the library

"Rosie's Posies" sure to be a success with young gardeners

Rosie's Posies by Marcy Dunn Ramsey; Tidewater Publishers; Centreville, Maryland; ISBN 0-87033-472-7; $14.95

Rosie is a little girl who has just moved to a new place. She has no friends and is lonely. Her mother suggests that they plant a garden.

Rosie's mother orders the seeds, and when they come they begin to make their garden.

When the seeds come up Rosie pretends that they're her babies and the garden is her kingdom. She learns their names and how to care for them.Rosie never feels lonely there, but will evil things threaten her kingdom?

I think kindergartners to third graders would enjoy this book because of the colorful pictures, the "How to Garden tips", and the flower seed packets enclosed on the back of the book.

I liked the way the artist made the flowers come to life by putting faces on them. I also enjoyed the pictures and names of the things she found in her garden on the front and back cover and colorful pictures throughout the book. Some of these were aster, jewelweed, chickadee, praying mantis, Solomon's seal, bee, slug, lacewing, sweet pea, and worm.

With the garden season coming up, buy it for your favorite budding gardener before it blossoms out of sight!

Elizabeth Gatewood
Beverley Manor Middle School
Staunton, VA

Editor's note: When information about this colorful 9-inch by 9-inch children's book arrived in the mail, I thought that the most appropriate place to seek a review was from someone closer in age to the book's targeted audience. Elizabeth Gatewood, whose father is VNPS publications chair Mark Gatewood, often attends Shenandoah Chapter events and is quite knowledgeable about the outdoor world.

Center for Plant Conservation receives environmental excellence award

ST. LOUIS - The Center for Plant Conservation (CPC) received the first Denver Botanic Gardens Medal at a ceremony hosted by the Denver Botanic Gardens on Wednesday, October 2. This award honors eminent contributions and leadership in the area of plant stewardship and the environment. "It is an honor to accept this wonderful award on behalf of CPC and to be seen as 'leaders' in conserving rare plants in our country," said Dr. Brien Meilleur, CPC President and Executive Director.

The Center for Plant Conservation is the only national organization in the United States dedicated exclusively to the conservation of U.S. native plants. It is unique among the world's conservation programs. Founded in 1984, CPC operates a national program of offsite (*ex situ*) plant conservation, research, and education through a national network of 28 leading botanical gardens and arboreta. This consortium collects, grows and maintains the National Collection of Endangered Plants, a living collection of 500 of the nation's rarest plants. The seeds and cultivated plants which comprise this collection are a source of genetic material for eventual reintroduction into the wild and are used in research, education and possible commercial development.

The efforts of the 28 gardens are undertaken as complements to the preservation of the U.S. flora through habitat protection, management and restoration. The CPC national office, headquartered at the Missouri Botanical Garden in St. Louis, provides coordination and support services while the gardens maintain the living plants or seeds and engage in conservation-related activities. The network's collective goal is to remove the rare plants of the U.S. from danger and to restore them to secure habitats.

One of CPC's unique strengths is working collectively with other non-governmental organizations, concerned citizens, and government agencies. The Center's collection of nearly 500 species--a quarter of the plants identified as rare, threatened or endangered in the U.S.--is a measure of its success. More telling is CPC's overwhelming acceptance by the world's conservation experts, institutions, and media as the pre-eminent advocate for plant conservation.

The CPC can be contacted at: Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299; phone: 314-577-9450 or homepage: http://www.mobot.org/CPC.

Three new institutions join CPC network

The Center for Plant Conservation announced the selection of the Chicago Botanic Garden in Glencoe, Illinois; the Morton Arboretum in Lisle, Illinois; and Santa Barbara Botanic Garden in Santa Barbara, California as new members into the CPC network.

These three nationally prominent institutions were selected to become Participating Institutions during CPC's October board meeting. This brings the consortium to 28 gardens and arboreta.

1997 VIRGINIA NATIVE PLANT SOCIETY PHOTOGRAPHY CONTEST

1. Subject categories:
A. VNPS Wildflower of 1998 (columbine;*Aquilegia canadensis*) - specimen; habitat-wild or garden
B. Favorite native plant photograph - open to all vascular and non-vascular species; non-flowering (mushrooms); ferns; sea or land plants; wildflowers, shrubs, vines, trees, etc.

2. Contestants:
All contestants must be members of Virginia Native Plant Society but there will be two categories of contestants: professional and non-professional.

3. Entry fee:
$1 per photograph. Entry of contest grants use of any winning photograph by VNPS in official publications, and the right to make a slide for such production.

4. Format:
8 x 10 inches mounted

5. Information provided:
Contestants should provide any technical data concerning the photo submitted including camera settings, lighting, etc.

6. Deadline:
Entry deadline is July 31, 1997. Entries must be submitted to:

VNPS Photography Contest
P.O. Box 844
Annandale, VA 22003.

7. Winners:
Winners will be announced at the Annual Meeting. Ribbons and a grand prize of an engraved Jefferson Cup will be awarded.

Chapter News

Plant garden, memorial tree, bio-inventory among Potowmack projects

The Potowmack Chapter has been busy the last few months. It recently received a letter from the Bryant Adult Alternative High School in McLean, Virginia, thanking it for the plant donation and help received from Potowmack's Propagation Chair Gerry Pratt. The school is starting a native plant garden for ornamental and education purposes. The aid received has given them a good start on the project and they have promised to keep the chapter informed of their progress.

The chapter was also well represented at a special event called the Volunteer Festival at the Springfield District Government Center on October 26. Kathleen Kust, Potowmack's conservation chair, was there to help the volunteers learn more about native plants while they help improve the appearance of their community. The *Connection Newspaper* reported a good turnout of high school students, scouts and adults who helped conduct resource management while learning about the flora around them.

Other recent work includes the donation of a 6-foot Washington hawthorn (*Crataegus phaenopyrum*) to Riverbend Park, a Fairfax County Park Authority site, in memory of beloved charter member Dorna Kreitz who served the Potowmack Chapter, the whole state and the cause of native plants with grace and dedication.

Several members of both the Potowmack and Prince William chapters of the VNPS started conducting bio-inventories of the plants and animals found at the Lorton Reformatory. The VNPS is just one of several organizations helping to inventory the fauna and flora on the prison's extensive land holdings. Others include the Fairfax Audubon Society, The Washington Area Butterfly Club and some of the local universities.

The Lorton staff is as eager as anyone to know what types of plants and animals are found on the tract and have been very helpful in arranging the surveys. It is hoped that the surveys will help in any decisions about what to do with the acreage, no matter who has possession of it.

The area is divided into various sectors which will be periodically searched to get an idea of what is found there. The VNPS chapters plan on doing these surveys several more times throughout the next year. Those who went on the initial survey discovered many plants and animals. There are sizable woodlands, many fields, several ponds and a few nice wetland areas. The place is quite beautiful and promises to hold many interesting plant and animal discoveries. If you would like to help, contact Kathleen Kust, Potowmack Chapter Conservation Chair, 703-836-5868.

Maymont garden show

The Pocahontas Chapter will be participating in the Maymont Flower and Garden Show. This year's show will be held from Thursday, February 20 to Sunday, February 23. The chapter will operate an education booth and use the new VNPS display during the event. Visiting members from other chapters are invited to stop by and say hello. The Pocahontas booth will be located on the mezzanine in the Richmond Centre in Richmond.

Winter plants

The Lewis Ginter Botanical Garden in Richmond is sponsoring a slide presentation on winter interest plants on Thursday, January 30 from 12:10 to 1 p.m.. For more information, call Pocahontas Chapter representative Betsy Ryland at 804-262-9887.

Old World plant sale

The Virginia Historical Society's 8th annual Old World Plant Sale will take place at Virginia House in Richmond on Saturday, April 12 from 9 a.m. to 5 p.m. and Sunday April 13 from 1 to 5 p.m.

Plant lovers are invited to come celebrate the return of spring and stock up on the rarest and finest Old World plants from the Virginia House gardens as well as from the area's finest growers. New daylily varieties from the Richmond Area Daylily Society as well as shrubs, vines, groundcovers and perennials from around the world will be available. Garden gifts from dirt to artwork will also be available. For more information, call 804-342-9665.

New PWWS officers

The Prince William Wildflower Society has two new chapter officers. Kim Hosen is the new education chair. She replaces Claudia Thompson-Deahl. Because of Nicky Staunton's election to the state conservation chair, Gina Yurkonis has taken over as the chapter's conservation chair.

Pocahontas garden

The Pocahontas Chapter continues to work on a native plant garden at the Parham Road Campus of J. Sargeant Reynolds Community College in Richmond. The garden site has been cleared of unwanted plants and desired plants have been tagged. Member David Lane designed and drew a map of the proposed garden.

Propagation workshop

The John Clayton Chapter presented a free workshop on propagation of native plants to members and guests. The three-hour session was held at the Virginia Living Museum in November.

Classes on seed sowing, propagation by cuttings, and below the ground parts (roots, rhizomes, corms) were led by Janis Miller, horticulture curator at the museum; George McLellan, landscape architect, and other members of the chapter.

Expanded riparian buffer is goal of Bay Program

ANNAPOLIS, Md. - Highlighting the important connection between streamside forest buffers and good water quality in the Bay region, the Chesapeake Executive Council set a new streamside forest buffer goal of 2,010 miles by the year 2010 at its annual meeting in Harrisburg, Pennsylvania in October.

The new goal calls on the Bay Program partners to "...increase the use of all riparian (streamside) buffers and restore riparian forests on 2,010 miles of stream and shoreline, targeting efforts where they will be of greatest value to water quality and living resources." A recent study showed that approximately half of the 110,000 miles of shoreline along the Bay and rivers are currently buffered.

"Buffers are a common sense, cost-effective way to keep pollution out of the rivers that flow into the Bay," said U.S. Environmental Protection Agency Administrator Carol M. Browner, the chair of the Executive Council. The Executive Council is the policy-making body of the Chesapeake Bay Program. The council includes Ms. Browner, Virginia Governor George Allen, Maryland Governor Parris Glendening, Pennsylvania Governor Thomas J. Ridge, District of Columbia Mayor Marion Barry and Chesapeake Bay Commission Chair Senator Noah Wenger.

In addition to signing the buffer goal, the Executive Council also adopted the Local Government Participation Action Plan; kicked off the new Chesapeake Bay Partner Communities program and the new Businesses for the Bay program; accepted the Regional Action Plans for Toxics Control for three toxic hotspots in the Bay region (Baltimore harbor, the Elizabeth River in Virginia and Anacostia River in Washington, D.C.); adopted the Priorities for Action for Land, Growth and Stewardship in the Chesapeake Bay Region; adopted the 1996 Information Access Strategy and adopted the 1996 Chesapeake Bay and Atlantic Coast Black Sea Bass Management Plan.

For more information, write: Chesapeake Bay Program, 410 Severn Ave., Suite 109, Annaplic, MD 21403 or go to homepage: http://www.epa.gov/r3chespk/

Beware of problems with invasive honeysuckle

Many types of bush or shrub honeysuckles (*Lonicera spp.*) have long been recommended for planting in people's yards. They are hardy, spread fast, are attractive and provide fruit for wildlife to eat. Unfortunately, most are not native and many of the reasons previously given for planting them also make them invasive.

It doesn't help that some animals, like white-tailed deer, seem to prefer native honeysuckles as forage and that deer populations are exploding over most of the East. This reduces the natives even more. Meanwhile, those fruits that provide the food for wildlife are helping seed new plants in animal droppings all throughout the area.

So how do you know if what you have is native or not? Most nonnative bush honeysuckles have a hollow pith in their twigs. As a general rule, if you cut a young twig and it is hollow, it's alien. You will probably find that most of your honeysuckle shrubs are exotics. The large numbers you will probably find if you look closely in your nearby woods should also convince you that they are invasive and are best not planted. Controlling them once they are in your neighborhood is something else altogether.

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

VNPS Membership/Renewal Form

Name(s)_____

Address_____

City_____ State_____ Zip_____-_____

__Individual $15 __Family $25 __Student $10

__Patron $50 __Sustaining $100 __Life $400

__Associate (group) $40; delegate_____

To give a gift membership or join additional chapters: Enclose dues, name, address, and chapter. (Non-voting memberships in any other than your primary chapter are $5).

I wish to make an additional contribution to ___VNPS _____Chapter

in the amount of __$10 __$25 __$50 __$100 __$_____

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

__Check here if you do not wish to be listed in a chapter directory.

Make check payable to VNPS and mail to:

VNPS Membership Chair, P.O. Box 844, Annandale, VA 22003

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

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(703) 368-9803

Frank Coffey, President
Nancy Sorrells, Editor
Barbara Stewart, Artist

The deadline for the next issue is Feb. 1

• Heritage

(Continued from page 1)

would be renamed, becoming the Division of Wildlife. Plants would be considered "wildlife" under the somewhat bizarre designation, "non-cultivated plants."

The new recommendations for consolidation offer one measurable upgrade from that offered previously. The report recommends that, in the event of transfer of the various departments, "positions and funding" should be transferred and then maintained as needed." In other words, some promise of funding and staffing would be there for Heritage for the time being, although its future might still leave much to the discretion of DGIF. Under current structure, DGIF receives no general funds. Fees paid by hunters and fishermen provide most of the department's revenue.

The functions of DCR's Heritage program and those of DGIF's various divisions might not combine as elegantly as this report would seem to imply. Nationwide, 68 percent of state natural heritage programs are housed outside game and wildlife units, so the "natural" placement in DGIF is not the case in the majority of instances across the country. Virginia's Heritage Program plays a vital role in managing the large number of sensitive resources on federal land, state parks and natural areas. Its capacity to perform this vital function would probably be diminished by reorganization.

Consolidation of some of Virginia's natural resources departments is not intrinsically a bad idea. For instance, the Endangered Plant and Insect Program now housed awkwardly within the Virginia Department of Agriculture and Consumer Services (with a staff of one!), could become a more viable arm of plant protection if it were moved into DCR and allowed to operate with Heritage.

Our Natural Heritage Program is absolutely central and essential to wild plant protection in Virginia, particularly to those communities and species that are more vulnerable. It is time for native plant conservation to gain some priority in environmental consideration. High time. Any action by the upcoming General Assembly to implement JLARC's recommendations should be a matter of great concern to VNPS members.

Jocelyn Sladen
Conservation co-chair

Last opportunity for journey to "The Bruce"

Virginia Native Plant Society members won't want to miss what may be the last chance to see "The Bruce" with veteran trip leader Ted Scott. Scott has been to this Canadian "plant paradise" on a number of occasions and knows the plants of the countryside as well as anybody.

As the *Bulletin* heads to press, there are openings for three more persons for the trip in June of '97. The group arrival date in Canada is June 14 and departure for home is June 21. The total charge for the trip is $450 which covers lodging, all meals for the week and a boat trip to Flower Pot Island where some of the rarer plants grow.

Anyone interested should contact Scott at 540-568-8679. The first three persons from whom we receive deposits of $50 each will have a place reserved for them for the trip. Any addditional ones will be placed on a waiting list to fill any vacancies that might occur later. Please make checks to Virginia Native Plant Society and mail to: Ted Scott, 100 Sunnyside Drive Unit 32, Harrisonburg, VA 22801.

There are no plans at this time for future VNPS trips to the Bruce, so anyone interested should take advantage of this last scheduled opportunity.

Virginia Native Plant Society
P.O. Box 844
Annandale, VA 22003

Please note the expiration date on your mailing label and renew accordingly.

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Conserving wild flowers and wild places

VNPS helping with native plant trail at state arboretum

Development of a new native plant trail at the State Arboretum of Virginia offers opportunities for stronger ties between the Virginia Native Plant Society and its chapters, and the Arboretum and the Foundation (until recently Friends) of the State Arboretum (FOSA). Working together on this project can serve these organizations' shared goal of heightening public appreciation of Virginia's native flora, and can also broaden the outreach of each.

When completed, the trail will invite a leisurely stroll through a woodland, a sunny field, and a wetland, each with naturalistic plantings of appropriate Virginia natives. It will enable visitors to experience in a concentrated, readily accessible area some of the plants of similar habitats across the state. It will also be a resource for classes and informal education about native plants.

The woodland section, to be planted next fall and the following spring, is the first slated for development. Here, on a slope a short walk from the Quarters, the arboretum's main building, persistent work has freed handsome limestone outcrops of a dense tangle of the exotic vine *Akebia quinata*, and removal of other nonnatives has given new prominence to existing natives, such as a magnificent hackberry, the state co-champion. The stone chimney of a 19th-century building and remnants of a stone wall stand as reminders of an earlier era.

Several trees and large shrubs

(See Native plant trail on page 4)

Parasitic plants well represented in Virginia

With its leafy stem and large yellow flowers, this new plant didn't look like a parasite. Keying it down in *Gray's Manual*, I found it was *Gerardia grandifolia* (now known as *Aureolaria grandifolia*). The manual, with typical Yankee understatement, noted that my new found specimen was "often more or less root parasitic." Further research revealed that it was a parasite on the roots of oak trees. How could this be, I wondered, since the plant looked autotrophic? How can one plant invade another?

***Cuscuta gronovii*, dodder**
Illustration by Nicky Staunton

This was my first encounter with a parasitic angiosperm. It spawned a lifelong interest in these bewitching creatures. In the more than three decades that have elapsed, I have studied parasites on five continents. As a result, my fascination with these plant cannibals has only increased.

The southeastern United States has a relatively rich flora of parasitic angiosperms. In fact, one group, the parasitic Scrophulariacae, reaches its greatest diversity here. Virginia has no paucity of parasites, either. More species of Santalaceae occur in Virginia and surrounding states than any other place on the continent. And we are privileged to have the world's largest populations of *Buckleya distichophylla* (Santalaceae).

What are parasitic plants and how

(See Parasites, page 3)

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From the President

Now that spring is only days away, we will have the opportunity to plant the seeds for that "native plant" garden so vivid in our winter dreams. As work proceeds in our gardens, let us all be generous in our plans for contributing plants to chapter plant sales.

It is through plant sales that most chapters are able to raise the funds necessary to carry out the work of VNPS. Many chapters help establish native plant gardens and trails by donating plants left over from sales. One example is the newly established Native Plant Trail at Blandy. Please read about this exciting use of native plants in Mary Pockman's article in this Bulletin.

In closing, I would like to thank all members who responded so generously to our Year End Appeal. If you had planned to give, but did not get around to it, you may still respond.

Your President, Frank Coffey

P.S. Fix that Zip! Please note that the 1997 refrigerator magnet bearing the 1997 Wildflower of the Year has the VNPS address printed with the wrong zip code. That zip should be 22003.

Mark your calendars!

The Virginia Native Plant Society's Annual Meeting will be in Williamsburg this year, hosted by the John Clayton Chapter. The meeting will be held at Colonial Williamsburg's Woodlands hotel facilities. Be sure to mark September 19-21 on your calendars.

VNPS establishes Endowment Fund

The VNPS Board of Directors has combined several existing funds to establish the Virginia Native Plant Society Founder's Endowment Fund. The largest of the existing funds was the Founder's Fund, established to honor Mary Painter.

Mary was the founder and first president of the Virginia Wildflower Preservation Society, the predecessor of the Virginia Native Plant Society.

The Society plans to allow the Endowment Fund to grow to the point that its earned interest could be used for a worthy project. Possible future projects include the publication of a Flora of Virginia, establishing a VNPS office, a Botanical Education Program, scholarships and grants, and establishing display gardens that feature Virginia natives.

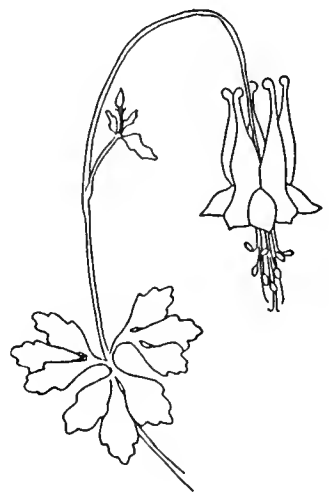
The Endowment Fund currently stands at approximately $4,000 and gifts are always acceptable. A tax-deductible gift is a nice way to memorialize a friend or relative and honor a special achievement or event.

Memorial contributions

Memorial contributions to the Virginia Native Plant Society Founder's Fund are a special way to recognize Loren Staunton's long support of VNPS. A letter acknowledging your thoughtful contribution will be forwarded to Nicky Staunton. All donations to the endowment are tax-deductible. For more information, or to contribute in memory or tribute to other VNPS family and friends, please contact:

Frank Coffey, President
P.O. Box 137
Concord, Virginia 24538-0137

Thanks are extended for contributions payable to "VNPS Founder's Fund."



Aquilegia canadensis, Columbine
Illustration by Nicky Staunton

Queen size quilt to be raffled at meeting

Last year's quilted wall hanging was such a success that the VNPS Board of Directors voted to plan another raffle for 1997 and to increase the size of the raffled quilt to "queen size." This quilt, again quilted by Mrs. Lorene Edmunds, will be similar to last year's and will feature the 1998 VNPS Wildflower of the Year, columbine.

If you were one of the many attending the Annual Meeting in September, you had the opportunity to see her marvelous work first hand. We are fortunate indeed to have her take on the "queen size" quilt project this year.

A special thank you to Lib Kyger, Betty Rosson, Carroll Lisle, Polly Taylor, Teddy Maloney and other Shenandoah Chapter members for working with Mrs. Edmunds on the design and layout.

Tickets for the drawing are $1 donation for a single ticket or $5 for a book of six. Chapter presidents will receive tickets to make available at chapter meetings and events.

•Parasites

(Continued from page 1)

is their behavior different from other plant interactions? The organ of parasitism is the haustorium that forms the link between host and parasite. We may define a parasitic plant as a plant with a haustorium. By forming a haustorium on the root of the host, the parasite seedling obtains a mature, functioning root system.

Finding haustoria takes some work but is worth the effort for anyone interested in these underground agents. A good parasite to examine is *Agalinis purpurea*, a purple flowered annual often abundant in parts of Virginia. It flowers in the fall in moist sunny areas. Simply grab the plant near its base and slowly pull it up. A close examination of the shallow root system will reveal tiny (up to 0.5 mm), white, knob-like ends of roots. With some luck, you will see the attachment to the host root. Often, the haustorium will terminate a short root of the parasite.

Types of Parasitism

We may classify parasites as holoparasites, hemiparasites, obligate parasites, and facultative parasites. The most abundant parasitic plants in Virginia are facultative parasites, like *Agalinis*. These are chlorophyll containing plants that do not require a host for germination. Facultative parasites can be grown to maturity under high fertilization regimes without hosts. They favor open, sunny areas where competition is great. This may be due to their exceptionally strong transpiration necessary for movement of materials from host to parasite. Obligate parasites, on the other hand, require a host to flower but not always for germination. Overall, parasites with tiny ("dust") seeds, i.e., less than 0.45 mm long, require a host stimulant to germinate while larger seeds do not. Holoparasites lack chlorophyll and require a host and a germination stimulant. Hemiparasites contain chlorophyll when mature.

Characteristics of Parasites

In Virginia, the habit of these parasites may be shrubs, vines, and annual or perennial herbs. In the stem parasite *Cuscuta*, the vegetative portion consists solely of a stem and scale leaves. *Buckleya*, *Nestronia* and *Pyrularia* (all members of the Santalaceae or sandalwood family) and the common mistletoe, *Phoradendron leucarpum*, are shrubs. All others are herbaceous root parasites; that is, they produce haustoria solely from their roots and may be annuals, perennials or biennials.

The seedling phase is the most vulnerable part of the life cycle because at this stage the vital attachments to the host are made. In dust seeds with minuscule food reserves, this phase is especially critical as the seedling will die in a few days without a host. Parasites with larger seed reserves can survive longer. To ensure seedling success, parasites have a remarkable array of adaptive mechanisms to ensure a host connection.

Much of this involves a finely-tuned system of chemical signals. These signals tell the parasite when the host is near, how near it is, and even help send the signal that tells the parasite to develop a haustorium and invade its host.

Extraordinary breadth of host selection and specialization exists among parasites. Some species of *Castilleja* and *Cuscuta* can parasitize hundreds of different hosts in diverse families. At the other extreme is beechdrops, *Epifagus virginiana* in the Orobanchaceae. It occurs only on American beech.

The terms "host range," "host specificity," "host preference," and "host selection" have different meanings. Host range is the total number of different plants that they can parasitize. For example, *Seymeria cassioides*, a species of the Scrophulariaceae rare in Virginia, invariably attacks pines in nature, but can parasitize many species of angiosperms and gymnosperms. Host preference, i.e., choice of the most desirable host for optimal growth, is much narrower. Similarly, *Cuscuta* species, dodders, typically have extremely broad host ranges and can even attach to many different hosts at once. Nevertheless, in nature, they are found regularly on few hosts.

Epifagus virginiana, Beechdrops
Illustration by Nicky Staunton

Only 15 of the approximately 318 families of dicots contain parasites (less than 5 percent). Only about half these 15 families are holoparasites. Of the approximately 165,000 species of dicots, about 1,800 are parasitic or just more than 1 percent. Figures at the generic level are similar with approximately 135 of all 13,500 (1 percent) being heterotrophic but this figure includes mycotrophs

Upcoming issues will discuss the dodders and mistletoes, the intriguing sandalwood family and the Scrophulariaceae (figworts and broomrapes).

Lytton J. Musselman is a professor of biological sciences at Old Dominion University.

Leesburg garden show

On April 26 and 27, four city blocks of Historic Downtown Leesburg will be transformed into a botanical garden at the Seventh annual Leesburg Flower & Garden Show.

Vendors will display a variety of gardening equipment, supplies, plants and flowers in addition to landscaped gardens. Gardening workshops, entertainment for all ages, and food are also scheduled throughout the weekend.

The show is sponsored by Leesburg's Department of Parks and Recreation. Hours are 10 a.m. to 6 p.m. Saturday and 10 a.m. to 4 p.m. Sunday. An admission donation of $2 for adults and $1 for children is requested. Historic Leesburg, founded in 1758, is located 35 miles northwest of Washington, D.C. For more information, call 703-777-1262.

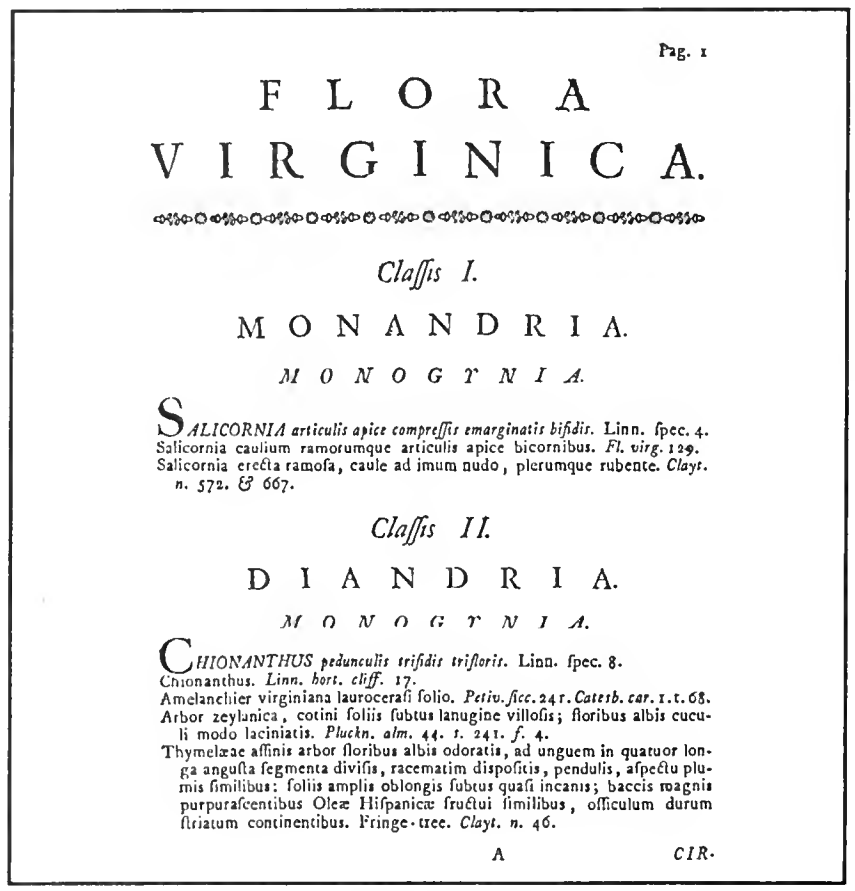
A purple fringe-tree? Ask John Clayton

About 10 years ago, I thought I had to have a fringe-tree, tagged *Arbor floribus albis odoratis* by 18th century scientist John Clayton, in my yard. Albis, of course, means white. It was Carolus Linnaeus who named it *Chionanthus* which translates loosely to "wind-tossed blossoms." Therefore, the tree has white, wind-tossed blossoms. Mark Catesby and Petivar compared the flowers to the amethyst Italian starwort. Plunkett called its white blossoms "cowl-like."

Clayton found the blossoms to be "thyme scented" and then used the word *purpurascentibus* to describe the *fruit*. As a scientist in the age of Enlightenment, Clayton had quite a following in Virginia, especially among younger, science-minded men who chose him, in 1773, as the first president of their Society for the Promotion of Useful Knowledge. Undoubtedly young men visited his garden in Gloucester County and saw his beautiful fringe-tree in the spring covered with white fringe. Later in the year they may also have seen it hung with purple fruit.

On the first page of his second *Flora Virginica*, Clayton described the fringe-tree in 10 lines. In those lines, he used two words meaning purple to describe the fruit. Along the way, however, the word purple became erroneously linked with the name of the tree instead of a description of the fruit.

(See purple fringe-tree, page 10)



Pag. 1

FLORA VIRGINICA.

Classis I.

MONANDRIA.

MONOGYNIA.

SALICORNIA *articulis apice compressis emarginatis bifidis.* Linn. spec. 4.
Salicornia caulium ramorumque articulis apice bicornibus. *Fl. virg.* 129.
Salicornia erecta ramosa, caule ad imum nudo, plerumque rubente. *Clayt. n.* 572. & 667.

Classis II.

DIANDRIA.

MONOGYNIA.

CHIONANTHUS *pedunculis trifidis trifloris.* Linn. spec. 8.
Chionanthus. *Linn. hort. cliff.* 17.
Amelanchier virginiana laurocerasi folio. *Petiv. ficc.* 241. *Catesb. car.* 1. t. 68.
Arbor zeylanica, cotini foliis subtus lanugine villosis; floribus albis cuculi modo laciniatis. *Pluckn. alm.* 44. t. 241. f. 4.
Thymelææ affinis arbor floribus albis odoratis, ad unguem in quatuor longa angusta segmenta divisis, racematim dispositis, pendulis, aspectu plumis similibus: foliis amplis oblongis subtus quasi incanis; baccis magnis purpurascentibus Oleæ Hispanicæ fructui similibus, officulum durum striatum continentibus. Fringe-tree. *Clayt. n.* 46.

A CIR.

The first page of John Clayton's 18th century Flora Virginica *featuring fringe-tree.*

•Native plant trail

(Continued from page 1)

planted last fall will in time extend the woodland canopy up the slope and create a new edge habitat on the lower, wetter side. After walkways and steps are finished this summer, wildflowers and ferns, along with additional woody plants, will be installed in selected areas. Further plantings will follow as more of the site becomes shaded.

Many individuals who are members of both VNPS and FOSA have already helped the arboretum get the native plant trail off to a strong start. Special credit goes to Piedmont Chapter member Nancy Larrick Crosby, whose interest and generosity have steadily encouraged progress. How VNPS might build on this beginning is on the agenda for the Society's March Board meeting, and chapter boards can follow up individually as well.

Mary Pockman

The State Arboretum of Virginia, part of the University of Virginia's Blandy Experimental Farm, is located east of Winchester, in the northern Shenandoah Valley.

Can you donate plants?

Providing plants for the arboretum's new trail is one way VNPS members can help. If you're interested, check the list of species chosen for the woodland section, which includes a few not widely propagated by commercial nurseries. Offers of other species will be considered if they suit the design and the growing conditions of the areas to be planted. Plants must be native to Virginia and obtained through nursery or garden propagation or authorized rescues.

For the plant list or additional information, please get in touch with Mary Pockman, at 7301 Hooking Road, McLean VA 22101; 703-356-7425; or pockman@delphi.com.

Columbine has fascinating past

Most people are probably familiar with the VNPS Wildflower of the Year for 1998--columbine (*Aquilegia canadensis*). After all, columbines are very popular garden plants. But how much do you really know about these enchanting flowers? It might be interesting to find out about some of the little-known folklore surrounding these members of the buttercup family.

For example, from where does the name come? *Columbine* is derived from the Latin word for "dove" because to some the spurs look like dove heads in a circle. To others, they appear to be human heads in a circle so another is "meeting house." This flower has several other common names: rock bells, rock lily, cluckies, bells, honeysuckle, Jack-in-trousers, Granny's nightcap and culverwort. It is easy to understand why some of the names were used, while others are a little more difficult to comprehend. Culverwort, for instance, is from the Saxon words *culfre* meaning "pigeon" and *wyrt* meaning "plant" or "herb."

Of course, the scientific name has a meaning as well. *Aquilegia* is from

(See Columbine, page 8)

Virginia Wildflower Celebration 1997

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

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

The 1997 Virginia Wildflower of the Year, fringe-tree, qualifies as one of North America's most beautiful small flowering trees. Its showy blooms reliably flower near Mother's Day in the northern part of Virginia. *Chionanthus virginicus* leaves an indelible impression on all who are fortunate to encounter this plant in its native environment. It most commonly grows along streams, small rivers, and in drier sites at higher elevations throughout the state.

Calendar of Events

March 24, Monday, 7 p.m. "Spring in Bloom" meeting of the Blue Ridge Wildflower Society at Center in the Square in Roanoke. Presentation on spring flora. Karen Shepard (Blue Ridge) 540-772-2733.

March 27, Thursday, 7:30 p.m. "Past and Present Herb Use" program by member of Board of the Herb Society of America. Potowmack monthly meeting, Green Spring Gardens Park. 703-642-5173.

March 29, Saturday, 10 a.m. Arcadia field trip in search of spring ephemerals. Meet by Jennings Creek bridge on Route 614. Bring lunch. Karen Shepard (Blue Ridge) 540-772-2733.

April 12, Saturday, Blue Ridge Wildflower Society trip. Karen Shepard (Blue Ridge) 540-772-2733.

April 12, Saturday, 8:30 a.m. Lake Moomaw trip. Leave from Bridgewater or meet at lake at 10:30. Bring lunch. Dwight Shull (Shenandoah) 540-828-3024.

April 20, Sunday, 10 a.m.-12:30 p.m. Great Falls Walk. Led by Marion Lobstein 703-536-7150.

April 20, Sunday, 2 p.m. Bull Run /Fairfax Regional Park Bluebell Walk. (Potowmack & Prince William assisting). Nicky Staunton 703-368-9803.

April 20, Sunday, 2:30-4:30 p.m. Balls Bluff Walk. Marion Lobstein 703-536-7150.

April 24, Thursday, 7:30 p.m. "Fairfax ReLeaf" program. Potowmack monthly meeting, Green Spring Gardens Park. 703-642-5173.

April 24-27, Thursday-Sunday. 28th Wildflower Pilgrimage, co-sponsored Science Museum of Western Virginia & Blue Ridge Wildflower Society. Keynote speaker Paul James. Karen Shepard (Blue Ridge) 540-772-2733.

April 26-27, Saturday,10 a.m.-5 p.m.&Sunday,noon-5 p.m. Prince William Wildflower Society Garden Tour. Helen Walter (PWWS) 703-330-9614.

April 27, Sunday, 2:30 p.m. Shale Barrens field trip. Meet at Ramsey's Draft, Rt. 250 west of Staunton. Jay Shaner (Shenandoah) 540-886-5763.

May 3, Saturday, noon. Tide Springs and wild roadside trip in Rockingham County. Milton Perlman (Shenandoah) 540-896-8396.

May 3 & 4, Saturday and Sunday, and May 10 & 11, Saturday and Sunday. Saturdays 9 a.m.-3 p.m. Sundays noon-4 p.m. **John Clayton Annual Native Plant Sale**, co-sponsored with the Virginia Living Museum. Sale at the museum, 524 J. Clyde Morris Blvd., Newport News. See many of the species being sold growing in the museum's garden.

May 4, Sunday, 7 p.m. Randolph-Macon Woman's College Botanic Garden Walk. Walk followed by a slide program in Martin Science Building, room 225. Karen Shepard (Blue Ridge) 540-772-2733.

VNPS members have opportunity to visit Mt. Cuba's native flora exhibits

Mt. Cuba Center for the Study of Piedmont Flora, near Wilmington, Delaware, is recognized as one of the finest exhibits of native flora in this country. Mt. Cuba is the private home of Mrs. Lamont duPont Copeland, and it is through her generosity that we are able to visit the garden.

Although Mt. Cuba is open to the public only one day per year, reservations for groups such as native plant societies are accepted for the period April to September. I have had the privilege of visiting three times, and based on my experiences and those of 28 VNPS members who visited in 1995, it is assumed that many other members would delight in seeing this garden.

A tour for 25 to 30 VNPS members has been arranged for Friday, May 2 at 1 p.m. when the garden is at its spring peak. The free tour will last approximately 2 hours. There are some transportation logistics to be worked out, as it will require approximately 2.5 to 3 hours (from Manassas) to get there. Before much can be done to make arrangements, we must know who is interested, who is willing to drive, and how many riders can be accommodated. Those seriously intending to make the trip should register names, address, phone number and number of persons each is able to accommodate by April 4 to: Ted Scott, 100 Sunnyside Drive Unit 32, Harrisonburg, VA 22801, 540-568-8679. It would be simpler if those going arranged their own transportation, but everyone going must register. Please do not register if you are unsure, thereby denying someone else the opportunity. Additional instructions will be sent at a later date. Anyone who went on the '95 trip may submit his name and will be assigned to spaces not filled by first timers on a first-come, first-served basis.

Ted Scott

Calendar of Events

May 6, Tuesday, Trillium Walk at Linden. Anne Crocker (Potowmack) 703-437-0355.

May 10, Saturday, 9 a.m.-noon. Prince William Wildflower Society Plant Sale. Bethel Lutheran Church in Manassas. Helen Walter (Prince William) 703-330-9614.

May 10, Saturday, 10 a.m.-2 p.m. 13th Annual Blue Ridge Wildflower Society Plant Sale. Community arboretum on Virginia Western Community College campus. Members may begin purchasing at 9 a.m.

May 10 & 11, Saturday and Sunday, 10 a.m.-4:30 p.m., rain or shine. **Garden Fair, State Arboretum of Virginia**. Vendors of woody and herbaceous plants (many natives) and garden-related items; nonprofit exhibitors; children's activities. Located 10 miles east of Winchester on U.S. 50. Call 540- 837-1458.

May 17, Saturday, 9:30 a.m. Lady-Slipper Special. Meet at visitor center on Rt. 211 at top of Massanutten Mountain. Bring lunch. Jacob Kagey (Shenandoah) 540-828-3297.

May 18, Sunday, 10 a.m.-12:30 p.m. Great Falls Walk. Marion Lobstein 703-536-7150.

May 24, Saturday, 8 a.m. for breakfast or **10 a.m.** for walk. **Lady-Slipper Walk.** Breakfast at Peaks of Otter Restaurant; walk at Peaks of Otter visitors center. Karen Shepard (Blue Ridge) 540-772-2733.

May 17, Saturday. Potowmack Spring Plant Sale at Green Spring Gardens Park, 703-642-5173.

May 22, Thursday, 7:30 p.m. "Gardening to attract wildlife" program by author Sherry Mitchell (*Creating Sanctuary*). Potowmack meeting, Green Spring Gardens Park 703-642-5173.

June 7, Saturday, 10 a.m. Rhododendron Day on the Blue Ridge Parkway. Meet at Peaks of Otter visitors center. Bring lunch. Karen Shephard (Blue Ridge) 540-772-2733.

July 12, Saturday, 11 a.m. Big Meadows and Swamp Trail with Emily Baxter. Meet 9 a.m. Bridgewater or 11 a.m. at Big Meadows Visitor Center. Lib Kyger (Shenandoah) 540-828-6252.

Webster Springs weekend celebrates 35 years

For 35 years, wildflower enthusiasts have been trekking to West Virginia for the Webster Springs Garden Club's Spring Wildflower Weekend.

This year's event, headquartered at a 4-H camp between Cowen and Webster Springs, will be Friday, May 2 through Sunday, May 4. The cost, which includes five meals and two nights' lodging, is $58. Lodging is in the dormitory-style 4-H camp.

Participants will be treated to four different tours this year including the Elk Mountain and Leatherwood trips. A variety of trips for people with different interests and stamina levels are planned.

The tentative registration deadline is April 21. Those needing more information can call Stella Riffle at 304-847-2735. For more information or to register, write: Webster County Nature Tour, P.O. Box 43, Webster Springs, WV 26288.

Smoky Mountains Pilgrimage

The 47th Spring Wildflower Pilgrimage will be held in the Great Smoky Mountains April 24-26. The three-day program of conducted nature walks, motorcades and photographic tours is held in Great Smoky Mountains National Park. For more information or for a brochure, contact: Spring Wildflower Pilgrimage, Great Smoky Mountains National Park, 107 Park Headquarters Road, Gatlinburg, TN 37738 or call 423-436-1290.

Suggested wildflower visit

If pink lady-slippers are your desire, Jacob Kagey of the Shenandoah Chapter suggests the following trip anytime between May 10 and May 15:

Travel to the Massanutten Mountain visitor's center in the Shenandoah National Park. The visitor's center is off of Route 211. On the east side of the visitor's center, a trail leads down the mountain past 150 to 200 pink lady-slippers!

Wintergreen symposium promises to be best yet

The annual Spring Wildflower Symposium hosted by the Wintergreen Nature Foundation has become a must-do spring event in Virginia. This year's 14th annual symposium includes some of the region's best instructors and an incredible variety of wildflower topics. Put May 9-11 (Friday evening to Sunday) on your calendar.

This year's event features many new programs and field trips. In addition to guided outings in the spectacular trillium fields and lady-slipper coves of Wintergreen's forest, there will be several hiking trips into wilderness area rock faces as well as car caravan trips to limestone cliffs and shale barrens.

Participants who consider themselves beginners will be offered a hands-on workshop designed to share the secrets of wildflower family identification. Fern identification will be offered in another session, and a special class on propagating ferns from spores will be offered.

Workshops include wildflower sketching and photography. Other program titles are: alpine flora of the Appalachian highlands, the Shamokin Springs Nature Preserve, landscape restoration in a woodland garden, use of native plants by the Cherokee, the eastern bluebird, and wildflowers and their insect pollinators.

In addition to workshops and field trips, slide lectures on a variety of topics will be offered. One focus of this year's event is to introduce participants to as many different wildflower habitats as possible from tidal wetlands to rock faces.

For a brochure on the symposium and for more information, call 804-325-8172 or e-mail at wtgnf@aol.com

Chapter News

BRCC Arboretum receives donation of Tidewater plants

Arranging for tours of Blue Ridge Community College's arboretum during the September annual meeting had positive results for the arboretum, which is supported by the Shenandoah Chapter. Paul Dennison, who works at the arboretum at the University of Delaware, was among those who toured the Weyers Cave arboretum.

After gaining consent from John Frett, the director of the Arboretum at the University of Delaware, Dennison returned to Blue Ridge with 22 shrubs and vines typical of Virginia's Tidewater in the back of his pickup truck. Dennison provided door-to-door delivery from Delaware and then went on his way to hike a portion of the Appalachian Trail.

The contribution enhances the portion of the arboretum dedicated to the Tidewater. The BRCC arboretum is designed to show plants indigenous to different biogeographic zones of Virginia and the Tidewater portion has been the most under represented.

Among the new species brought from Delaware are: Hercules club (*Aralia spinosa*), cross-vine (cultivar) (*Bignonia capreolata*), beauty-berry (*Callicarpa americana*), coastal pepperbush (*Clethra alnifolia*), titi (*Cyrilla racemiflora*), climbing hydrangea (*Decomeria barbara*), low gallberry holly (*Ilex glabra*), coastal sweetbells (*Leucothoe axillaria*), swamp sweetbells (*Leucothoe racemosa*), trumpet honeysuckle (*Lonicera sempervirens* 'John Clayton'), dwarf coastal azalea (*Rhododendron atlanticum*), swamp azalea (*Rhododendron viscosum* 'Delaware Blue'), yellowroot (*Xanthorhiza simplicissima*).

The BRCC arboretum is also accepting donations to the BRCC Arboretum Endowment Fund. Between now and May, contributions are eligible for matching funds through a grant to the college. This fund now contains $18,000 of money pledged by college personnel. Donations will ensure that this unique arboretum receives steady financial assistance needed to survive and grow into its second decade.

Teamwork makes northern Virginia plant rescue a success

When development is imminent and the last of the plant save areas have been decided, the next step is to schedule a plant rescue. This last-ditch effort can provide a native plant seed bank that would otherwise be buried under buildings and asphalt. Such a plant rescue happened in 1996, and its success was the result of cooperation between several groups and the developer.

The rescue took place at a 12-acre Target store site containing one of the healthiest streams in Reston. The project began with Reston Association obtaining permission and getting liability releases from the Target national headquarters in Minneapolis. This may seem like a small step, but often involves educating the property owner about site plants that they probably were not aware existed.

As the scope of this project grew, so did the partnerships. Judy Okay, coordinator of the Difficult Run project for the Virginia Department of Forestry (VFD), and Barbara White, urban forester for VFD had already planned on implementing a $5,000 grant from Coastal Zone Management by creating a raingarden along a section of the Snakedon Branch. A raingarden, also known as bio-retention, is used to reduce the flow and velocity of stormwater before it reaches streams, thereby reducing streambank erosion. The plan was to channel the stream and leave an available source of riparian plants.

Meanwhile, Gary Gepford, the faculty advisor for Students Against Global Abuse (SAGA), an environmental club in Herndon High School, was looking for a student project involving an under-utilized school greenhouse. SAGA was awarded $1,500 from the Chesapeake Bay Foundation for greenhouse repair. Another environmental organization, Tree Action, teamed with a group of students from Herndon Middle School Science Club for the club's Wild School Project. Others helping were Runnymeade Park members from the Maryland Native Plant Society and the National Park Service. The pieces came together when the Reston Association dug truckloads of plants from the Target development area and placed them in the school's greenhouse.

(See Rescue, page 9)

Internship available at Green Spring Garden Park

An intern is needed for Green Spring Garden Park's 2-acre Virginia Native Plant Trail located in Fairfax County. The intern would work under the supervision of the park education coordinator and the Potowmack Chapter's education chair and develop a self-guided tour, brochures, labels and school programs to complement the native plant trail.

Preferred qualifications are: basic knowledge of native plants, course work in botany, horticulture and/or education, and experience conducting tours. The intern would work 20 to 40 hours a week beginning after March 1. The stipend is $2,000. For more information and to apply, contact Nancy Luria 703-642-5173 (day) or 703-351-9723 (evening)

Gloucester site visited, inventoried

An interesting piece of ground in Gloucester has been opened to visitors by John Clayton members Bobbi and Eddie Ray. It is mostly wet woods, in part a former nursery, and some of it will be developed. John Clayton members have started an inventory and rescue work, particularly of hybrid rhododendrons. Field trips, identifications and inventories to the site are all planned for the year. If you are interested in helping, call Mary Hyde Berg at 804-693-3568.

New book details Invasive Exotics

The Society recently received in the mail a new book published by the Brooklyn Botanic Garden entitled *Invasive Plants; Weeds of the Global Garden.* Because it is probably the first book devoted solely to the subject, it was with considerable interest that I read it.

More a handbook than a book, being of modest size and perhaps a quarter-inch thick, it manages to devote a full page to each of 80 different plants that have arrived through horticultural channels and are now creating substantial problems in continental United States and Canada (Hawaii alone would require a book inches thick). The two editors, Janet Marinelli and John Randall, present brief sections covering the topics "Redefining the Weed" and "How Non-native Species Invade & Degrade Natural Areas." Two sections by other well-informed authors recommend tools useful in physically removing plants and the use of herbicides.

Following these introductory sections is the "Encyclopedia of Invasive Plants"-- informative material on each of the specific plants covered including what each plant looks like, where it came from, where it has spread, what problems it causes and how it can be controlled.

The material is well written, up-to-date, and informative. A color photograph of each plant is displayed, most of excellent quality. It was exciting to see Virginia Native Plant Society listed as one of the 10 sources nationally for additional information.

The only sense of disappointment experienced in reading the book was the fact that it only covered about 24 of the plants we are concerned about in Virginia, two dozen out of more than one hundred. One can only hope that the acceptance of this first effort will be such that Brooklyn Botanic Garden will be encouraged to produce a sequel to cover the rest of the 300 plants creating such devastation to our natural areas throughout the country. Anyone interested in the subject will find this $7.95 book a good investment.

Ted Scott

"Wild Beauty" highlights America's rare flora

The Virginia Museum of Natural History in Martinsville will premier "Wild Beauty: America's Rare Flora" beginning in April at its Virginia Tech branch in Blacksburg.

The exhibit has been developed in conjunction with a number of nationally renowned photographers and will feature over-sized vividly detailed color photographs of dozens of the nation's rare or threatened wildflowers.

"Wild Beauty," which will tour for a 5-year period, will open with the work of Maryl Levine, whose photography has appeared in such publications as *National Wildlife, Nature Conservancy* and *National Geographic.* In 1998, her photographs from this exhibit will be shown at the American Museum of Natural History in Washington, D.C.

Maryl's photographs will be featured in the exhibit at the museum's Virginia Tech and University of Virginia branches as well as at the Virginia Museum of Natural History headquarters in Martinsville. Then, the works of prominent wildflower photographers, writers and scientists such as Ken Stein, Marion Lobstein and Hal Horowitz will be showcased as the exhibit continues to travel to the museum's affiliates in Winchester and Fredericksburg, other locations in Tidewater, and Northern Virginia, and to many of Virginia's state parks. When not traveling, the exhibit will be housed at VMNH in Martinsville.

"Wild Beauty" has been designed with easy-to-read panels of information about the plants, their habitats, their unique characteristics and the major threats to their survival. The exhibit also will provide information about conservation issues to increase visitors' understanding of what makes these plants so special.

Many of the species to be included live on the brink of extinction and exist today in only a few places and in very small numbers. The initial 51 photographs will focus on plants from around the nation, including 10 Virginia

(See Wild Beauty, page 10)

•Columbine

(Continued from page 4)

Latin for "eagle" because the flower's spurs somewhat resemble an eagle's talons. *Canadensis* is obviously from its range. The reference to the eagle as well as its presence in many coats-of-arms even won it favor to the small but vocal committee that wanted the columbine as the national flower. They failed in their attempts, so one species, *A. caerulea*, has to settle for being Colorado's state flower.

It is probably just as well it is not our national flower since it has other symbolic meanings as well. Columbine is a symbol of cuckoldry and a deserted lover in the Victorian language of flowers. It was considered an insult to give it to a woman and bad luck to give it to a man. Others thought it bad luck to give to a woman and an insult to the man. Either way, it was not a proper gift.

Columbines have been used medicinally in Europe for centuries to cure everything from headaches to smallpox. Many Native American tribes, like the Meskwaki, also used the smoked seed capsules as a love potion and the root to combat diarrhea. It can, however, be poisonous. The plant has astringent and diuretic properties, and its prussic acid has a narcotic effect on some people.

The flowers of our native species are red and tubular--designed to attract and be pollinated by the long tongues of hummingbirds who prefer the color red. Red often appears black to bees who are usually too short of tongue to pollinate columbine. Some insects have learned to cheat, though, and eat a hole at the end of the spur to get at the nectar.

There are many more things to be learned about these lovely and fascinating flowers with a long and sometimes colorful history. For instance, leaf miner insects, *Phytomyza aquilegiae*, can only live on columbines. Enjoy them for their beauty, but remember that there is a lot more to them than first meets the eye. Think about the way they were named, what they were used for in the past, and what animals depend on them. It is all these things together that make our native flowers all the more beautiful.

Alonso Abugattas, Publicity Chair

For Wildflower Gardeners: Fringe-tree and good garden companions

Chionanthus virginicus, Fringe-tree, is so lovely that eminent plantsman Michael Dirr suggests it should be our national shrub because "...even dogwood does not carry itself with such refinement, dignity and class when in flower..." (*Manual of Woody Landscape Plants*).

Chionanthus, a combination of the Greek word *chion* meaning snow and *anthos* for flower, refers to clusters of snow white, strap-like flowers that unfurl just as the tree begins to leaf out in early to mid-May. Dirr believes a correlation exists between petal and leaf widths--the wider the petal the wider the leaf and conversely. It appears that some of the flower clusters are fragrant which explains how you may detect no fragrance when sniffing individual blossoms up close though you will catch a whiff of sweetness at a distance.

Just as it grows in habitats ranging from moist to dry and sunny to partially shady in the wild, fringe-tree thrives in a variety of garden sites. It can stand alone as a lawn or patio tree or be combined with other native shrubs and perennials in a sunny mixed border or woodland edge. Early May is a time of such lush flowering in Virginia that many combinations are possible.

Fringe-tree blooms best in full sun. Just be sure the soil stays slightly moist. Think about pairing its airy delicate blossoms with plants that have a more solid and substantial feel such as the native blue flag irises (*I. versicolor* and *I. virginica*). Golden alexanders (*Zizia aurea*) is a good leafy filler.

At 4 feet tall, the yellow flowering Carolina bush pea (*Thermopsis villosa*) is a good companion as is its shorter relative, blue false indigo (*Baptisia australis*). Blue star (*Amsonia tabernaemontana*) with pale steely blue flowers atop 3 to 4 inch leafy clumps blooms at the same time. Though you probably don't want it twining through your fringe-tree (give it a fence or trellis for support), native coral honeysuckle (*Lonicera sempervirens*) is a great color combination.

In a partially shaded setting, fringe-tree's flowers may be less spectacular, but it will still be the focal point of a late spring woodland garden. Natives that bloom at the same time and share its requirement for slightly acid, humus-rich soil include white flowered Solomon's plume (*Smilacina racemosa*) that grows about a foot high. Slightly shorter eared coreopsis (*C. auriculata*) will add a splash or bright golden orange. Other possibilities include woodland phlox (*P. divaricata*), wild bleeding heart (*Dicentra eximia*), and wild geranium (*G. maculatum*). Native groundcovers such as green and gold (*Chrysogonum virginianum*), foamflower (*Tiarella cordifolia*) and dwarf crested iris (*I. cristata*) can be added to woodland plantings. Even when it isn't blooming,

(See Companions, page 10)

•Rescue

(Continued from page 7)

Tree and shrub seedlings rescued included pinxter azalea, serviceberry, sweet birch, deerberry, highbush and lowbush blueberry, spicebush, chinquapin, paw paw, maple-leaved possumhaw, blackhaw and arrow-wood viburnum. Ferns removed were wood, grape, cinnamon, Christmas, sensitive and New York. Orchids recovered were cranefly, twayblade and rattlesnake plantain. Other plants included narrow-leaved mountain mint, hepatica, alumroot, gerardia, thin-leaved coneflower, gray goldenrod, mint, rush and aster species and water plantain. In addition, box turtles, salamanders, garter and black snakes were relocated.

The rescuers kept in mind that it is always more important to save the habitat as a whole rather than rescue individuals. This rescue's success was due to the involvement of so many dedicated people. Developers should be encouraged to allow groups to remove native plants when they are threatened so that they can be saved and used to augment existing natural areas.

Claudia Thompson-Deahl
PWWS member

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

VNPS Membership/Renewal Form

Name(s)_____

Address_____

City_____ State_____ Zip_____-_____

__Individual $15 __Family $25 __Student $10

__Patron $50 __Sustaining $100 __Life $400

__Associate (group) $40; delegate_____

To give a gift membership or join additional chapters: Enclose dues, name, address, and chapter. (Non-voting memberships in any other than your primary chapter are $5).

I wish to make an additional contribution to ___VNPS _____Chapter

in the amount of __$10 __$25 __$50 __$100 __$_____

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

__Check here if you do not wish to be listed in a chapter directory.

Make check payable to VNPS and mail to:

VNPS Membership Chair, P.O. Box 844, Annandale, VA 22003

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

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22003
(703) 368-9803

Frank Coffey, President
Nancy Sorrells, Editor
Barbara Stewart, Artist

•Wild Beauty

(Continued from page 8)

species. These species reflect biological and geological diversity and have been selected because of their beauty, interest and importance. Subsequent versions of "Wild Beauty" will feature the work of other photographers and examine additional species and themes.

The exhibit will include a map of the United States to help teach about the plants in each state and to show which species are candidates for official designation "threatened" or "endangered."

Initial exhibit dates are: April-June VMNH at Virginia Tech; July-August, VMNH Martinsville; September-October, VMNH University of Virginia. For information, visit the Virginia Museum of Natural History home page at: http://www.bev.net/education/museum/vmnhmvl/vmnh.html or call the museum at 540-666-8600.

•Companions

(Continued from page 9)

fringe-tree's slightly glossy dark green foliage and rounded habit make it an attractive small tree or multi-trunked shrub for home landscapes. It has no serious pest or disease problems and should be considered for city street planting since it is tolerant of air pollution. It has been cultivated in England since 1736 and received a Royal Horticultural Society Award of Merit in 1931.

Nancy Arrington, Horticulture Chair

•Purple fringe-tree

(Continued from page 4)

In his highly-referenced biographical notes about Clayton, published in Philadelphia in 1805, the eminent Dr. B. S. Barton wrote of "Clayton's purple fringe tree," and quoted Virginians who had known Clayton.

One of those quoted was Bishop James Madison, the head of the Protestant Episcopal Church in Virginia. Madison, who lived in Williamsburg, wrote of "Clayton's purple fringe tree," which was still thriving 30 years after Clayton's death, according to a friend who crossed the York River to visit the garden.

There was no footnote explaining the use of the word "purple." Apparently Barton did not realize that Bishop Madison was known among friends for facetiousness, which his use of the word purple may have been.

A Latin dictionary offers further insight as it gives a second meaning to *purpura* as "bright, gleaming, beautiful, royal." Among friends, Clayton might very well have called his favorite garden tree "royal."

But Barton, botanizing in the Virginia Blue Ridge mountains, apparently decided that Clayton had mistaken the gray, mossy beards of the ash tree as a separate species. All of which raises many questions and still leads to confusion today.

I went to a nursery and asked for a "purple fringe-tree." The nurseryman patiently explained that the trees always had white flowers. Apparently I had not been the only one asking for purple. I wound up buying a male tree, the only choice, and its lovely white fringe swings in the breeze every spring. It is now about 18 feet tall. No purple fruit, which I have never seen, but which are said to resemble the Spanish olive. (See Nancy Arrington's article in the November 1996 *Bulletin*).

I also have a Chinese fringe tree with whiter, larger blossoms, but, like Clayton, I most admire the white drapes of tiny blossoms of *Arbor floribus albis odoratis*--the Virginia Native Plant Society's 1997 Wildflower of the Year.

Harriet Frye, of the John Clayton Chapter, is also the author of a Clayton biography titled "The Great Forest, John Clayton and Flora." She believes Virginians should be reminded that the Commonwealth had a colonial scientist as well as great statesmen and generals.

Virginia Native Plant Society
P.O. Box 844
Annandale, VA 22003

Please note the expiration date on your mailing label and renew accordingly.

May 1997 Vol. 16, No. 3

Bulletin

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

Good native plant info to be found on the "Net"

The Internet has become very popular in the last year or two, and is supposed to be an unlimited source of useful information. There is, however, a lot of hype in this statement. First, the quality of information available can vary from excellent to nearly useless, and second, even when good information is available it can be hard to find. This does not mean that the Internet is not exceedingly useful. There is a lot of very good information and it is becoming much easier to obtain.

In the old days (2-3 years ago for the Internet) information was much harder to find. It often was there, but the Internet was (and still is) notoriously unorganized, so finding specific information could be a problem. The analogy of an enormous library without a cataloging system comes to mind. Fortunately things have improved. Now there are numerous commercial services which provide free searches of the Net. Just supply a word or phrase and they return a list of appropriate sites. A list of these search engines can be found at **http://home.netscape.com/home/internet-search.html/**. The one I use a lot is Lycos at **http://www.lycos.com/lycos-pro.html**; others may be just as good or better.

I started searching the Internet for native plant information last fall when I decided that I would like to get pictures

(See Internet, page 2)

Prescribed burns: Effective plant management tool

The plant inventory of the anticipated U.S. Fish & Wildlife Refuge in Woodbridge has grown to approximately 600 species of plants during the past two years. But, without annual mowing, the fields of Eastern gamma grass and sweet gum trees have become overgrown due to problems of insufficient personnel and funds at this northern Virginia site.

During the U.S. Army use of the 580 acres, annual mowing occurred and an astonishing variety of habitats and plants thrived. Using fire in small areas of the meadows on a rotational basis and at the correct time of year has been considered often by Frederick Milton, U.S. Fish & Wildlife Manager, but not yet tried in this extremely urban peninsula in the Belmont Bay and the Potomac.

The plant inventory team has felt unsure about using burns, wondering what the effect would be on the buttonbush and maleberry shrubs, spiranthes, meadow beauties and downy lobelia, as well as swamp milkweed, milkworts and various hawkweeds. No assurance came from knowing that controlled burns have been used by farmers in preparing fields for crops and for control of roadside vegetation. Reports of Native American use of fire didn't seem to apply well to this site with dry upland meadows, low wet meadows, marshes, tidal areas, floodplain forests, shorelines. The successful use of fire by Caren Caljouw and the Virginia Department of Natural Heritage to re-establish Peter's Mountain mallow is well documented and the recent article by Lytton Musselman about the necessity of fire for successful management of long-needle pines was also background information, but not really applicable to the refuge.

In March the Virginia Department of Game and Inland Fisheries announced a Prescribed Burn Workshop in Culpeper at the Heartland Institute. Their goal, in addition to educating interested persons, was also to conduct a burn on one of the fields where the land manager plans to sow seed for songbirds and quail. The Woodbridge inventory team decided to attend the workshop to become better informed. In addition to

(See Burns, page 9)

Inside this issue

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Info & registration, pages 5-6
• Fringe-tree
VNPS brochure, insert
• VNPS photo contest
rules, page 4

From the President

Hats off to the coordinators of the VNPS Winter Workshop! Effie Fox, Education Chair; Nancy Arrington, Horticulture Chair; Stan Shetler, Botany Chair; and Nicky Staunton, Conservation Chair, all worked very hard to produce this year's workshop "The State of Virginia's Trees." Thanks to the University of Richmond Biology Department, John Hayden, VNPS Pocahontas Chapter and all of the presenters of programs, including VNPS Director at Large, Cris Fleming and Pocahontas Chapter Vice President, Nancy Hugo. The workshop was well attended and there were many favorable comments.

I hope that as we focus on trees this year we will choose to plant long-lived, usually slow growing trees that will be beautiful and in their prime 50 to 100 years from now. This is very important for future generations. The white oak, Quercus alba, *is one example that fills this bill nicely.*

I am happy to report that the Virginia Native Plant Society Founder's Fund is steadily growing. Each contribution brings closer the day when this fund will provide enough income for VNPS long-range projects.

Please remember to purchase Wildflower of the Year Quilt raffle tickets. Mrs. Edmunds is making good progress. I hope to have photos of the quilt front available soon. Let's all work together to make this a really successful project!

Your President, Frank Coffey

•Internet

(Continued from page 1)

and information about some of the more interesting native plants in the woods back of my house. I began by searching for the word "Wildflowers" and got 1100 sites--far too many. Checking the first few, I found lots of people selling wildflower seed, wildflower T-shirts and even wildflower wallpaper--not exactly what I wanted.

Changing the search to "native plants" produced 308 entries many of which were closer to what I wanted. Some of these sites had nothing to do with Virginia native plants but were interesting anyway. For example check out The Society for Growing Australian Native Plants at **http://www.ozemail.com.au/~sgap/**. Trying "plant images" I got 453 sites and narrowing to "native plant images" I got 96 selections. Each of these searches produced some useful sites. Trying "Virginia native plant images" gave me seven hits with six concerning the Plymouth Colony in Massachusetts. Apparently the statement in the document "...a voyage to plant the first colony..." along with references to Native People and the Virginia Colony caused the inclusion of these references. Search engines are not perfect yet! From these searches I found several sites with good images and native plant information and have downloaded about 70 pictures. Some of the sites that I have found useful are given below. Most of these sites have links to other native plant-related sites, so often you can find lots of interesting facts just by picking a site and following the links.

The Department of Botany at the University of Wisconsin at Madison has created a Virtual Foliage Home Page at **http://www/wisc.edu/botany/virtual.html** which, besides plant images from various botany courses, has the images of the vascular flora of Wisconsin on-line. This site is a little difficult to navigate because appropriate images are found only by moving through several menus. For example, to get a picture of a columbine, next year's plant of the year, you have to go through four sets of choices - flowering plants, dicots/monocots, ranunculaecae, aquilegia. The pictures are, however, good and often there is more than one picture for each plant. Another source of images is at **http://www.csdl.tamu.edu/FLORA/gallery.htm.** This site, produced by Texas A & M University, has lots of images of Texas native plants.

For methods of cultivation, propagation, and edible and medicinal uses of plants try The Plant Tracker at **http://www.axis-net.com/pfaf/index.htm**. Here there is an extensive database of plants prepared by Plants For A Future, a non-profit organization, located in Cornwall, UK. Searches can be made by scientific name, common name, family or by use of the plant, and optionally various criteria such as moisture level needed, type of soil, pH and sunlight requirements can be specified. The results of your search give a description of the plant and various uses it has. For example fringe-tree fruit can be "used as a pickle like olives" and the root is supposedly a "most valuable remedy for disorders of the liver and gall bladder." The entry on pokeberry references a recipe for preparing pokeberry pie. (I have my doubts about the desirability of pokeberry pie.)

To find plant distribution, visit the site created by the Biota of North America Program at **http://www.mip.berkeley.edu/bonap/**. This program of the North Carolina Botanical Garden has the distribution of all the known vascular plants in North America north of Mexico. You can type in either common or scientific names and get a distribution map. For the U.S., the distribution is shown at the state level by a map and a list of states. Try pine to find the only state in the continental U.S. that has no pines. In the future this site will have distributions available by the county level which should make it very useful.

The PLANTS National Database located at **http://plants.usda.gov/plants/** allows you to query a database of plants by scientific name, common name, family or genus and returns scientific name common name, synonyms and range by state. The threatened and endangered species of a selected state can be listed as well as wetland plants for a selected region. This site is in the process of adding photographs for each plant so that a picture and information will be returned.

The National Wildflower Research Center in Austin Texas at **http://www.wildflower.org** maintains a data-

(See Surfing, page 10)

Virginia's parasitic plants: *A look at mistletoes and dodders*

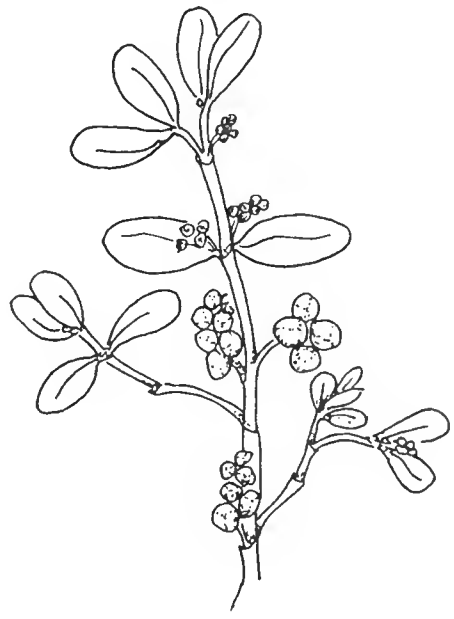
There are two large families of mistletoes, the Loranthaceae with typically large showy flowers and the Viscaceae with small flowers. No species of Loranthaceae are recorded from North America. Most are tropical.

One of the most common parasitic plants in Virginia is the native Eastern mistletoe, *Phoradendron leucarpum* (=*P. serotinum*). This mistletoe can produce its own food through photosynthesis. However, it is dependent upon its host for water and materials carried in the water stream. Severe drought may cause the host tree to withdraw water from the parasite!

Mistletoe is frequent in the southeastern part of our state. For example, it is conspicuous in the Great Dismal Swamp during winter months. In the city of Norfolk, mistletoe is a common sight on several species of trees. I have seen it on black gum, red maple, elm and no doubt others. Silver maple is particularly susceptible. When I moved to my house in 1973, the silver maple in the adjoining yard had three mistletoe plants on it. In 1996, the tree was cut down, due in large part to the intolerable load of mistletoes that numbered in the scores if not hundreds of plants. On the campus of Old Dominion University they attack the thornless honey locust (*Gleditsia triacanthos* var. *inermis*) but the parasite does not seem to live for many years on this host. The campus joke is that at ODU, basketball players get athletes' foot and botanists get mistletoe.

Mistletoe fruits are easy to germinate and make an easy and interesting class experiment. After harvest, the fruits may be kept in a refrigerator for several weeks. Place the "berries" on a filter paper or paper towel and water with two percent peroxide solution. This will keep fungal growth down. The radicles emerge from the seeds and flatten against the paper.

In nature, if a suitable host is present, the tip of the seedling turns into a penetration tool. After entering the host, it hooks up with the cambium. Each year as the cambium produces new growth, it stimulates the mistletoe which synchronizes its growth with the cambium. On occasion, the parasite sends sinkers deeper into the host.



Phoradendron leucarpum
Eastern mistletoe
Illustration by Nicky Staunton

Of course, when we think of mistletoes we think of Christmas and the legends surrounding the purported amorous influences of mistletoe. These legends' roots are as ancient as the Druids. They worshiped the European mistletoe, *Viscum album*, which superficially resembles our mistletoe. Green when its hosts were dormant, the mistletoe boded life and hope during the bleakness of a northern European winter. Consequently it was used in ceremonies marking the winter solstice.

Eastern mistletoe plants are unisexual so each parasite produces flowers of one sex. However, don't expect to collect a bouquet of the flowers to enhance the effects of the berries! The flowers are only a few millimeters long, among our smallest flowers.

What pollinates these tiny flowers? More data is needed to determine pollen vectors. Apiarists have told me that mistletoe flowers are an important source of nectar in midwinter when little else is available.

Cuscuta, dodder

Cuscuta, dodder, species resemble "parasitic spaghetti" because of their long, tangled stems. Dodders are, in fact, nothing but stems with haustoria and scales! They are so highly specialized that they lack any roots. Unlike almost any other genus of plants, all dodder species are totally devoid of hairs. All dodders are holoparasites although amounts of chlorophyll may be present in the developing fruits.

We have the following species in our state: *Cuscuta pentagona* (=*C. campestris*) our most widespread dodder, discussed below; *C. compacta*, a robust dodder chiefly of the eastern part of Virginia with dense, rope like coils about its woody hosts; *C. gronovii*, often abundant along streams on diverse hosts; *C. indecora*, native only in salt marshes along the coast and probably introduced farther west; and *C. rostrata*, an Appalachian species with garlands of white flowers that remind one of stringed popcorn. Some authors recognize other species which may be best subvented under *C. pentagona*.

When thinking of the Norfolk port, perhaps the first commodity that comes to mind is coal. Or, maybe numbers of the navy's sombre grey ships. A little-known fact is that common field dodder, *Cuscuta pentagona* (also known as *C. campestris*) is Norfolk's most famous botanical export! This parasite was first described from Norfolk, Virginia in 1842. It is not clear if it was native here or introduced to this port city because weed introductions around ports are well documented. The original description refers to the host plant as being a *Euphorbia* or *Tragia*. Both genera contain weedy species that could themselves have been introduced.

Whether native or introduced we have spread this parasite to many parts of the world. I have personally encountered my compatriot in such

(See Parasites, page 10)

Virginia Native Plant Society Photo Contest

Rules

1. Open to VNPS members only (Members of VNPS Photo Committee ineligible to compete)

2. Two categories of contestants: Professional (main livelihood) or amateur

3. Each photographer may submit one photo per category of photograph. Photographs must be of Virginia native plants. There are four categories which are listed below.

1998 Virginia Wildflower of the Year (*Aquilegia canadensis*, columbine)
A. Plant Specimen: Photograph of one columbine specimen
B. Habit: Columbine in a natural or cultivated habitat
(These will be judged against each other as a group)

Favorite Native Plant Photograph (any native flowering trees, shrubs, wildflowers)
C. Plant Specimen: Photograph of one plant specimen
D. Habit: Photograph of native plants in a natural or cultivated habitat

4. Entries must be 8 x 10 inch prints (no slides) with stiff backing, no matting, no frames

5. A fee of $1 per entry is to accompany each photograph to defray costs of contest

6. Contestant name, address, phone number, and submitted category for the photograph as detailed in item 3 above should be placed on back of the photograph

7. Color or black and white prints may be submitted, but will be judged together

8. Deadline for entries: July 31, 1997 postmark

9. Mail entries to: VNPS Photo Contest
P.O. Box 844
Annandale, VA 22003

AWARDS: Each of the four categories will receive a first, second and third place award. An honorable mention may be awarded. There will be one grand prize winner who will receive VNPS designation as Best Virginia Wildflower Photographer of 1997 and receive a Jefferson Cup.

VNPS reserves the right to use winning photographs in an exhibition and possible use in production of the 1998 Virginia Wildflower of the Year brochure. Winners will be expected to furnish the slide or negative for the winning prints.

NAME _____
ADDRESS _____
_____
PHONE _____
CATEGORIES ENTERED (circle) A B C D Fee enclosed_____
Return coupon & photos to: VNPS Photo Contest, 8815 Fort Drive, Manassas, VA 20110

Virginia Native Plant Society

Annual Meeting

September 19-21, 1997

Dear VNPS'er,
Members are invited to a wonderful weekend in Virginia's historic Colonial Williamsburg. Much careful planning has gone into making this a worthwhile and memorable occasion. We invite you to join us. You will be glad you did!
Gordon Chappell, President, John Clayton Chapter

Location

Williamsburg Woodlands, Colonial Williamsburg

Schedule of Events

Friday, September 19
2-8 p.m. Registration, Williamsburg Woodlands, Center Room
2:30-4:30 p.m. Garden Tours of Colonial Williamsburg, meet at Center Room
Dinner on your own
8-9:30 p.m. Coffee and tea
Welcome and program introduction
Program: **"Adventures on the Dragon" Teta Kane, slide/lecture**
9:30 p.m. Announcements

Saturday, September 20
Breakfast on your own
8:00 a.m.-4:30 p.m. All-day field trips depart, includes box lunch, meet at Center Room
9 a.m.-1 p.m. Half-day field trips depart, includes box lunch, meet at Center Room
2-3 p.m. Afternoon speaker: **Harriet Frye, author of *John Clayton and Flora*,** Center Room
3-5 p.m. Garden tours of Colonial Williamsburg, meet at Center Room
3-4:30 p.m. Silent Auction
6:30-7:30 p.m. Social hour with cash bar, Cascades Conference Center-Terrace
7:30-8:45 p.m Dinner, Cascades Room
8:45-10 p.m. Event Program
Remarks: Frank Coffey, VNPS President
Evening speaker: **Norman Beatty, Executive Director, Williamsburg Land Conservancy**
Sunday, September 21
Breakfast on your own
8:30-11:30 a.m. Half-day field trips depart
8:30-11:30 a.m. VNPS Board Meeting, Center Room

SATURDAY FIELD TRIPS

(Box lunch provided on full and half-day field trips)
FULL DAY - 8 a.m.-4:30 p.m. approximately

1. Bethel Beach & Point Comfort, Mathews County
2. Dragon Run Swamp, limited number, includes canoeing, Middle Peninsula
3. Virginia Living Museum & Sandy Bottom, Newport News
4. Zuni Pine Barrens, Southside Virginia

SATURDAY FIELD TRIPS

HALF DAY - 9 a.m.-1 p.m. approximately

5. Bassett Hall Woods & Trace, Williamsburg
6. Chesapeake Nature Trail, West Point
7. Greenspring Swamp, Williamsburg
8. Jamestown Island, Jamestown
9. William & Mary Campus, Williamsburg
10. Garden Design Tours, Williamsburg

SUNDAY FIELD TRIPS

(no lunch provided)

11. George McLellan's Garden, Gloucester
12. Haynes Pond, Gloucester

Accommodations

A block of rooms has been reserved for VNPS members at Williamsburg Woodlands. For more information, call 1-800-HISTORY.

Detach here, or better yet, make a photocopy so you won't destroy this newsletter

VNPS REGISTRATION FORM

Name_____ Telephone_____
Address_____ Chapter_____
_____ Number of persons_____
_____

Saturday Field Trips

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

1 2 3 4 5 6 7 8 9 10

Sunday Field Trips: Circle here 11 12

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

Registration Fees

$50 registration fee includes box lunch Saturday and dinner Saturday night

Number of persons registered _____ (number x $50) Amount_____

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

Gordon Chappell
113 Pine Point Road
Williamsburg, VA 23185
Telephone: 757-220-0914

For your bookshelf

This book is big, it's beautiful, and it's all about natives!

***The Native Plant Primer: Trees, Shrubs, and Wildflowers for Natural Gardens* (1995) Carole Ottesen. 354 pp. Harmony Books, New York, New York.**

The Native Plant Primer is the kind of big, glossy, book guaranteed to excite any gardener with its wealth of possibilities. For the native plant enthusiast, however, it also provides a much-needed reference. The author begins with a personal account of the epiphany which sent a dedicated proponent of the English garden style on a native plant quest across America. Unlike the author, however, we will not need to travel to Sri Lanka to learn to appreciate native plants — we have only to open this book.

The first half of the book is divided into regional sections. Each section contains a regional description, a list of recommended plants and photos of gardens. Thankfully, there is a Mid-Atlantic section. Far too many books lump the Mid-Atlantic into either the Northeast or Southeast. In reality, this is a transition zone (both in terms of climate and plant communities) that cannot be equated with either New England or the Deep South. It's refreshing to find a reference that acknowledges this reality.

The bulk of the book is devoted to plant descriptions arranged alphabetically by Latin name within the following sections: perennials, annuals, grasses, ferns, water plants, vines, shrubs and trees. Each entry lists common names, family, origin, hardiness, height, adapted region(s), landscape use, culture, propagation method, and species / cultivars. There is a written description and, in most cases, a photo of the plant. Sprinkled throughout are very useful charts which compare different members of a genus such as *Aster* or *Helianthus*. The book finishes with appendices listing nurseries, gardens and plants for special purposes.

The sheer size and completeness of this book may prove daunting to the gardener with a casual interest in native plants or the wildflower lover who is new to gardening. This is definitely not the usual brief introduction to the concept of gardening with natives. Such books have really proliferated in recent years, and many have no more substance than a list of a dozen plants and a sample garden-plot design. Instead, this is a book to help you decide which species of aster or alum root or whatever might work best in your landscape. The price ($50) will also be daunting to the casual user, but it would be a worthwhile addition to any horticultural library.

Carole Ann Barth is owner and principal of Heal Earth Gardens in Silver Spring, Maryland. Heal Earth Gardens provides environmental / garden consulting, writing and training services to individuals, groups and agencies.

Calendar of Events

June 3-July 30 - **Wild Beauty: America's Rare Flora** at Virginia Museum of Natural History in Martinsville. Photo exhibition of America's rare plants. 540-666-8600.

June 7, Thursday, 10 a.m.-5 p.m **Spring Herb & Garden Festival, "Herbs and their Uses"** Sponsored by the Herb & Botanical Alliance. Egg Harbor, N.J. Contact Anita Beckwith 609-965-0337.

Natural History Museum produces wildflower magazine

VNPS members should check out the exciting happenings at the Virginia Museum of Natural History, located in Martinsville with branches in Blacksburg and Charlottesville. A family membership with the museum comes with plenty of benefits, including a quarterly magazine, *Virginia Explorer*. The latest issue of this glossy, professionally-done journal is a must for native plant enthusiasts because the entire issue is dedicated to wildflowers. In this issue Maryl, a professional nature photographer, tells the full story of her efforts to photograph threatened or endangered species of flowers (see information above in calendar of events).

This issue can be ordered for $3.50 at VMNH, Attn. Publications Dept., 1001 Douglas Ave., Martinsville, VA 24112. Family membership is $35-call 540-666-8600. Membership includes *Virginia Explorer*, a quarterly newsletter, reciprocal free admission to 200 science museums, a discount on books and gift shop items, notification of special events and discounts on field trips. You can also check out the museum on the Internet at: http://www.vmnh.org.

June 29, Sunday, 2-4 p.m. **Insects & Plants Nature Walk**. VMNH naturalists walk through DuPont Preserve, Martinsville. Register by June 20. 540-666-8651.

July 8, Tuesday, 6:30-7:15 **Almost Immortal: The lives of clonal plants and animals**. Dr. Judith Winston, Virginia Museum of Natural History Director of Research, talks about these little-known plants and animals. King's Grant Retirement Center, Martinsville. Register by July 7. 540-666-8651.

July 12, Saturday, 11 .m. at Big Meadows Visitor Center, Skyline Drive (Bridgewater 9 a.m). **Big Meadows and Swamp Trail**. Emily Baxter (Shenandoah) 540-828-6252.

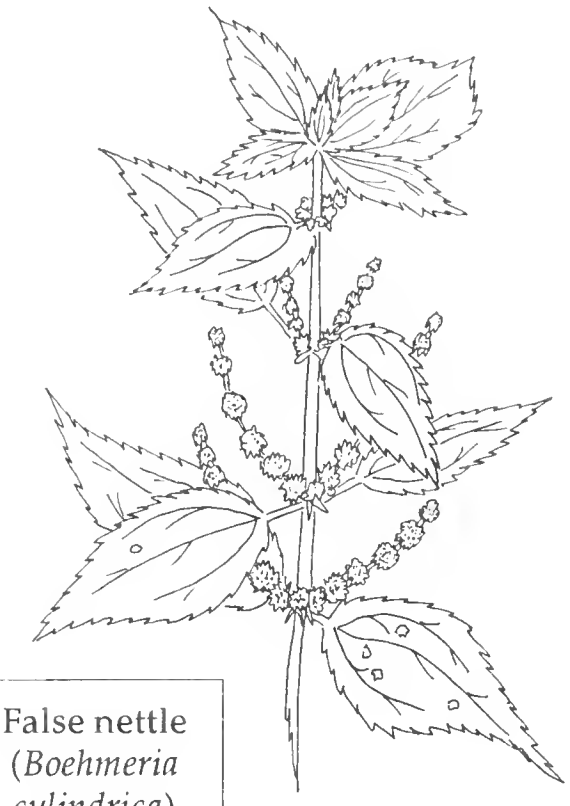
August 2-September 29 - **Wild Beauty: America's Rare Flora** at VMNH in Charlottesville. 540-666-8600.

September 25, Thursday, 7:30-8:30 p.m. **Hands-on demonstration of native, naturalized and invasive grasses**. (Potowmack) Green Spring Gardens. 703-642-5173.

Vist this site on the Parkway for summer blooms

Jacob Kagey of the Shenandoah Chapter suggests this trip during the summer for wildflower viewing. Travel on the Blue Ridge Parkway just past milepost 17. In an open area on the east side of the drive is a large field. From about June 28 to July 4, check the area for Canada lilies. About a week after the Fourth of July, the field will be full of butterfly-weed. On the west side of the drive, you can spot Turks cap lilies, whorled rosinweed and many others.

False nettle has a surprise atttraction despite a "weedy" reputation



False nettle (*Boehmeria cylindrica*)
Illustrations by Nicky Staunton

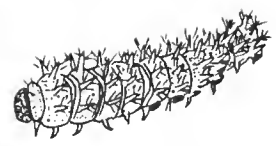
Most people think that you have to grow stinging nettle (*Urtica dioica*), a plant painful to the touch, in order to attract red admiral butterflies. Luckily, this is not so. False nettle (*Boehmeria cylindrica*) is in a different genus, but is, indeed, a member of the nettle family and therefore every bit as attractive to nettle-eating caterpillars. The reason it is called "false" nettle is only because it lacks the stinging hairs characteristic of the *Urtica* genus.

Unfortunately for butterfly gardeners, nettles do not have showy flowers. For this reason, false nettle is not usually stocked by nurseries nor even discussed in wildflower gardening books. Yet, it is an attractive plant. It has sturdy stems that reach three feet in height when located in a good spot. The coarsely toothed, opposite leaves are its most noticeable feature. They are 1 to 3 inches long, ovate and a pretty, light green. The flowers are easy to miss because they are tiny, greenish, and occur in little clusters along spikes in leaf axils.

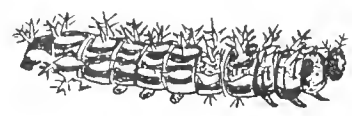
False nettle makes a nice border plant--mine grow along the west side of my greenhouse. Wildflower guides say that it is a plant of moist, shady places, but that has not been my experience. My plants receive hot, afternoon sun for at least half a day. I do not water these plants which are situated on well-drained sloping ground, but they thrive, living up to their reputation as "weedy" plants.

Even though I landscape for wildlife, I did not plant the false nettle patch which now grows in my yard. A few plants came up on their own one year and, as is my custom, I let them grow because I did not immediately recognize them. The floral structure is the key to making an identification, but because the flowers are insignificant, I missed them that first year. However, I noticed that I seemed to have red admirals and eastern commas around more often than ever before and it seemed as if there was almost always a red admiral resting on those unidentified plants! This did not really sink in until the second year at which time I suspected that my patches must contain larval food plants. I checked that area every day until the plants flowered in July. I got out the wildflower guides to find that my mystery plants belonged to the nettle family. That explained the increased presence of the red admirals and eastern commas.

Red admiral butterfly & caterpillar



Comma butterfly & caterpillar



During the first winter that I had false nettle in my yard, I discovered American goldfinches love nettle seeds. Many plants, including the relatively tall false nettle, remain standing above snow cover with fruits or seeds exposed.

I have not found *Boehmeria cylindrica* to be invasive. Rather than large groups popping up in new spots, usually only one plant will appear here or there. The area covered by false nettle will increase somewhat each year, but control is easily accomplished by cutting or pulling unwanted plants.

The genus name comes from George Rudolf Boehmer, an 18th century botany professor in Germany. The species name refers to the cylindrical leaf shape. So, the moral of this story is, let some of the "weeds" that appear unexpectedly in your yard grow...you just might be thrilled that you did.

Marlene A. Condon is a nature writer/photographer/gardener who has been fascinated by plants and animals all her life. This article first ran in the newsletter of the Butterfly Society of Virginia.

Horticulture position open at Virginia Living Museum

The Virginia Living Museum is a regional zoological park, botanical garden, aquarium, planetarium, and educational facility in southeastern Virginia. This full-time, salaried position offers a unique opportunity to work with native plants and animals in naturalistic habitats.

Responsibilities: Installation and maintenance of plants in indoor and outdoor exhibits; general lawn, landscape, greenhouse and nursery maintenance; supervision of volunteers and interaction with visitors. Some weekend work required.

Qualifications: Bachelor's degree in horticulture or related field and 1-2 years experience in a botanical/zoological park, nursery/landscaping operation, or similar facility. Requires experience in the use and maintenance of power equipment. Some knowledge of Virginia native flora preferred.

To apply: Send resume by June 30, 1997 to Janis Miller - Horticulture Curator. Mailing address: Virginia Living Museum, 524 J. Clyde Morris Blvd., Newport News, VA 23601 FAX:(757)599-4897

E-mail: vlmhort@juno.com or janmike@visi.net

Seeing red brightens spring wildflower gardens

The colors of a Virginia spring are predominately pale: pinks, lavenders, blues, yellows and whites. The few bright red-flowered natives available to wildflower gardeners are wonderful accents to use among these paler colors or against a background of ferns. Because the plants discussed here are woodland natives, perhaps they are red-flowered to lure hummingbirds into the shadows to pollinate their tubular flowers. Native companions that bloom at the same time and share cultural requirements include green and gold (*Chrysogonum virginianum*), foamflower (*Tiarella cordifolia*), sundrops (*Oenothera* spp.) and the white forms of *Phlox divaricata* and *stolonifera*. Unless noted, the plants below are native to Virginia.

For Wildflower Gardeners
By Nancy Arrington
VNPS Horticulture Chair

Columbine (*Aquilegia canadensis*) is the first red-flowered native to show up in gardens. Red and yellow pendant flowers hang on slender stems above light green compound foliage. Flowering begins in mid-April and continues through May. Rich soil and sun produce large robust plants while plants grown in lean soil in part shade are delicate and airy. Good drainage is a must. Plants are short-lived but reseed freely. Columbine is our VNPS Wildflower of the Year for 1998.

Fire pink's (*Silene virginica*) crimson red, five-petaled tubular flowers are about an inch across and bloom

(See Red flowers, page 10)

• Burns

(Continued from page 1)

the required leather boots, gloves and cotton clothes, the team took open minds. Virginia DGIF members instructed on definition of a prescribed burn (David Sausville, Forest Stewardship Biologist); benefits of prescribed burning for wildlife (Dan Lovelace, District Wildlife Biologist); laws and liability (Larry Cochran, Emergency Field Coordinator); personal safety and physical fitness (Everette Kline, Area Forester of Virginia Department of Forestry); weather and fire behavior (Fred Turck, Emergency Response Planner, Virginia Department of Forestry); firing methods (Steve Capel, Habitat Coordinator Biologist); preparing a burn plan and post-burn (Dan Lovelace); and review equipment in the field, inspect area to be burned (Dan Lovelace, Burn Boss). The prescribed burn was scheduled for 4 p.m. with suppression and mop-up to follow.

The burn took place on schedule and in a very short time the acreage was clear of winter's dead grasses. The dogbane stems did not burn entirely; spring field cress was not even singed; and the earth was still cool and moist following the burn. The day's efforts were well worthwhile.

The new refuge just might benefit from a small burn next January or February when critters are still hibernating, no ground bird nests would be harmed and before the annual plants sprout. We request information from any readers who might have knowledge and experience regarding the effect of fire upon native plants. Please send to VNPS Attn: Nicky Staunton, P. O. Box 844, Annandale VA 22003.

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

VNPS Membership/Renewal Form

Name(s)_____

Address_____

City_____ State_____ Zip_____-_____

__Individual $15 __Family $25 __Student $10

__Patron $50 __Sustaining $100 __Life $400

__Associate (group) $40; delegate_____

To give a gift membership or join additional chapters: Enclose dues, name, address, and chapter. (Non-voting memberships in any other than your primary chapter are $5).

I wish to make an additional contribution to ___VNPS _____Chapter

in the amount of __$10 __$25 __$50 __$100 __$_____

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

__Check here if you do not wish to be listed in a chapter directory.

Make check payable to VNPS and mail to:

VNPS Membership Chair, P.O. Box 844, Annandale, VA 22003

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

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(703) 368-9803

Frank Coffey, President
Nancy Sorrells, Editor
Barbara Stewart, Artist

The deadline for the next issue is July 1

•Red flowers

(Continued from page 9)

in May on stems about a foot tall. It brightens a fairly shady spot with sparse blooming, but flowers better with a little morning sun. Give it neutral to slightly acid, well-drained soil. Rich soil causes weak steams. Plants are short-lived, but reseed fairly reliably.

Coral honeysuckle (*Lonicera sempervirens*) lacks the vigor and (regrettably) the fragrance of the invasive Japanese honeysuckle though it will quickly cover a trellis or fence with handsome blue-green foliage. It begins flowering in early May and continues sporadically through much of the summer. Narrow tubular rose-red flowers, about an inch long, flare open slightly at the tip. Plants grow well in sun in ordinary soil. At a VNPS annual meeting several years ago, John Clayton Chapter members donated a dark gold-flowered selection discovered in that area and named (appropriately) 'John Clayton.'

Red buckeye (*Aesculus pavia*), a small clump-forming shrub or tree with typical five-leaflet buckeye foliage, grows 10-20 feet tall. Reddish-rose upright flower panicles, 4-8 inches long, begin blooming in late April and continue through May. It prefers a rich, slightly moist soil and flowers in shade but grows more densely and flowers better in sun. It is not native to Virginia.

Indian pink (*Spigelia marilandica*) is an especially eye-catching southeastern native. Mature plants are 12 to 24 inches tall and wide. Stems are tipped with clusters of 1.5-inch long tubular flowers that are bright crimson outside and green-tinged yellow inside. Each blossom is open at the tip and split or "pinked" into five sharp lobes. Indian pink prefers a rich, slightly moist soil and dappled shade. Strong sun may fade the blossoms. This plant belongs to the mostly tropical logania family which contains well-known garden plants like *Buddleia* as well as some of the world's most toxic plants including strychnine and rotenone.

•*Surfing*

(Continued from page 2)

base of native American plants and the names and addresses of native plant organizations in the U.S. It has links to native plant organizations and gardens with web pages and a national list of gardens with displays of native plants.

The Virginia Department of Conservation and Recreation Natural Heritage site at **http://www.state.va.us/~dcr/vaher.html** has the Invasive Alien Plant List and fact sheets co-developed by VNPS and DCR plus rare plant and animal lists and maps along with information on natural areas and preserves in Virginia.

If you have Internet access try some of these sites and do some searches on your own. Information on the internet changes rapidly and more information becomes available each day.

Richard Moss, Pocahontas Chapter

•Parasites

(Continued from page 3)

different areas as New Caledonia, Sudan and India. Closer to home, *C. pentagona* is a serious pathogen of tomatoes in California. It is most frequently found on legumes, especially alfalfa and lespedeza.

Like most weeds, humans have affected the distribution of *C. pentagona* and other dodders. Recent introductions have occurred through contamination of commercial seed shipments. I regularly examine seeds of dodders intercepted by the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture. Invariably, the dodder turns out to be the same one first described from Norfolk!

This article is the second in a series by Lytton J. Musselman, a professor of biological sciences at Old Dominion University.

August 1997

Vol. 16, No. 4

Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

Conserving wild flowers and wild places

Greenstone Foundation awards grant to VNPS

VNPS has just announced that it has been the fortunate recipient of a grant for $3,000 from the Greenstone Foundation. The grant was made to help complete the publication of fact sheets on a selected list of invasive alien plants.

The Virginia Department of Conservation and Recreation, Division of Natural Heritage, and Virginia Native Plant Society joined in a partnership program five years ago to educate the public on the enormous harm done to the habitats of our native plants by invasive alien plants.

One phase of that effort has been the development of a list of invasive alien plants in Virginia and the publication of informative fact sheets on the most damaging of those plants. Eighteen fact sheets covering 22 plants have been published to date, the two most recent ones covering tall fescue, *Festuca elatior* and Chinese lespedeza, *Lespedeza cuneata*.

The funds from this grant, coupled with a grant received by the Department of Conservation and Recreation, will enable us to publish nine more fact sheets covering 13 more plants. Funding is being sought to publish three more sheets on three plants in 1997.

The key person most responsible for the publication of these sheets has been Caren Caljouw, Stewardship

(See Grant, page 7)

Annual Meeting Spotlight

Virginia Living Museum offers something for everyone

In southeastern Virginia there is a small museum that offers visitors a unique experience and is both fun and educational. The Virginia Living Museum, located in Newport News, is a combination of zoological park, botanical garden, aquarium,

VIRGINIA LIVING MUSEUM

NEWPORT NEWS, VA

planetarium and environmental education center, and everything you see here is found in Virginia.

The grounds and exhibits at the museum are planted exclusively with native species. As you approach the entrance, you pass through a large wildflower garden containing native perennials and grasses, including wild columbine, fire pink, goldenrods, beard-tongue, seashore mallow, wild indigo, atamasco lily, bluestar, asters, purple coneflower, black-eyed Susan and river oats. Surrounding and accenting the perennials are collections of native evergreens, flowering shrubs and small trees. Here you'll find a variety of native hollies, sweetbay magnolia, fringe-tree, sweet pepperbush, dusty zenobia, beautyberry, Virginia sweetspire, shrubby St. John's-wort, hawthorns, wax myrtle, dogwood and redbud. There's something in bloom or in fruit year-round.

Inside the museum, you'll find aquariums, a large walk-through songbird aviary, and many small animal exhibits. The James River exhibits take you down the river from the mountains to the sea, showing you the plants and animals which inhabit the river banks and waters, while the World of Darkness takes you to the nocturnal realm of bats, flying squirrels, owls and others.

(See Living Museum, page 4)

Annual Meeting Reminder

VNPS Annual Meeting
Sept. 19-21

Williamsburg

Call (757) 220-0914

From the President

The VNPS Board of Directors met in June at the Peaks of Otter Lodge near Bedford. I want to thank all of the board members who were able to attend for an enjoyable and successful meeting. A special thank-you to Karen Shepard and the Blue Ridge Wildflower Society for making the arrangements and hosting the meeting. It is always wonderful to visit the Parkway.

Phoebe White, membership chair, reported that for the first time, our membership has topped 1500! It is good to see our membership grow. Phoebe has a sizable supply of membership forms available, so contact her if you need them. This form may also be downloaded from our Web Site: www.hort.vt.edu/VNPS.

If you have not visited our VNPS Web Site, please do so. It is really developing nicely and will be a great asset to the Society. Thanks to Dr. Stan Shetler, Dr. Bob Lyon and Richard Moss for sharing their expertise and providing space for our site.

Our Wildflower of the Year queen size quilt is all finished! Mrs. Edmunds has done a fantastic job and she sent it to our June board meeting. It is simply beautiful! Remember tickets are a $5 donation for a book of 6 or $1 for a single ticket. Photos have been sent to chapters but they only show what the top of the quilt looked like before the quilting was done. Contact John Fry (540-364-3046) if you need additional tickets. Let's really push the ticket sales so this will be a highly successful project. The John Clayton Chapter has the quilt now and will be displaying it right up to the drawing on Saturday night at the annual meeting.

Gordon Chappell, John Clayton Chapter President, reports that plans are moving nicely for the Annual Meeting. I will look forward to seeing everyone in Williamsburg the weekend of September 19 & 20.

Your President, Frank Coffey

VNPS staff artist resigns after 16 years

Barbara Stewart has resigned as artist for the Virginia Native Plant Society after serving over 16 years. During this time she has provided drawings for the Wildflower of the Year program and other requested art work. In her letter of resignation, she stated that she would be available for special projects. Barbara's work has always been of the highest quality and it is certain that VNPS will want to call on her in the future.

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, 1996, 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 at right present fairly, in all material respects, the financial position of the Virginia Native Plant Society as of October 31, 1996, and the results of its operations for the year then ended in conformity with generally accepted accounting principles.

June 7, 1997, Robert K. Hersh, C.P.A., 3213 N. John Marshall Drive, Arlington, Virginia 22207

VNPS Fiscal Year 1996
Summary Income Statement
Year-to-Date
For the period ending Oct. 31, 1996

INCOME	
EARNED INCOME	
Other earned income	$13,645
TOTAL EARNED INCOME	$13,645
BUSINESS INCOME	
Sales	$3,739
Fees	$10,338
Other income/business	$3,191
TOTAL BUSINESS INCOME	$17,268
UNCLASSIFIED INCOME	
Unclassified income	$6,966
TOTAL UNCLASSIFIED INCOME	$6,966
TOTAL INCOME	$37,880
EXPENSES	
JOB RELATED EXPENSES	
Other job related expenses	$1,581
TOTAL JOB RELATED EXPENSES	$1,581
OTHER EXPENSES	
Education expenses	$23,959
TOTAL OTHER EXPENSES	$23,959
BUSINESS EXPENSES	
Office Exp./Business	$13,255
TOTAL BUSINESS EXPENSES	$13,255
TOTAL EXPENSES	$38,795
NET INCOME	$-915

SUMMARY BALANCE SHEET

ASSETS	
CURRENT ASSETS	
Checking accounts	$12,404
Savings accounts	$12,000
TOTAL CURRENT ASSETS	$24,404
MARKETABLE INVESTMENTS	
Common Stocks	$476
TOTAL MARKETABLE INVEST.	$476
TOTAL ASSETS	$24,880
LIABILITIES	
CURRENT LIABILITIES	
Accounts payable	$264
TOTAL CURRENT LIABILITES	$264
LONG-TERM LIABILITIES	
Other long-term liabilities	$3,740
TOTAL LONG-TERM LIABILITIES	$3,740
UNCLASSIFIED LIABILITIES	
Unclassified liabilities	$4,413
TOTAL UNCLASSIFIED LIABILITIES	$4,413
TOTAL LIABILITIES	$8,417
EQUITY	
TOTAL NET WORTH	$16,463
TOTAL LIABILITIES&NET WORTH	$24,880

Wildflower Clippings: A look across the country

The National Wildlife Federation recently reported in one of its magazines about a cooperative study that was done by ecologists from the Universities of Toronto and Minnesota on the effects of pollution on native grasses. The 12-year-study simulated nitrogen emission levels from cars and power plants in the Northeast. Their results: native grasses, which frequently occur in nitrogen poor areas, had impaired growth. Non-native grasses, especially from Europe, were imported for agricultural development and thrive on large doses of nitrogen. Thus, roadsides have thriving non-native grasses stimulated by emissions that out-compete natives and species diversity declines.

An article in the May 25th issue of the *Arlington Journal Newspaper* had an excellent article on native plants by Helene Hollander Lepkowski. "Growing Native" mentions the many benefits of growing native plants while not ignoring the real importance of habitat conservation. Ms. Lepkowski really did her research and not only quoted Potowmack Chapter members (she attended the chapter sale at Green Spring) but also representatives of many like-minded organizations such as the Maryland Native Plant Society and Fairfax Releaf. She stressed the importance of not planting invasive species while focusing on all the unique virtues of our Northern Virginia natives.

Just about every issue of *American Butterflies*, a publication of the North American Butterfly Association, contains articles on the associations between native plants and the butterflies that depend on them as caterpillar hosts or nectar sources. Recent examples: "The Brilliance of Asters (Part 1, The East)" that focuses on native asters and their use by butterflies to obtain nectar or provide caterpillar food (for pearl crescent butterflies in Northern Virginia); "The Gaea Gardener: False Nettles" which talks about this plant and its use by red admiral and eastern comma butterfly larvae (also see the May 1997 issue of the VNPS *Bulletin*); and "Native Eupatoriums for the Butterfly Garden." The articles are interesting and often have local application to Virginians.

The New Columbia Audubon Society of Washington, D.C. and the Washington Area Butterfly Club have initiated attempts to establish stands of white turtlehead (*Chelone glabra*) at Kenilworth Aquatic Gardens. They are hoping that if they succeed in getting large stands of turtlehead established, they can then attempt to introduce Baltimore checkerspot butterflies. Baltimore checkerspots are very uncommon in the Northern Virginia area and white turtlehead is one of the primary host plants for caterpillars of this species. Because there does not appear to be any nearby colonies of the butterfly, it is unlikely they would find the plant for themselves. Once the checkerspots are established, however, they could spread to other nearby areas having suitable habitats. Anyone who would like to donate plants can contact Alonso Abugattas at (703) 358-6535 during the day or (703) 528-8808 in the evenings.

The Maryland Native Plant Society recently reported in its newsletter about a study indicating that half of the major wetland weeds were introduced for horticultural use. The results are taken from a Brooklyn Botanic Garden book, *Invasive Plants: Weeds of the Global Garden*, which covers 82 invasive plant species in depth. The study makes use of the two most comprehensive natural area lists, one by the Nature Conservancy and the other by the National Pest Plant Councils. Many of the plants listed are still being sold commercially. This just goes to prove that gardeners need to be careful about what plants they choose to use in their gardens. Researchers are reported to be looking into reliable methods of predicting which species can become problems so new infestations can be prevented.

National Wildlife Federation had an article in its January issue of *National Wildlife Magazine* about the disappearance of the native plants in the United States. Using data provided by the Nature Conservancy, the magazine reports that nearly 10 percent of the native plants in the United States may have disappeared from at least one of their former home states. Hawaii and the Northeast suffered the most losses, particularly in wetland species. Delaware recorded the highest percentage of lost species (over 12 percent) but the real surprise is who else made the top five--our neighbor Maryland with six percent lost.

Many organizations are becoming more and more aware of the problems caused by invasive plants. Take, for example, an article in the June issue of *Turkey Call*, a publication of the National Wild Turkey Federation. In this hunting magazine, one author, Dr. James Kennamer, clearly states his position: "In my mind there is no question--we must avoid bringing non-native species into new ecosystems without careful consideration..." He goes on to give many examples of invasive plants and animals with their consequences. He tempers his statements with thoughts on how non-natives should not be removed from consideration outright, but used with much caution. Not all non-natives are bad and some natives can be helped to expand their ranges (such as he believes turkeys should be). But the article suggests extreme caution. "The real challenge is to make the right choices." This organization is taking steps in the right direction as are many other individuals and organizations.

This article was compiled by VNPS Public Relations Chair Alonso Abugattas.

Living Museum offers variety from nature

(Continued from page 1)

The Touch Tank and Discovery Center offer up-close, hands-on encounters with wild creatures and artifacts, and throughout the day there is a variety of live animal programs presented by museum interpreters. There's also a planetarium which offers everything from sky interpretation programs to laser light shows, and an observatory for solar viewing during the day and night sky viewing during evening hours. In addition, the changing exhibit gallery brings new feature exhibits to the museum every few months.

Outdoors, a quarter-mile nature trail winds through upland and lowland habitats alongside a small lake, passing large naturally-vegetated enclosures housing raccoons, beavers, bobcats, red foxes, river otters, wild turkey, white tail deer, skunks, opossums and bald eagles. In and among the exhibits you'll find a variety of woodland plants. Ephemeral spring wildflowers like bloodroot, spring beauty, Virginia bluebells and trout lily are followed by ferns and flowering shrubs, like mountain laurel, native azaleas, sweetshrub, viburnums and sweet pepperbush. From the boardwalk along the edge of the lake you can view wetland plants like rose mallow, scouring rush, pickerel weed, blue flag iris, and an assortment of wild turtles, ducks and wading birds. Plus you can step inside the wetland aviary and see wetland plants and animals up close from an observation deck.

Also incorporated into the grounds are several display gardens. The Butterfly Garden contains native perennials, shrubs and trees which provide nectar for adult butterflies, and food for various caterpillars. The plants include milkweeds, asters, Joe-Pye weed, blazing star, cardinal flower, sassafras, buttonbush, and many others. This exhibit also provides information on common Virginia butterflies, the plants which attract them, and the basic ingredients needed to create your own butterfly garden.

The Backyard Habitat display garden shows how you can make your own yard a habitat for wildlife. In a typical backyard setting, you'll see examples of ways to provide food, water, shelter, and nesting sites for a variety of animals. This includes water sources like a backyard pond and various types of birdbaths, and assorted feeders and nesting boxes, such as bluebird houses and even bat boxes. Plantings include fruiting shrubs which supply food and shelter, like hollies, blueberries and viburnums, and nectar plants for hummingbirds,such as bee balm, coral honeysuckle and trumpet creeper.

The horticulture staff, with the assistance of many dedicated volunteers, maintains the grounds and exhibits and provides plant material for use in educational programs. Most of the perennials and some trees and shrubs seen at the museum were grown in our own greenhouse and nursery. In addition, each year we grow thousands of native perennials for our spring and fall wildflower sales, which are major museum fund-raisers.

The museum's education staff offers a wide variety of classes and guided field trips for children, adults, groups and families. Day-trips might take you canoeing in a cypress swamp or caving in the mountains, while longer safaris go whale-watching in New England, or further afield to Alaska or Belize with trained naturalists as your guides. In addition, the horticulture staff provides programs on such topics as native plant identification and propagation, butterfly gardening, and backyard habitat development.

During this year's VNPS annual meeting, hosted by the John Clayton Chapter and held in nearby Williamsburg, the Virginia Living Museum will be one of Saturday's field trip destinations. I hope to see many VNPS members then, but if you choose to take one of the other wonderful field trips (and there are LOTS to choose from), I hope you'll use the attached coupon to visit us another time. For more information, you can phone the museum at (757) 595-1900, or reach me at vlmhort@juno.com if you have access to e-mail.

Janis Miller, VLM Horticulture Curator

Fall workdays set for native plant trail at State Arboretum

Fall workdays will give VNPS members a chance to help plant ferns, wildflowers, shrubs, and trees in the State Arboretum's new Virginia Native Plant Trail (See March 1997 *Bulletin*). These workdays will be from 10 a.m. to about 3 p.m. on Wednesday, Oct.1, Saturday, Oct. 4, and Saturday, Nov. 8 , rain or shine. In case of very severe weather, check (540) 837-1758, ext. 22, before 10 a.m. All are welcome, for the whole day or any part of it.

Beverages and snacks will be provided; bring your own lunch. Tools will be available, but bring yours if you like, as well as gloves and anything else to work comfortably. For more information or to let planners know you are coming, call (540) 837-1758, ext. 26. The arboretum is on U.S. Rt. 50 about 9 miles east of Winchester.

Virginia's parasitic plants provide mystery and intrigue

Comandra umbellata, bastard toad-flax
Illustration by Nicky Staunton

Scientists were amazed when the parasitic behavior of sandalwood (*Santalum album*) was reported in the early part of this century! Like other members of the Santalaceae, sandalwood is green. Seeds germinate readily and will establish seedlings in pots without hosts. Yet, in nature members of this family are invariably parasitic on a diversity of hosts.

The Santalaceae is especially well represented in Virginia. We have one of the richest assemblages of this family in North America. This does not mean that there are scores or even dozens of species, however. Four species are native in our state.

The most widespread and the only herbaceous member is *Comandra umbellata*. In fact, this species is one of the most widespread herbaceous plants in North America, occurring in most of the lower 48 states. Its closest relative is found in the Balkans. Few plant families have a distribution like the Santalaceae.

The greenish white flowers appear in the spring and develop into a drupe-like fruit. My enthusiasm for common names knows bounds and this family is especially aggravating. The "common" name of *C. umbellata* is the sesquipedalian bastard toad flax. Few modern nature lovers have any idea what toad flax is, much less the biological significance of a bastard. Why not simply call this inhabitant of open sunny areas "*Comandra*"? It is certainly simpler. In addition, the name is descriptive of the tuft of hairs associated with the anthers.

Unlike *Comandra*, the other three species are shrubs. All are unisexual. Most widespread is the Appalachian *Pyrularia pubera*, oilnut or buffalo nut. The first common name refers to the oil found in the large seed. Like all members of the family, the host range of oilnut is broad. Recently, we have documented it as a serious problem in a Christmas tree plantation in southern West Virginia. Oilnut bears small greenish flowers in the early spring. Fruits are unique and have been described as drupes. However, they are actually schizocarps. As the fruit matures, the outer fleshy portion splits and drops the large, round seed. Oilnut shares with buckleya an Appalachian-Far Eastern distribution.

Nestronia umbellula is known from about five counties in the state. *Nestronia* occurs in the Carolinas, Georgia, Tennessee and has recently been found in eastern Kentucky. The genus is monospecific.

It is a nondescript shrub that I often confuse with blueberries or huckleberries. My students call it "blah bush," a descriptive appellation. The court's ruling against all male colonies doesn't apply to *Nestronia*—only staminate plants are known in our state! One of its common names, and perhaps the oldest, is conjurer's nut. No known extant populations of female plants nor any pistillate specimens exist in all of Virginia. Can we conjure up any ideas to address this mystery?

Several theories have been posited. One intriguing idea is that the introduced Japanese honeysuckle, which has a fragrance very similar to that of conjurer's nut has lured away potential pollinators. The fragrances are remarkably similar. Who is conjuring who?

I believe the decline of this shrub may be attributed to the lack of fire. The largest populations are in areas that are disturbed, like the population along the Bannister River in Pittsylvania County; or along the margins of granite outcrops farther south. Evidence from earlier literature and herbarium labels shows that large populations developed in recently burned areas. This still does not address the peculiar problem of a single sex state, however.

Without doubt the most interesting, best known, and unfortunately often heavily collected of our Santalaceae is *Buckleya distichophylla*. Asa Gray reportedly called this the "rarest shrub in North America." Unlikely, but its distribution is limited. And, if botanists continue to insist that every herbarium have a sheet of Virginia buckleya, Gray may be right. It is strictly a southern Appalachian endemic with its closest relative in eastern China! Again, I deplore the apparently recently invented common

(See Parasites, page 8)

Castilleja coccinea, Indian paintbrush
Illustration by Nicky Staunton

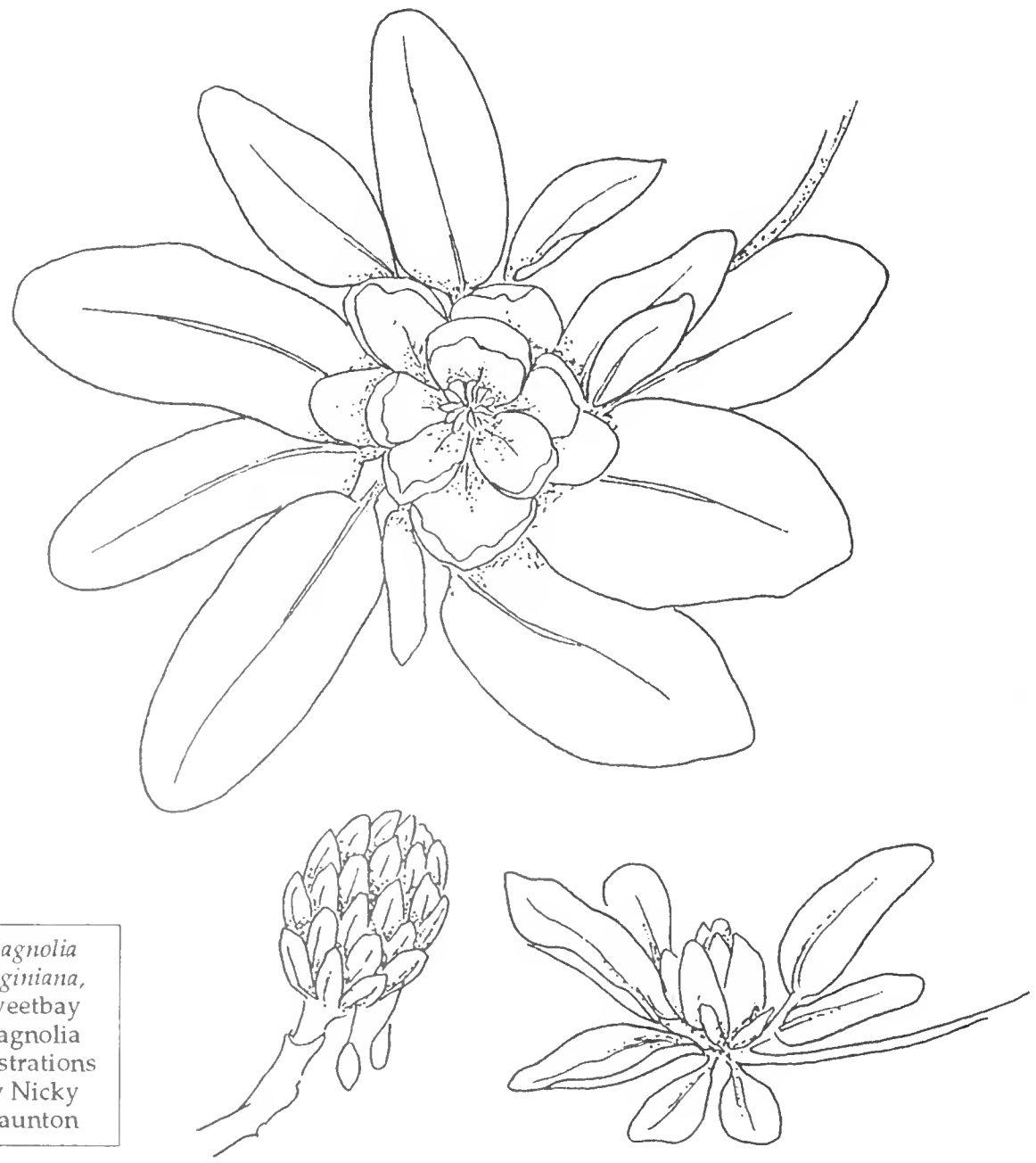
Search for sweetbay turns up unique swale

In 1990 and 1991, I was intensively involved with searching the central Virginia piedmont for populations of sweetbay magnolia (*Magnolia virginiana*). In May 1990, I found an interesting seepage swamp at the headwaters of Horsepen Creek at a point about a mile-and-a-half northwest of Oilville in Goochland County. Turning into the Sleepy Hollow subdivision off Long Drive, I discovered a small, but noticeable swale dominated by black gum and red maples and surrounded by brand new houses. According to my maps, this sphagnous seep was situated at the very upper end of Horsepen Creek. Poking into a shrub thicket consisting of fetterbush (*Leucothoe racemosa*), deciduous holly (*Ilex decidua*) and arrowwood (*Viburnum dentatum*), the first interesting oddity was a large, 23-inch sweetbay magnolia. Next to it was a handsome chokeberry (*Aronia arbutifolia*), and turning, I saw poison sumac (*Rhus vernix*).

Hummocks supported cinnamon fern (*Osmunda cinnamomea*), netted chain fern (*Woodwardia aceolata*), and dense cover of marsh fern (*Thelypteris palustris*). Standing water between hummocks had Turk's cap lily (*Lilium superbum*), some of which were eight feet tall! Other interesting plants were little green orchids (*Habenaria clavellata*), including about 50 in a space of five square feet! I also saw the largest single population, about 300, of fancy fern (*Dryopteris intermedia*) I have ever encountered.

I checked on this area again recently, and miraculously it is still intact. Despite the presence of interesting wetlands, the site is not protected because of regulatory allowance for areas in headwater landscape positions. Herbarium specimens were obtained for documentation and are at Virginia Commonwealth University.

Thanks go to Pocahontas Chapter member Robert Wright for sharing his visit to the headwaters of Horsepen Creek with us.



Magnolia virginiana, sweetbay magnolia Illustrations by Nicky Staunton

VNPS group again experiences memorable Bruce expedition

Calypso orchids, moonworts, heavenly food and a dawn birding expedition were part of the excitement experienced by 20 VNPSers who trekked to Canada's Bruce Peninsula in June.

We met at Wildwood Lodge in Mar, Ontario for a week of wildflowers. Ted Scott directed trips, Mother Nature cooperated and Canada's preservation of its unique habitats enabled us to enjoy about 95 percent of the flora we anticipated. The lake iris, ramshead orchids and butterwort of Dorcas Bay were prolific and fresh. The wall of ferns and nodding trillium of Crane River; Robert's oak fern at Dyers Bay Crossroads; sundews, arrowgrass and false asphodel at Oliphant Fen; yellow ladyslippers, Indian paintbrush, starry false Solomon's seal and gaywings mixed profusely along the roads all added to a wonderful journey.

On the shore of Lake Huron, Wildwood Lodge hosts Vic and Shirley Thomas served baked white fish for a breakfast and a memorable Dorcas Bay fieldtrip picnic; breakfasts included heavenly sticky buns, Red River cereal and crunch special pancakes.

Bob and Jody Lyons invited us to celebrate their 50th wedding anniversary and our days concluded around their hospitable campfires. Rob Lyons, their son, started the evening fires and we drifted to the glow, just as moths would. Jean Worthley aided our birding expeditions (30 species in 1 1/2 hours prior to breakfast) and helped give names to mystery plants.

Flowerpot Island yielded the festive glory of a nine-member family of Calypso orchids. Moonwort was waiting demurely on the appointed sand dune for our tryst...Frances Newcomb located several more nearby. Sharp eyes of Karen Shepard, Elaine Smith, Butch and Betty Kelly, Joe Howard, Vilja Lewis, Milton and Jean Leroy, Ed and Dot Fererro, Bud Gregory, Jean Solomon added to the trip's success. The

(See Bruce, page 7)

The Naturalist's Library

Book on West Virginia forests is useful guide to mountain state

***Upland Forests of West Virginia* Edited by Stephen L. Stephenson. McClain Printing Co., Parsons, WV 1993. $28.50.**

The rugged terrain and relative high elevation of West Virginia's mountains have long drawn naturalists and recreationists from the Mid-Atlantic region. *Upland Forests of West Virginia* is an outgrowth of a 1989 symposium by the West Virginia Academy of Science and brings together the work of over 20 authorities on the biota and ecology of the West Virginia forest as it occurs above 3,000 feet.

It might be hard for the casual visitor, driving through the dense forest lining the Mountain State's roads, to realize that what he is seeing bears little resemblance to the original forest cover of the state. Logging and fires, destroying both trees and deep humus soil, had virtually eliminated the original forest cover by 1920. The remnants we enjoy today are second- or third-growth northern hardwoods. Several chapters mention the extensive red spruce forests which once covered much of the high mountain country. One author claims that the original red spruce forest of the Canaan Valley probably represented one of the finest examples of its type in the eastern United States if not the entire world.

Following an introduction to the upland forest and its history, the book launches into chapters covering individual elements of the biota. Bryophytes, lichens and fungi each have their chapters, with a well-taken plea by the respective authors not to ignore these less spectacular members of the plant communities in favor of more showy plant groups. Our readers will appreciate the chapter on rare plants by Brian R. McDonald of the West Virginia Natural Heritage Program. Insects and spiders, reptiles and amphibians, birds, wildlife and prehistoric human occupants each have their turn.

I'd consider it a poor natural history book that didn't provide one good "gee whiz" fact and *Upland Forests* provided this: there is a plant bug (Order Hemiptera) which looks like an ant and lives with ants on the beaked sedge surrounding the boardwalk at Cranberry Glades. The benefits of this relationship to either insect are not known. The plant bug may gain protection from predators by mimicking ants which are known to be unpalatable.

Anyone who travels to the mountains of West Virginia to camp, hike and botanize will find *Upland Forests of West Virginia* to be useful for reference and background. It is a worthy companion to *Flora of West Virginia* and Earl Core's *Vegetation of West Virginia* as guides to the natural history of this fascinating region.

Mark Gatewood, Publication Chair

•Grant

(Continued from page 1)

Director, Department of Conservation and Recreation, Division of Natural Heritage. Sadly for us, Caren and her family are returning to Massachusetts by the end of August. We will miss working with her and will miss her on the VNPS Board of Directors where her input has always been valuable.

Ted Scott, 1st Vice-President

•Bruce

(Continued from page 6)

final day, our showy ladyslipper was in her regal, rosy glory. Neighboring plants had buds which opened the next week. None of us would have enjoyed the trip as much had Ted not pushed himself, despite his broken ankle, to be with us. It was a pleasure to be the substitute leader under his guidance. There could be a 1998 Bruce Peninsula trip. If so, co-leaders and dates will be announced in the next *Bulletin*.

Nicky Staunton, Conservation Chair

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

VNPS Membership/Renewal Form

Name(s)_____

Address_____

City_____ State_____ Zip_____-_____

__Individual $15 __Family $25 __Student $10

__Patron $50 __Sustaining $100 __Life $400

__Associate (group) $40; delegate_____

To give a gift membership or join additional chapters: Enclose dues, name, address, and chapter. (Non-voting memberships in any other than your primary chapter are $5).

I wish to make an additional contribution to ___VNPS _____Chapter

in the amount of __$10 __$25 __$50 __$100 __$_____

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

__Check here if you do not wish to be listed in a chapter directory.

Make check payable to VNPS and mail to:

VNPS Membership Chair, P.O. Box 844, Annandale, VA 22003

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

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Frank Coffey, President
Nancy Sorrells, Editor

The deadline for the next issue is Oct. 1

•Parasites

(Continued from page 5)

name of "pirate bush." Why not just call it *buckleya*?

Spectacular stands of *buckleya* can be found in Roanoke County at the Poor Mountain preserve. Other populations that I have studied for 25 years are declining at a rapid rate, largely through the kind of fragmentation of the landscape that occurs through urbanization. There are records of buckleya from fewer than 10 counties in Virginia. I was alarmed to learn that some well meaning naturalist planted some fruits along the Blue Ridge Parkway.

Buckleya is easy to grow from the peculiar green fruits produced in the fall. Despite a long tradition of association, hemlock is not a requirement for the growth of buckleya. In fact, at the Poor Mountain site some of the largest shrubs are nowhere near hemlock.

Figworts and Broomrapes

This is the largest group of parasitic plants in the southeastern United States and well represented in Virginia. Traditionally, the parasitic figworts have been placed in a subfamily of the Scrophulariaceae. The other subfamily of the Scrophulariaceae, with such familiar plants as foxglove, snapdragon, and mullein, contains autotrophic species. All species without chlorophyll were placed in the Orobanchaceae, the broomrape family. Recent molecular systematics has shown what botanists have postulated for many years. Relationship between the parasitic subfamily of the Scrophulariacae and the Orobanchaceae is close.

Green, autotrophic genera include *Agalinis* (with eight species, including one that occurs in saltmarshes), *Aureolaria* (our largest and showiest members of this group); *Buchnera* (abundant farther south but rarely seen in Virginia); *Castilleja coccinea* (Indian paintbrush, restricted to a few sites in Virginia); *Melampyrum linear*e, a small annual plant most abundant in the Appalachians in Virginia; *Pedicularis*; *P. canadensis* is widespread in the state; *Schwalbea americana*, now a federally endangered species almost certainly extirpated from Virginia; and *Tomanthera auriculata*, extremely rare and known from only one site in the state. Holoparasitic members, those formerly included in the Orobanchaceae are *Conopholis americana*, widespread and often abundant; *Epifagus virginiana*, a peculiar annual common throughout the state; *Orobanche ludovicianana*, likely extirpated from Virginia; and *Orobanche uniflora*, probably more common than realized due to its early flowering and its habitat under leaf litter. *Orobanche minor* has been introduced from Europe.

I have grown most of the autotrophic species. They are easy to cultivate in pots with a diversity of hosts. Unfortunately, few are used in the wildflower trade except *Castilleja*. The commercially available species of Indian paintbrush is not native to Virginia.

The genus *Aureolaria* is my favorite among the autotrophic members of this group. Four species are found in the Old Dominion. They are often known by the common name of false foxglove because the shape of the corolla resembles that of the cultivated foxglove. The corollas last only one day and then fall from the plant.

Aureolaria pedicularia is the only annual/biennial. It produces large, bright yellow flowers in late summer and fall. This species is always associated with red oaks, which it parasitizes. It may attack other species but *A. pedicularia* will always be found attached to a red or black oak. On the other hand, the other species are perennials and parasitize white oaks.

Tallest of all our herbaceous parasites, *A. flava* is most common in the mountains and flowers in mid to late summer. *Aureolaria laevigata* is an Appalachian endemic. This species is most conspicuous at the margin of dry forests on south facing slopes. Only one member of the genus flowers in the spring, *A. virginica*. It often forms attractive stands along roads and at the margins of woods.

This article is the third in a series by Lytton J. Musselman, a professor of biological sciences at Old Dominion University.

November 1997 Vol. 16, No. 5

Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

Conserving wild flowers and wild places

Williamsburg meeting a wonderful success

John Clayton would have been proud! His namesake VNPS Chapter hosted a wonderful Williamsburg weekend of wildflowers. One hundred and fourteen members of VNPS gathered in Colonial Williamsburg, Virginia, to elect a president, Marie Minor of the Pocahontas Chapter, who will see us into the new millenniun. Many thanks to members who mailed in their ballots: it was a record return of 313! Our weekend began with an elegant Friday evening meal at Christiana Campbell's followed by an evening program of Teta Kain's stunning photographs of Dragon Run, a Saturday field trip.

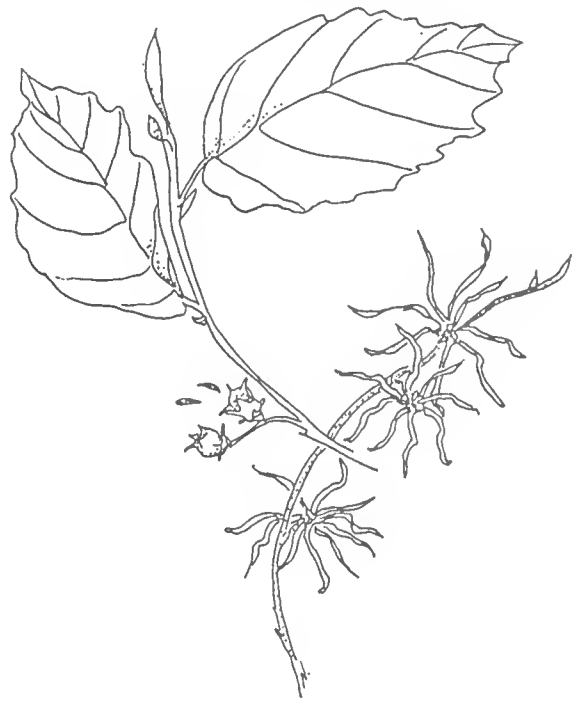
Members who had missed visiting the Zuni Pine Barrens eight years ago finally saw the long-needle pine in its habitat with fellow flora. Dr. Lytton Musselman's *Bulletin* articles about the pine barrens prepared us for the visit. The first plant to greet

(See Beautiful setting, page 9)

For Wildflower Gardeners

Witch hazel adds to fall gardens

Our native witch hazel (*Hamamelis virginiana*) is a wonderful plant for ending the gardening year. In addition to its lovely fall foliage and flowers, and adaptability to a wide range of growing conditions, it has a rich history of various uses.



Hamamelis virginiana, witch hazel
Illustration by Nicky Staunton

Witch hazel grows as an understory tree in dry or moist woods from Canada to Florida and Texas, and is found in most Virginia counties. Another East Coast species, *H. vernalis*, blooms in late winter and early spring as do the Asian species and cultivars.

Linnaeus established the family, Hamamelidaceae, in 1742 based on specimens and descriptions he received from John Banister, a British missionary living in Virginia. The genus name *Hamamelis*, meaning "together with fruit," describes the presence of last year's seed pods along with the current year's flowers.

Grown as a multi-stemmed shrub or single-trunked tree, witch hazel will slowly reach a height and spread of 15 to 20 feet. Dark, green alternate leaves, 3 to 5 inches long and 2 to 3 inches wide with irregularly scalloped edges, are arranged in a slightly zig-zag pattern. As they turn yellow and begin to fall in late October, clusters of tiny round buds along the stems begin to unfurl their small yellow, spidery flowers. Each bloom consists of four strap-like

(See Witch hazel, page 8)

Native plant fact sheets become reality

The fruits of our effort to compile a list of native plants of Virginia suitable for conservation, restoration and landscaping went to the printer on September 29. Plant descriptions include native regions for each (coastal, piedmont or mountain); suitability for wildlife enhancement, horticulture and landscaping, conservation and restoration, or domestic animal forage; and most suitable light (of three) and moisture (also of three) levels.

An article about this project appeared in the *Bulletin* exactly one year ago, in the November 1996 issue. This has been a cooperative

(See Native plants, page 9)

Inside this issue

- VNPS homepage...page 3
- Plant propagation...page 4
- Parasitic plants...page 8

From the President

Hello Members! I have humbly accepted the honor of assuming the position of the Virginia Native Plant Society President. I hope that I will be able to fill the position as capably as Frank Coffey. I will be in a learning mode for a while; however, there is a notion which I would like for the society members to consider. While we are pursuing our interests through legislation, we should, at the same time, be increasing our efforts to promote our society's goals to the public. Legislators will only support amendments favored by their constituents. By making the public aware of our organization using any opportunity for promotion, we are building grassroots sympathy for our interests and our organization. This makes it easier for legislators to support the amendments we favor, and the two-pronged approach will provide a solid base of support in our causes of conservation, preservation, and the use of native plants in our environments.

As the new president, I am eager to hear your voices. If you have any ideas or thoughts that you wish to share with me, please contact me at 804-443-5950 or mfminor@inna.net. I will be happy to hear from you.

Your president, Marie F. Minor

From the former President

I want to thank all VNPS members, officers and board members who helped make my tenure as VNPS President an enjoyable adventure. I will always remember our experiences together.

I hope everyone will give our new president, Marie Minor, and the new VNPS Board of Directors all the support they need to continue the important work of our Virginia Native Plant Society.

Your former president, Frank Coffey

New VNPS Board

President	Marie Minor	804-443-5950
1st VP	Ted Scott	540-568-8679
2nd VP	John Fry	540-364-3046
Treasurer	John White	540-364-3066
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Horticulture	Nancy Arrington	703-368-8431
Membership	Phoebe White	540-364-3066
Publication	Open	
Publicity/PR	Nancy Hugo	804-798-6364
Registry	Boleyn Dale	804-725-5451
D-A-L	Pat Baldwin	804-838-2064
D-A-L	Pam Weiringo	540-772-3665
D-A-L	Allen Belden	804-786-7951
D-A-L	Cris Fleming	301-657-9289
D-A-L	Jim Bruce	804-749-4415
D-A-L	Faith Campbell	703-569-8745
Blue Ridge	Karen Shepard	540-772-2733
Jefferson	Pat Willis	540-967-1776
J.Clayton	Gordon Chappell	804-220-0914
Piedmont	John Fry	540-364-3046
Pocahontas	Richard Moss	804-748-2940
Potomack	Norma Vermillion	703-451-0572
Prince William	Helen Walter	703-330-9614
Shenandoah	Bonnie Hohn	540-885-2393
S. Hampton Rd.	Holly Cruser	757-481-2285

Aulakh's cardinal flower selected top wildflower photograph

Lobelia cardinalis reigns supreme as the "Best" winning photograph of the 1997 VNPS competition. Bob Lyons of VPI Department of Horticulture chose the intense scarlet cardinal flower photo by Elizabeth Aulakh of the Potomack Chapter resulting in her being named as the best wildflower photographer for this year. The engraved pewter Jefferson Cup was announced as her award during the program at the Annual Meeting in Williamsburg.

Below is the list of winners:

In the category of the 1998 Virginia Wildflower of the Year (*Aquilegia canadensis*)

A. Plant Specimen: Photo of one columbine specimen
- 1st Carolyn Bates, BRWS
- 2nd Teta Kain, John Clayton
- 3rd Dorothy Bliss, BRWS

B. Habitat: Columbine in a natural or cultivated habitat.
- 1st Carolyn Bates, BRWS
- 2nd Jan Gates
- 3rd None

Favorite Native Plant Photograph

C. Plant Specimen
- 1st Elizabeth Aulakh - Best overall
- 2nd Carolyn Bates
- 3rd Nancy Sorrells

D. Habitat
- 1st Martha Shelkey
- 2nd Carolyn Bates
- 3rd Dorothy Bliss

Watch for the announcement of the 1998 VNPS Photography Contest...and, be using your tripod to photograph the 1998 Columbine and....the VNPS choice Virginia Wildflower of the Year 1999: twinleaf. (Check the *Atlas of Virginia Flora* to locate counties in Virginia which have natural stands of twinleaf and be ready for this seldom-seen spring wildflower.) Rules will specify how to enter slides in the next contest. We appreciate the 11 contestants submitting 25 8 x 10 mounted prints which were displayed at the Annual VNPS Meeting in Williamsburg.

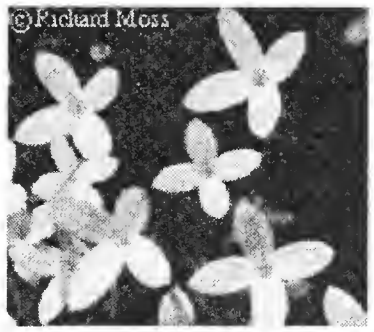
Check out the VNPS home page at: **http://www.hort.vt.edu/VNPS/**

The Virginia Native Plant Society

Conserving Wild Flowers and Wild Places

Education Research Advocacy Protection Rescue Propagation

Some Virginia Native Plants in Summer



Bluets *(Hedyotis caerulea)*

Wild Columbine *(Aquilegia canadensis)*

Jewel Weed *(Impatiens capensis)*

Bee Balm *(Monarda didyma)*

The Virginia Native Plant Society (VNPS) was founded in 1982 as The Virginia Wildflower Preservation Society. It is a statewide organization with approximately 1500 members supported primarily by dues and contributions. Membership is open to anyone, amateur or professional. Its purpose is to further appreciation and conservation of Virginia's native plants and habitats. Incorporated in Virginia as a not-for-profit, publicly supported organization, it is tax-exempt under the U.S. Internal Revenue Code. The Society's work and activities are carried out by volunteers.

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

- ☐ An Alien Invasive Plant Project.
- ☐ Selection of a Native Plant of the Year.
- ☐ A Registry Natural Areas in Virginia with rare or interesting Native Plants.
- ☐ Preparation of a List of nurseries which supply Native Plants.
- ☐ Sponsorship of Seminars, Workshops, Field Trips, and through many local chapters, Plant Sales.
- ☐ An Annual Meeting in September. (The Program for last year's Meeting may be seen here.)

The VNPS is governed by a Board of Directors, and has nine local chapters located throughout the Commonwealth. Members are encouraged to participate in the work and activities of the Society at the local level, through the chapters, as well as at the state level. The society publishes a Bulletin five times a year in January, March, May, August, and November.

To request more information about the VNPS.

Virginia Native Plant Society
P.O. Box 844
Annandale, VA 22003

If you haven't surfed the Internet looking for the Virginia Native Plant Society home page, now's your chance. Go to the address listed above for information about nurseries, native plants of the year, alien invasive information, and much, much more.

Winter Workshop round-up

Propagating broadleaf evergreens from cuttings

In March of 1996 the VNPS Winter Workshop featured various methods of propagating plants. Now the thought has occurred to some that this might be a subject of interest to our members who could not attend that workshop. This is the first in a series of articles on several of the more common ways of propagating plants. Because this is still the season when one can propagate some of our woody plants from cuttings, this first article will address the steps necessary to be successful in that endeavor.

This article will focus primarily on the propagation of broadleaf evergreen plants such as azaleas, rhododendrons, hollies, kalmia and leucothoe. The first important step is to take the cuttings from the best type of growth and at the best time of the year. Deciduous woody plants will be covered in a later article. Cuttings from young plants root more readily than cuttings from more mature plants. Cuttings should be taken when the new stem wood has reached a proper level of hardness as indicated in the box below.

One of the first questions to address is what kind of propagator you wish to make or purchase. I have used wooden grape shipping boxes and wine boxes to root hundreds of plants. They will rot out after one or two seasons but the price is right. They should be about five inches deep, have holes in the bottom for drainage and a method of providing a fairly airtight, transparent to very translucent plastic cover without the cuttings touching the cover. I use two four-foot cool white florescent tubes with a reflector over a homemade propagator with an area 42 inches by 30 inches or over two smaller purchased propagators.

The lights should be only eight to ten inches above the plants, but I have been successful at 15 inches. Prior to taking the cuttings one should prepare the rooting medium at least a day or two before using it. Make up a mix of half Canadian peat moss and half horticultural grade perlite. BE CAREFUL NOT TO BREATHE THE DUST OF EITHER CONSTITUENT-A FACE MASK IS ADVISED. Rubber or latex gloves are also highly advisable because peat moss can carry a fungus which, if it gets into a cut or open sore, can cause very serious blood poisoning--rare but not worth taking a chance. (The gloves will also help protect from the Captan and hormone referred to later, both of which can be carcinogenic.)

Mix the medium thoroughly, moistening it as you do it. At first you can apply a fair amount of water, but as it gets wetter, be more cautious, because as it gets wetter it won't take much water to make it too wet. The proper level of moistness is important. You are aiming for a condition in which the medium forms a ball that will stay together after squeezing it. The ball should hold together with handling. If more than one or two drops of water drips out when squeezed as hard as you can, it is too wet. It's better to stay on the dry side. Store the moistened medium in a closed plastic bag or covered container at a temperature of about 70 degrees F until ready for use. This will help the moisture level in the medium to become more uniform throughout. (For boxwood use damp builders sand.)

Instructions will usually say to take the cuttings when the plants are "turgid." This means a time when the water pressure in the vascular system of the plant is highest, usually early in the cool of the morning before the sun hits the plant. A cool, cloudy day is ideal. Before every cut, sterilize by dipping in alcohol either a sharp knife or a pair of pruning shears which have the correct type of anvil so that they cut in a manner similar to scissors. (A flat anvil will cause damage to both the plant and the cutting.) Immediately place the cutting(s) in a plastic bag accompanied by an identifying label and tie the bag shut.

Keep in a cool place and in the shade until through collecting. The cuttings may then be stored for up to 10-14 days in a sealed plastic bag (do not add water) in a refrigerator at 40 degrees F or immediately prepared for sticking in the rooting medium.

From this point, one will in time discover that every individual does something perhaps a little differently, sometimes drastically so, from some of the details I specify below. They do what they have found in their experience works best for their conditions. You will in time no doubt change some of the details I outline. On the other hand, you should remember that I have had great success over an 18-year-period with the methods I describe.

When ready to stick the cuttings in the rooting medium, wash the cuttings in a solution of Captan (three tablespoons to a gallon) or similar fungicide. Shake off excess. REMEMBER THE RUBBER OR PLASTIC GLOVES. Dip all cutting tools in alcohol to sterilize them and permit to dry. Cleanliness is most important

(See Propagation, page 5)

When to take plant cuttings

Evergreen azaleas	**Late July -December, earlier the better**
Rhododendrons	**Late August to February**
Hollies	**September to December**
Leucothoe	**September to December**
Boxwood	**Late September (Virginia)**
Kalmia	**Early June to October (difficult)**

Plant	Time Required To Root
Evergreen azaleas	**Four to eight weeks**
Boxwood	**Eight to ten weeks**
Hollies	**Four to six weeks**
Rhododendrons	**Eight to twelve week**
Kalmia	**Five to six months**

•Propagation

(Continued from page 4)

from this point. Continue to work with the gloves on until all cuttings have been stuck.

1. Pinch out any blossom bud present. (It is better to avoid the use of cuttings with apparent blossom buds if possible). Do not remove vegetative end buds.

2. Trim the base of the cuttings to a total length of two inches for evergreen azaleas, three to four inches for the others.

3. Remove all but the top three or four leaves and on large leaf plants such as rhododendrons reduce the length of the remaining leaves by half.

At this point evergreen azalea cuttings are ready to be stuck in the rooting medium with perhaps two inches between each cutting. Rooting hormone is not necessary.

4. For cuttings other than evergreen azalea, use a very sharp knife to make two parallel cuts on opposite sides of the stem for about 1-1 1/2 inches at the bottom of the cutting. Cut deeply enough, but no deeper, to just take a very thin sliver off the hard wood of the cutting beneath the bark.

5. Dip in a rooting hormone powder containing 0.8 percent of indole-3-butyric acid such as Hormex or Hormodin (get the proper percentage) so as to cover all the cut surfaces. Knock off the excess. A mask should be worn anytime there is a chance of hormone dust being in the air. The hormone to be used should be removed from its container into a conveniently shaped vessel and the container resealed immediately and returned to the refrigerator for storage. When you are through treating the cuttings, all excess hormone should be discarded-NOT RETURNED TO ITS ORIGINAL CONTAINER. Remember, you are still working with gloves on. The rooting hormone is fairly expensive. The smallest can available at most garden supply houses costs around $15 and is enough to root a few thousand cuttings.

It, therefore, is a good idea to work with a friend so that you can share the powder and the expense. Besides, it is more fun that way. If the powder is stored in a refrigerator in a tightly closed can, it will retain its strength for at least two years.

6. With a dibble about the size of the stems of the cuttings, make a hole in the rooting medium to the depth the cutting will be stuck. Stick the cutting into the rooting medium as deep as you can without the leaves touching the medium. Water in the cutting with a squirt of water to bring the medium in good contact with the stem. Use as little water as possible so the medium doesn't get too wet.

7. When all cuttings have been stuck, mist the foliage until damp with as little runoff as possible.

8. Cover propagator with an airtight cover and place under lights about 8-10 inches above cuttings for 16 hours per day. I use cool white florescent lights and get good results. Maintain a temperature as close to 70 degrees F as you can in the propagator.

9. Mist the cuttings at least twice daily for the first week with as little runoff as possible. After that you can determine that you have high humidity if droplets of moisture continue to form on the propagator cover. Mist as needed to maintain that high humidity. If in a large enclosure, probably daily; if in a pot in a plastic bag, possibly once a week. Open enclosure for a few minutes once a week at least for an exchange of air. The objective is to keep the leaves moist in a high humidity atmosphere at a temperature of 70-75 degrees F. Bottom heat is very helpful or even necessary for the plants more difficult to root, especially in a space cooler than 70 degrees. In that situation I bury a thermostatically controlled heating cable in a bed of moist sand under my rooting vessels or I use an old electric blanket under a sheet of 6 mil plastic to protect the blanket.

Near the end of the appropriate time period, test the cuttings by very gently tugging on them to see if there is resistance. A well-rooted plant will not give at all. If ready, pot up in an appropriately sized pot, 5 inches is about right, with the following mix: 2 parts milled (fine) pine bark; 2 parts Canadian peat; 1 part builders sand; 1 part perlite.

Moisten this mix with water treated with a wetting agent such as AQUA-GRO, following instructions on the container and repeat about every 10 weeks. If you have difficulty finding milled pine bark (your friendly nurseryman is the most likely source), you might use Pro-Mix, available from garden supply dealers. In that case do not add a wetting agent; it is already included.

The plants should be fertilized about bi-weekly with an acid fertilizer such as Miracid at half the strength recommended for house plants. After several weeks this can then be strengthened to the full strength for house plants. Keep a close eye on the condition of the plants after each change in their environment. If they appear to be unhappy, adjust by changing back a little toward their previous environment. This might mean less fertilizer, more or less moisture, more or less warmth. Do not let plants become dry when fertilizer is being used, but also remember that a too

(See Cuttings, page 10)

VNPS members to the rescue!

Quick work foils purple loosestrife plantings

As we follow our daily routines of working, playing, socializing, and whatever we do in our spare moments, few of us think seriously about how important members are to VNPS. A drama that played out during the last few days of September served as a sudden, stark reminder of what important roles individual members play in the success of VNPS as an organization.

During the last weekend of September, a VNPS state officer received an e-mail message from a member in one of our largest cities: "Stop the presses! Help! The city is planning to order quantities of 'Morden Gleam' [purple loosestrife] for a beautification project. Please send me information about the sterility of 'Morden Gleam.'" Our state office responded:

"Morden Gleam is a purple loosestrife hybrid produced by crossing Morden Pink with *Lythrum alatum*, a rare native in Virginia but more abundant elsewhere. While the nursery trade has for years said that Morden Gleam (and the other horticultural cultivars of purple loosestrife) is sterile, we now know as a result of extensive research at the University of Minnesota that it is both male and female fertile. A copy of the research paper by Asher and Anderson is being sent by priority mail. Two native species of *Lythrum, L. alatum* var. lanceolatum and *L. lineare*, whose ranges in Virginia are restricted to your area of the state, will in time likely be threatened by planting Mordem Gleam in the area.

If this plan becomes a reality, it will be the worst possible eventuality for the freshwater marshes in your part of Virginia and our waterfowl that depend on those marshes for food and cover."

By early Monday morning our state office had alerted the Division of Natural Heritage, The Nature Conservancy, the Virginia Department of Game and Inland Fisheries, and the Virginia Department of Agriculture and Consumer Services, all of which have specific interests that would be detrimentally affected by the planned project. Each of those organizations immediately sent a message of alarm to the city government.

On Tuesday evening, September 30, the state office received the following e-mail message:

"--We have apparently been successful in showing our concern, as it has been decided to avoid the use of any type of *Lythrum*. I have notified our landscape department that I will provide them with the research article for city study and to be used as a guide for future planning."

We heaved a big sign or relief and a giant "THANK YOU" to a quick-acting member. How important is a member? Each of us can be that member just by keeping our eyes and ears open.

Sanguinaria canadensis Illustration by Nicky Staunton

Potowmack Chapter holds successful sale, annual meeting

The Potowmack Chapter has had a very busy year. The fall plant sale, for example, was very successful, selling 25 percent more plants than last year's sale. More than 1,300 plants were bought by the general public. Almost all of the shade and woody plants were purchased.

The Potowmack Chapter has now grown to 445 members. Its annual meeting was held on Sunday, October 5 at Woodlawn Plantation in Alexandria. Among the events were: talks by Woodlawn director Susan Olsen and Marion Lobstein, a discussion of environmental concerns by Congressman Jim Moran and Senator Joe Gartlan, recognition of VNPS charter members, elections, business meeting, a seed exchange and a tour of Frank Lloyd Wright's Pope Leighey House.

John Clayton Chapter saves York plants

Smoke billows up from a pile of burning trees, the flames shooting two stories into the air. What was once a rich forest is now exposed red earth, laid bare by roving bulldozers. Sound familiar? Images of the Brazilian rainforest and the central plateau of Madagascar come to mind, but, no, this is Virginia, not two miles, as the crow flies, from the historic district of Colonial Williamsburg in York County.

This is the increasing scenario in the Williamsburg area as more and more people move into the community. Williamsburg continues to attract people, mostly from points north, who are looking for a quiet, attractive and cultural place to retire. They come here from the Washington area and the Northeast corridor looking for relief from the crime, traffic and general congestion of the cities they left behind; not realizing that their increasing presence is transforming this community into the very thing they thought they were leaving. As if that were not enough, people are starting to move in from points west as well. Williamsburg has become an attractive bedroom community for metropolitan Richmond. This leaves members of the John Clayton Chapter of VNPS literally on the front line as more and more woodland falls to development.

Through a haze of smoke and

(See Plant rescue, page 10)

Twenty diverse habitats need protection at refuge

The Occoquan Bay National Wildlife Refuge (a.k.a. Harry Diamond Labs, Woodbridge Research Facility, Mason Neck National Refuge-Woodbridge Unit) is your newest national wildlife refuge. It is a place of 580 besieged acres in Northern Virginia including dry upland meadows and sea level wetlands, 20 plant communities where bald eagles visit daily, and communities of insects, mollusks, fish, reptiles and mammals yet to be inventoried.

In 1994 Congress designated the U.S. Army Woodbridge Research Facility-Harry Diamond Laboratory as a closed military base and transferred it to the United States Fish and Wildlife Service. Forty years of benign land management, mostly yearly mowing, under the army produced high biodiversity.

The intensely diverse plant communities at the refuge offer shelter, food and breeding grounds for a variety of wildlife. The plant communities are among the refuge's most valuable natural feature. Wetlands are legally protected; however, the dry upland meadows are not. Consequently, the military land has been thus-far unsuccessfully coveted as useful Northern Virginia real estate.

Unfortunately, USFWS planners from Hadley, Massachusetts, envision severe land alteration in their comprehensive management plan. Ironically, the CMP team includes a real estate acquisition specialist, a geographic associate (fisheries), an engineer, a landscape architect and a general biologist, but no botanist or land management/ecology specialist. Such an advocate is needed to protect the viability of the plant communities and their habitats. Healthy, ordinary flora is becoming too rare in this area. Protecting plant communities before they become rare is as important as protecting the plants after they have become endangered.

The USFWS plan is to remove the sturdy and usable structures on the site at the cost of $2 million and allow the 12-acre compound area to return to grasslands. In addition, the plan calls for the construction of a $5 million visitor center which will become an interpretative showcase, hosting 30,000 to 100,000 visitors annually. Under this plan, the new visitor center site is near the wet forest above a fox community and will offer fishing activity under the bald eagle tree perches. This area, as well as 75 acres of the upland meadows, will then experience "heavy use" and trails will intersect meadows where the northern harrier and other raptors currently hunt mice, voles and rabbits which live in the eastern gama grass and along tree rows harboring owls.

The CMP ignores the fact that the existing natural resources demand preservation and sensitive land management in order to survive. There is no acknowledgment in the plan that such habitats are the basis for visitors - both wildlife and human - to the site. The USFWS planning team appears to see its newest refuge as a prime piece of land near the nation's capital to be developed.

With a VNPS mission to "Conserve Wild Flowers and Wild Places," we need to insist that USFWS slow its plans for altering the refuge and add a qualified specialist in ecologically-oriented land management to the planning team. Someone is needed to project the effects of proposed changes upon the natural resources of this miniature replica of coastal, piedmont and deciduous forested hills of Virginia. USFWS should be urged to use existing buildings until impact assessments are complete. Opinions may be expressed to USFWS, Jeff Underwood, 300 Westgate Center Drive, Hadley, MA 01035, 413-253-8408, or to representatives instrumental in having the land transferred to USFWS: Senators Chuck Robb and John Warner and Congressmen Tom Davis and Jim Moran.

Nicky Staunton, Conservation Chair

VNPS expedition will return to Canada's Bruce Peninsula

Entering Canada by crossing the Niagara escarpment and moving toward the Bruce Peninsula between the Georgian Bay and Lake Huron, the first-time visitor begins to notice different architecture and natural features. My mind's eye recalls the scenes clearly and anticipates the VNPS 1998 trip to "the Bruce."

Members of VNPS - and persons who would join VNPS to go-are invited the week of June 13-20 to Wildwood Lodge on the beach of Red Bay for an intense week of botanizing. Wonderful birding opportunities abound, also. Add a boat trip to Flowerpot Island to look for the fairy slipper orchid; a sand dune visit to see Moonwort - a tiny 1 1/2-2-inch fern - the delicious meals of Wildwood Lodge hosts, the Thomases, and you have the hint of an exciting week's adventure.

Botrychium lunaria, Moonwort Illustration by Nicky Staunton

Cris Fleming, VNPS Director-at-Large, field botanist for Maryland Natural Heritage Program and botanical instructor for the United States Department of Agriculture and field trip leader for Audubon Naturalist Society, assures trip members of exciting botanical excursions. If you are interested in being on the list of 18 for the '98 trip, send your $50 deposit (part of the total fee) to: VNPS Bruce Trip, P.O. Box 844, Annandale, VA 22003. If you have questions, call: Nicky Staunton at 703-368-9803 or e-mail: staunton @erols.com. The final fee is to be announced, but should not exceed $500 for the week's lodging and meals at Wildwood Lodge and cost of the boat trip. We will carpool while on the Bruce. Transportation to the Bruce and home will be "on your own." It is about 800 miles from Northern Virginia, so one night motel cost will also be extra.

Nicky Staunton, Bruce trip co-leader

Beechdrops, squaw-root provide interesting parasitic studies

This article is the fourth and final article in a series by Lytton J. Musselman, a professor of biological sciences at Old Dominion University.

In examining the great diversity of parasitic plants in Virginia, we come, finally, to the holoparasitic species. Of these, one of the most intriguing because of host selection and floral biology is the widespread beechdrops (*Epifagus virginiana*). This is an appropriate common name as this stiffly erect fall-flowering species is always associated with beech. However, not all beech trees have beechdrops associated with them.

Few native species have such an interesting floral syndrome as beechdrops. They produce two kinds of flowers. The relative abundance of these flowers varies among individuals. Generally, every plant has at least a few chasmogamous (open, typical) flowers and several cleistogamous (lacking typical parts) flowers. Chasmogamous flowers have a narrow, tube shaped corolla. On the other hand, the cleistogamous flowers are greatly reduced.

I have not studied the floral visitors nor do I know if the cleistogamous flowers are self fertile. Of course, the cleistogamous flowers can pollinate themselves so most of them produce seed.

The capsules rupture late in the fall, exposing the hundreds if not thousands of tiny seeds to rain drops. It opens in such a way as to form a splash cup that uses fall rains to disperse the seeds.

Like other aspects of the plant, the seed germination remains a mystery. We simply do not understand how they germinate! Obviously, some germinate every year because it is possible to find the yellowish tuber-like seedlings under the leaf litter early in the summer. I have traced seedling development back to nubbins only a few millimeters wide. Earlier stages remain to be discovered.

More conspicuous than beech drops is *Conopholis americana*, squaw-root. This perennial forms a cone-like fruit, giving the genus its name. Flowers are produced early in the spring. While the individual flowers are small, they are borne on a fleshy axis in large numbers. Squaw-root often forms noticeable clumps at oak tree bases. Oaks are the favored host; I have not found them on any other host.

They produce new shoots each year from an underground tuber-like structure. These underground parts of the plant can often grow to several inches in circumference.

Squaw-root produces its seeds in a fleshy capsule in the summer. At this stage the parasite is an important food for black bears in the Smoky Mountains.

Suggested parasitic plant readings

If you have enjoyed this series on parasitic plants and would like to learn more, the classic reference on parasitic flowering plants is *Biology of Parasitic Flowering Plants* by Job Kuijt, published in 1968 by the University of California Press. Publication of this volume launched modern studies of parasitic plants. For color pictures of most of the species occurring in the Southeastern United States see "Root Parasites of Southern Forests" by Lytton J. Musselman and William F. Mann, 1976. A recent review of all parasitic plants in the American South is, "Parasitic Weeds in the Southern United States" by Lytton Musselman. It was published in 1996 in *Castanea* 61(3): 271-292. Copies of the 1976 and 1996 articles are available from Lytton Musselman.

•Witch hazel

(Continued from page 1)

twisted petals an inch long that curl up to avoid the ravages of cold, rainy weather. This allows them to stay attractive for three to four weeks. The flowers have an elusive sweet fragrance that fills the air but is hard to detect by close-up sniffing.

Witch hazel is easy to grow in almost any garden situation from full shade to full sun and in soil ranging from moist to dry. Plants grown in rich, moist soil in full sun to part shade will attain a dense, vase-like shape and will flower better than those growing in a dry, shady spot.

This native is excellent for fall-blooming gardens with features such as asters, especially the very-late climbing aster (*A. carolinianus*), goldenrods, gentians, native grasses, and the Christmas fern. Fall companion shrubs include beautyberry (*Callicarpa americana*), winterberry (*Ilex verticillata*) and strawberry bush (*Euonymus americanus*).

Although it has no serious pest or disease problems, witch hazel is host to some interesting insects. The spring witch hazel gall, a small pineapple-shaped growth attached to twigs, contains eggs of an aphid that attacks the flower buds. Another aphid chews on leaf undersides causing a cone-shaped gall resembling a witch's hat to form on leaf surfaces. Two moth species feed inside the rolled leaves.

The authors of *Native Shrubs and Woody Vines of the Southeast* say that witch hazels are pollinated by nocturnal winter moths that fly at air temperatures as low as freezing and feast on the flowers. The seed pod develops over the following year, and, at maturity, splits with a noticeable pop to eject the small black seeds up to 40 feet from the parent plant.

American Indians made bows from witch hazel's pliable wood and used preparations of the stems, leaves, bark and roots to treat ailments. Forked branches of this tree have long been used for "witching" or divining rods to dowse for water, salt and ores.

Although *Hamamelis virginiana* is difficult to propagate, several native plant nurseries offer it. For a list of nursery sources, check the VNPS web site (see page 3) or write: VNPS, P.O. Box 844, Annandale, VA 22003.

Nancy Arrington, Horticulture Chair

•*Native plants*

(Continued from page 1)

project executed by a partnership between the Virginia Native Plant Society and the Virginia Department of Conservation and Recreation's Division of Natural Heritage. It was made possible by a grant from the National Fish and Wildlife Foundation and with matching funds from the Virginia Nurserymen's Association, the Lewis Ginter Botanical Garden and the Virginia Chapter of the American Society of Landscape Architects in addition to funding from VNPS and the Division of Natural Heritage.

Copies of the master list of some 300 Virginia natives and three regional brochures listing plants growing in the Coastal, Piedmont, or Mountain zones will be made available to members through their local chapters. We hope you will find the material informative and useful.

Ted Scott, 1st Vice-President

Beautiful setting, field trips highlight weekend

(Continued from page 1)

us at the head of the trail was sheep laurel...with a modest, but open, blossom and several buds. Later we saw some of the other endemic plants, pixie moss was one; and visited the Blackwater River where galax leaves were profuse on the hillside. George McClellan, our leader, identified the unusual plants, explained "controlled burn" and we even saw a fence lizard and a summer tanager. (I must confess to taking something with me from the Zuni...chigger bites on one "unsulfured" ankle. The scars are still evident!) The canoe field trip on the Dragon was more than anticipated - two canoes tipped over- but there was little water. Those visiting the Williamsburg colonial gardens were inspired.

We agree with our host, Gordon Chappell, President of the John Clayton Chapter, that the weekend was like having friends get together. We had a fabulous weekend in the beautiful setting of the Woodlands of Colonial Williamsburg and thank Gordon and Sherry Chappell for the arrangements and the members of John Clayton Chapter for their detailed plans and efforts to make our stay positively unforgettable. We even dropped in on some friends who lived nearby: the shadow witch orchid colony, *Ponthieva racemosa*. We first met them during a fieldtrip with Pat Baldwin at our last Clayton-hosted annual meeting. The shadow witches have stood their ground and were in fresh bloom!

The weekend was a blend of recognizing fellow VNPS members and visiting with them and enjoying the native plants of the Williamsburg area. We are grateful!

Nicky Staunton, Conservation Chair

Lecture, trip focus on rare plants at Percival's Island in the James River

Dr. Gwynn Ramsey, curator of the herbarium and retired professor of biology at Lynchburg College, will present a slide lecture on "Rare Plants at Your Backdoor: The Plant Diversity of Percival's Island" at 7:30 p.m. on Thursday, November 20 in the theater of Dillard Fine Arts Center at Lynchburg College. The event, co-sponsored by Lynchburg College and the City of Lynchburg Department of Parks and Recreation, is free and open to the public. On Saturday, November 22, Ramsey will lead a trip to Percival's Island to identify rare plants discovered through his research.

As professor of biology at Lynchburg College for 32 years, Ramsey is well-known for his research on the flora of the river gorge watersheds in the central Blue Ridge Mountains. For two years from 1995 to 1997

(See Percival's Island, page 10)

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

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•Cuttings

(Continued from page 5)

wet condition kills more plants than almost any other condition. Remember, adjust plants to new environments cautiously. When watering, use water as warm as the plants and medium. Rain water is better than chlorinated water.

Plants can be moved outdoors in early May but must be hardened off gradually. My best location has been the north (shady side) of the house. Move to permanent location or growing bed in partial to full shade (high shade is best).

Though you will likely be surprised, be prepared for disappointment at first, BUT don't give up. You will learn by doing each time you try, and in fact, probably more from the failures than the successes. Good luck, and call me if you really get discouraged.

References

Plant Propagation, Philip McMillan Browse, Simon and Schuster, Rockefeller Center, 1230 Avenue of the Americas, New York, NY 10020

The Reference Manual of Woody Plant Propagation, Michael A. Dirr and Charles W. Heuser, Jr., Varsity Press Inc., P.O. Box 6301, Athens, GA 30604

Growing & Propagating Showy Native Woody Plants, Richard E. Bir, The University of North Carolina Press, Chapel Hill, 1992.

Propagator source: Walt Nicke Co., P.O. Box 433, Topsfield, MA 01983.

Ted Scott, 1st Vice-President

•Plant rescue

(Continued from page 6)

surrounded by bulldozers, Ingrid Jahn and Michael Sawyer quickly and systematically dug *Sanguinaria canadensis* from an island of vegetation destined to be cleared. The developer had elected to leave this particular stand of trees as a bit of green space in his new subdivision, but plans to clear all the undergrowth and then, presumably, plant grass. Time is of the essence and other woodland plants are passed over in order to remove the colony of bloodroot which has miraculously survived. Next to the *Sanguinaria* are at least four different species of fern, *Arisaema triphyllum* (Jack-in-the-pulpit), reaching two feet high; *Mitchella repens* (partridge-berry); *Prenanthes altissima* (gall of the earth) and *Smilacina racemosa* (false Solomon's seal), but these have to wait because the bulldozers are at hand.

This is not the first sortie into the site. For the past month-and-a-half, alerted by chapter conservation chair Mary Hyde Berg, various members of the John Clayton Chapter have made visits to remove other plants in harm's way. Large stands of *Orchis spectabilis* (showy orchis) have already been removed from what will become phase two of this new housing development. Numerous ferns have also been removed, among the six identified are: *Botrychium virginianum* (rattlesnake-fern) and *Ophioglossum vulgatum* (adder's-tongue fern). Still, many woodland plants remain despite those that were destroyed. Plans are being made for future rescues. Most of the plants removed from the site are distributed by members to end up in wildflower gardens throughout the community. Some will be planted in the wildflower reserve at the College of Wiliam and Mary, and others will be relocated to the Virginia Living Museum in Newport News.

Michael Sawyer, John Clayton Chapter

•Percival's Island

(Continued from page 9)

he and a group of Lynchburg College students also collected specimens of plant life on Percival's Island. As a result of his research on the island, Ramsey discovered numerous plants infrequently found in this area including clammy-weed, a state-listed rare plant.

For more information, call Bob Eubank, Lynchburg Department of Parks and Recreation, 804-847-1640.