



U.S. Department of Agriculture
Agricultural Research Service

U. S. National Arboretum News and Notes

Spring 2004

News and Notes is issued three times a year, in January, May, and September, to stakeholder organizations to keep them informed about recent arboretum accomplishments and activities. Stakeholders are encouraged to use material from this document in reports to their members. Please send comments to:

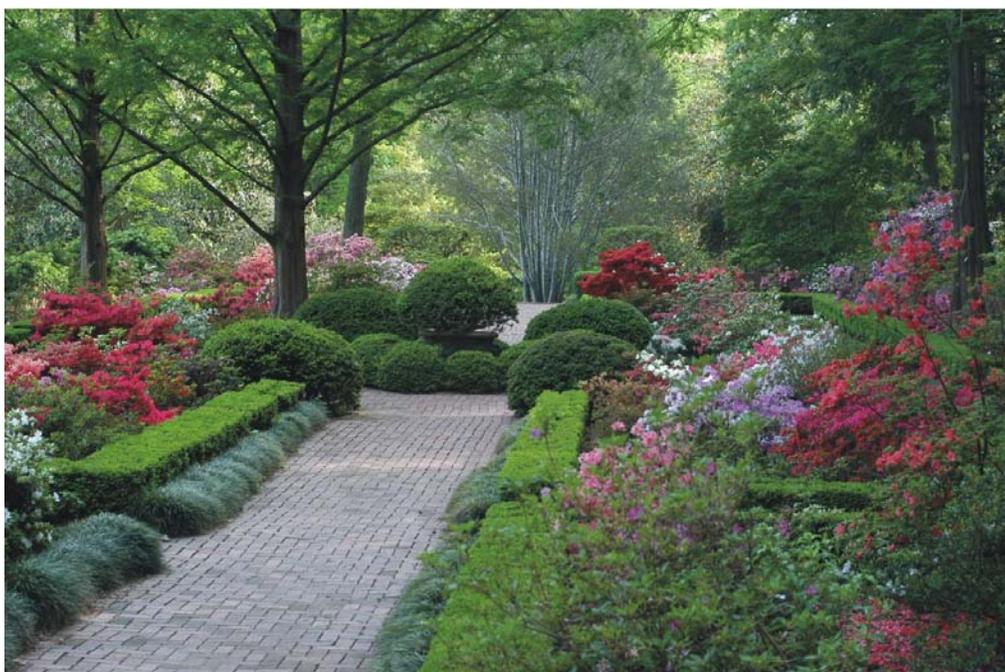
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Gardens Unit Bolstered by Increased Funding

Congress voted to increase base funding for the Gardens Unit by \$724,699 in late January, and President Bush signed the Omnibus Bill that made this increase effective. The additional financial resources provided will strengthen the USNA's capacity to manage and expand its gardens to keep them at the forefront of American horticulture.

Additional positions will be added to provide labor and expertise that is currently lacking and to increase the level of existing positions in the Gardens Unit. Some of the money will also be used to design and implement improvements to paths in various gardens, take care of outstanding tree pruning and removal needs, and clear invasive plants from

wooded areas. Several existing gardens and collections will be expanded to include a wider variety of plants. This increase in funding represents a very significant increase in Gardens Unit funding and is a result of stakeholder efforts to inform Congress of the critical need for more adequate support for the gardens and collections at the USNA.



The formal Morrison Garden is part of the extensive Azalea Collections.

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USNA participates in Cherry Blossom Festival

The USNA is playing a greater role in the popular Washington D.C. National Cherry Blossom Festival. Cherry Blossom princesses from every state and territory in the United States visited the arboretum Monday, March 29th. Dr. Margaret Pooler, arboretum research geneticist, gave them an illustrated lecture on the arboretum's tree and shrub breeding program, focusing on recent work with flowering cherry trees. The princesses were then given an introduction to bonsai in the National Bonsai and Penjing Museum. After that, they were taken on a tour of the arboretum's grounds. The arboretum has 76 varieties of flowering cherry trees and close relatives in the research and display collections, making it a wonderful place to view these trees without the crowds.

On April 2nd the arboretum held a special lecture and tree planting ceremony to celebrate the 100th anniversary of the introduction of flowering cherry trees by the USDA and to inform the public about a new flowering cherry, *Prunus* 'First Lady', that was recently introduced by the arboretum's Floral and Nursery Plants Research Unit. A 20-member delegation from the Ozaki Memorial Center in Ise, Japan, along with representatives of the Japan Cherry Blossom Festival

and the U. S. National Cherry Blossom Festival, attended a special lecture by arboretum scientist Dr. Margaret Pooler titled "Beyond Yoshino Cherries—Exploring the Diversity of Flowering Cherry Trees." Following the lecture, Congressman Gil Gutknecht (1st District-Minnesota), U.S. Department of Agriculture Deputy Under Secretary for Research, Education and Economics Dr. Rodney Brown, and Arboretum Director Dr. Thomas Elias joined



Cherry Blossom and Dogwood Princesses pose in front of 'First Lady' cherry tree.

the Japanese guests in a symbolic tree planting ceremony to recognize the arboretum's 'First Lady'. Japanese Cherry Blossom Princess from Tokyo and three Japanese Flowering Dogwood princesses from Ise, also assisted in the tree planting ceremony. Arboretum staff planted 'First Lady' at the Capitol Columns Overlook on the arboretum grounds the following week when the weather had improved. The new 'First Lady' is a 25-foot-tall, upright tree with dark pink, single, partially hanging flowers. More information on 'First Lady' is available on this [Fact Sheet](#).

The Friends of the National Arboretum (FONA) sponsored a reception for all attendees immediately after the tree planting.

Floral and Nursery Plants Research Unit Scientist Recognized for his Tree Breeding Work

On April 2nd, the American Horticultural Society (AHS) presented arboretum scientist Dr. Alden (Denny) Townsend with the prestigious Luther Burbank Award for extraordinary achievement in the field of plant breeding. The award was made at a banquet at the AHS spring celebration 'Washington Blooms!', and recognizes Dr. Townsend's research contributions on the breeding and physiological genetics of urban trees. Among his contributions are the

introduction of 15 new elm and maple cultivars to the nursery trade as U.S. National Arboretum releases. These include two American elms, 'Valley Forge' and 'New Harmony', that are resistant to Dutch elm disease, and the insect-resistant red maple 'Brandywine'.

On Arbor Day in April, the Mayor of Haverford, MA, recognized the National Arboretum and particularly Dr. Alden Townsend for developing and releasing new disease-tolerant American elms.

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Dr. Townsend with 'Valley Forge' elm saplings.

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Several years ago, Dr. Townsend released 'Valley Forge' and 'New Harmony' American elms to the nursery industry after twenty years of screening and testing American elms for disease resistance. Both selections are available from the nursery industry and are being planted in cities throughout the northeastern and upper Midwestern United States. The American elm was once the most popular and common street tree in these regions, but the introduction of Dutch elm disease eliminated over 90% of these beloved and beautiful trees. Thanks to Townsend's efforts, the American elm may be returning to our cities.

2004 Interns Arrive

Eight interns have been appointed to positions at the arboretum. Deanna DiDonato, a graduate of Rutgers University with a degree in nutritional science, was the first to

arrive in March and will be working in the National Herb Garden. The Herb Society of America Potomac Unit has sponsored internships in this collection since 1988. In April, Sara Egbert joined the Asian Collection staff in a position sponsored by the Chadwick Trust Fund. Sara graduated from Brigham Young University.

Six interns began their internships in May. Meg Williams works part-time in the Friendship Garden and is a student at Montgomery College in Landscape Technology. Her

internship is sponsored by the National Capital Area Federation of Garden Clubs, Inc. The Woman's National Farm & Garden Association is funding two internships this year. Elizabeth Myers, an Iowa State University student, accepted the Conifer Collections position. Todd Rounsaville will work in the Dogwood Collection and is studying environmental horticulture at the University of Rhode Island.

The arboretum is funding several internships: Sean Marick joined the staff in the Holly/Magnolia Collection and is working towards his Master's in Education from Mount Saint Mary's in Emmitsburg. His internship is funded by the Gardens Unit. This unit will also support the Integrated Pest Management position, which is not yet filled, as well as one in the Introduction Garden—the area surrounding the Administration Building. Micki Kuhlman, a horticulture graduate from the University of Connecticut, was selected for this position.

The Floral and Nursery Plants Research Unit is supporting two interns. Autumn Forrest will work in the Germplasm Repository in Glenn Dale, MD. She graduated from the University of Pittsburgh with two majors, one in ecology and evolution and one in religious studies. The youngest intern, Alex Berger, will begin his internship with the Shrub Breeding program after he graduates from Maryland's Montgomery Blair High School in June. His position is made possible through a trust agreement with J. Frank Schmidt Company, a nursery in Boring, OR.

Funds raised through the annual Lahr Native Plant Symposium, held at the arboretum in March each year, support an intern in Fern Valley, part of the Native Plant Collection. This position will be filled in June.

New Summer Hours

The arboretum will be open on selected Saturday evenings this year so that visitors can enjoy the grounds in the cooler hours as the sun begins to set. The R Street Gate will not close until 7 p.m. on every June and July Saturday, except for July 3rd when the arboretum will close at 5 p.m. Last year, thanks to stakeholder support, the arboretum stayed open late on seven summer Friday evenings. This year we are experimenting with Saturdays in order to take advantage of the many visitors who are already here who want to stay later. Visitors will find something else new this year too: a late tram tour and free staff-led tours.

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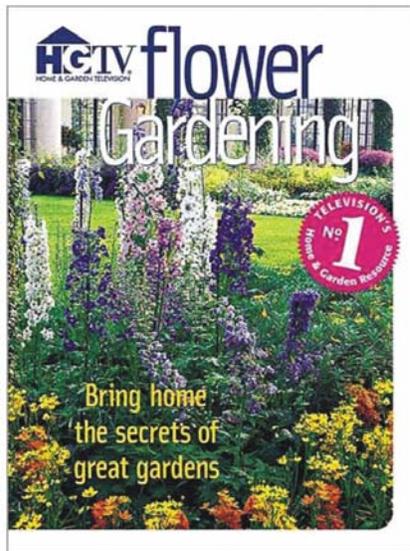
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The 40-minute tram tour begins at 5:30 and costs \$4 per person (discounted rates for seniors and children). The informal tours and talks in the gardens begin at 5 p.m. at the entrance to the featured collection. For dates and topics, please [check the USNA website](#).

All visitors arriving after 5 p.m. must enter through the R Street Gate.

Arboretum Featured Prominently in New Book

The National Arboretum has been prominently featured in many publications and television programs in recent years. The most recent is a new book by the Home and Garden Television Company. Their *Flower Gardening: Bring Home the Secrets of Great Gardens* features many of the more important botanical gardens and arboreta of the United States. This work contains a 10-page chapter solely on the arboretum. The display gardens, collections, and the arboretum's research program are included in this beautifully illustrated work that takes readers on a tour of the best-loved and most-visited destination gardens in the United States. Unlike other comparable books, this publication offers practical gardening tips for readers.



Visitation to the Arboretum Web Site Continues to Expand

Visitation to the arboretum web site, www.usna.usda.gov, continues to increase at a rapid pace. In January 2004 alone, 66,643 individual visitors used the web site. The arboretum is expecting about 1.5 million visitors via the internet this year. Fact sheets about the arboretum's new plant releases are among the most downloaded

features. Recent additions include a virtual tour of the National Bonsai and Penjing Museum, a photo gallery of *Hippeastrum* images, and expanded Gardening Questions and

Answers. Virtual tours of the other display gardens and collections are being prepared and will be posted later this year.

Spring Symposia Serve both Familiar and New Audiences

The popular annual Lahr Native Plant Symposium was held on March 24, 2004. In its 18th year, the symposium is eagerly anticipated by area professional and non-professional native plant advocates.

One hundred and forty attended the day-long **Native Plants: Landscapes in Balance**, which featured landscapes that work to achieve a balance with culture, nature, and the realities of modern American life. Topics ranged from the creation of a Native People's landscape, to preserving the wonderful natural landscapes that remain, and practicing an environmentally beneficial brand of horticulture. The presenters included Donna House, a key designer of the native landscape being created at the Smithsonian's new National Museum of the American Indian; Chris Ludwig, the Chief Biologist with the Virginia Department of Conservation and co-author of the developing *Flora of Virginia*; and Dr. Richard Bir, author of *Growing and Propagating Showy Native Woody Plants* and sage advisor to the North Carolina and national nursery industries. During concurrent sessions Nurseryman Dale Hendricks, ardent native plant gardener Katy Stein, Virginia Native Plant Society plant propagation specialist Laura Beaty, and the Anacostia Watershed Society horticulturist Steve McKindley-Ward explored the relationship of native plants to sustainable business networks, suburban garden transformations, successful plant propagation, and low-tech stream restoration. The Friends of the National Arboretum sponsored a plant sale on the same day with over 15 area vendors offering both common and hard-to-find natives. Proceeds from the symposium support the Lahr Internship in the Fern Valley Native Plant Collection.

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In an effort to reach a new audience and to highlight the National Bonsai and Penjing Museum's penjing collection, the arboretum and the National Bonsai Foundation will co-sponsor **The Art of Chinese Penjing**, a two-day symposium scheduled for May 22 and 23, 2004. Regional and international experts will present lectures, discussions, and demonstrations about the ancient origins of penjing and the singular influences that shaped this art form. The topics include the influence of Chinese gardens, the historical development of penjing, and the various styles that have evolved throughout history. A presentation featuring the "companion" collections donated by Dr. Yee Sun Wu to the Montréal Botanic Garden and the National Arboretum will explore the uniqueness of maintaining both bonsai and penjing displays while respecting their differences. A dramatic new style of penjing—Wind-Blowing Water and Rock—will be introduced by Hu Yun Hua at a pre-symposium demonstration. The symposium is made possible through a generous grant from the Mary E. Mrose Fund of the National Bonsai Foundation.

Garden Club of America Tours USNA

The Arboretum was pleased to host over 500 members of the Garden Club of America (GCA) who ate lunch at and toured the arboretum on April 26th and 27th as part of the activities for the GCA annual meeting in Washington, D.C.

Members toured the National Herb Garden, the National Bonsai and Penjing Museum, Fern Valley, the Asian Collections and the Gotelli Dwarf and Slow Growing Conifer Collection, where staff provided overviews of arboretum work and answered questions. Arboretum volunteer guides were on board to point out other locations and to give historical information as buses shuttled the members from one collection to the next. The arboretum worked in collaboration with members of the board of the Friends of the National Arboretum to arrange this visit.

Azalea Society of America Visit a Blooming Success

Approximately 40 members of the Azalea Society of America (ASA) visited the arboretum on May 7th as part of their annual national convention, which was held in Maryland this year. After lunch in the auditorium, the group joined Director Thomas Elias for a special tour of the satsuki azalea bonsai exhibit in the National Bonsai and Penjing Museum. Curator Barbara Bullock then led the members on a 90-minute tour of the Azalea Collection where she pointed out the many new azalea cultivars added to the garden over the past 10 years.



Azalea Society of America members explore the Azalea Collection.

Following the Azalea Collection tour, the group boarded their bus for tours of two more of the arboretum's finest gardens: Fern Valley Native Plant Collection, led by Curator Joan Feely, and the Gotelli Dwarf and Slow Growing Conifer Collection, led by former gardener for the area, Ed McCarthy. Barbara Bullock was honored by the ASA during a banquet the following evening. The ASA presented her with a Certificate of Appreciation "For unwavering support of the 2004 National Meeting & Convention, with our sincere thanks, Ben Morrison Chapter of the Azalea Society of America."

Arbor Café Reopens with a New Menu

The Arbor Café opened for the season in April. It has metamorphosed into a coffee house serving espresso drinks, smoothies, chai lattes, frappacinos, bagels, muffins, cookies, and biscotti. Warm weather versions of the coffees, lattes, and smoothies will also be available. The café will be open on Fridays from 12:00 p.m. to 4:00 p.m. and Saturdays, Sundays, and holidays from 10:00 a.m. to 4:00 p.m.

New On-Site Lunch Options

Chef LeJon of Catering by Chef Inc. will be providing box lunches to tour groups visiting the arboretum. Chef LeJon is a graduate of The Culinary Institute of America and is also available to cater lunches for meetings and seminars. If you are interested in providing food for your group tour or meeting, seminar etc. please contact Carol Sisas, 202-245-4544 or email sisase@ars.usda.gov for menu and booking information.

‘First Lady’ Planted at the Capitol

The National Arboretum provided a ‘First Lady’ flowering cherry to the Architect of the Capitol in late March. The tree was planted March 31st and joins many other historic trees on the grounds of the Capitol. Information about ‘First Lady’ is available on a [USNA fact sheet](#).

Pot-In-Pot Demonstration and Out-planting Project

This collaborative project between the Research Unit and Gardens Unit is now in place in Nursery 5, located to the east of Valley Road on the arboretum’s DC grounds. The purpose of the project is to compare the growth of several arboretum tree introductions in a pot-in-pot production system with tree growth in conventional field conditions.

A more detailed description may be found in the Winter 2004 edition of *News and Notes*. The project is supported in part by the USDA Forest Service through the Mid-Atlantic Center for Urban and Community Forestry.



Pot-in-pot test field with trees in pots and in ground.

Research Unit Scientists Attend Conferences in Taiwan

Four Floral and Nursery Plants Research Unit scientists were in Taiwan in March to participate in two international meetings. Dr. Rob Griesbach and Dr. Hei-ti Hsu attended the 8th Asian Pacific Orchid Conference in Taiwan from March 6th-8th. Dr. Griesbach presented an invited review on the biochemistry and genetics of flower color. Dr. Hsu was co-author of a paper on evaluation of *Dendrobium* orchids modified to express the coat protein gene of *Cymbidium mosaic virus* with colleagues from National Chung-Hsing University in Taichung, where Dr. Hsu spent a six-month sabbatical in 2003.

Dr. Hsu then joined Dr. Ramon Jordan and Dr. John Hammond at the 11th International Symposium on Virus Diseases of Ornamental Plants, held in Taichung from March 9th-14th. Here Dr. Hsu presented a paper on *Cucumber mosaic virus* resistance in plants expressing antiviral antibodies. With scientists from National Chung-Hsing University, Dr. Hsu co-authored papers on viruses affecting *Hippeastrum* and calla lily and on transmission of *Watermelon silver mottle virus*. He teamed with a group from the University of Hawaii to write on antibody-expressing plants resistant to *Tomato spotted wilt virus*. Dr. Hammond gave a paper on potyvirus isolates from creeping phlox and portulaca, and an invited review on the status of genetically modified ornamentals. Dr. Jordan presented papers on potyviruses affecting *Spiranthes* orchids, and *Bean yellow mosaic virus* infection of verbena.

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Orchid display at the 8th Asian Pacific Orchid Conference.

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Arboretum scientists (from left): John Hammond, Roger Lawson (retired), Hei-ti Hsu, Ramon Jordan, and Rob Griesbach at the International Symposium on Virus Diseases of Ornamental Plants in Taiwan.

Dr. Hsu served on the Organizing and Program Committee, and Dr. Hammond on the Scientific Advisory Committee for the symposium. Dr. Hammond also serves as the Chair of the International Working Group on Virus Diseases of Ornamental Plants.

Dr. Townsend is also being recognized as a 2004 Outstanding Alumnus by the School of Forestry Resources, The State University of Pennsylvania.

Research Unit Participates in the 2004 Mid-Atlantic Nursery Trade Show

On January 7th-9th the Floral and Nursery Plants Research Unit staffed a booth at the annual Mid-Atlantic Nursery Trade Show (MANTS) at the Baltimore Convention Center.

Information and displays about research activities and U. S. National Arboretum plant releases was presented by a number of Research Unit staff, as well as general information about the arboretum. We expect that this will be an annual event for us to share information with the nursery trade and members of the public who attend MANTS.

Student Honored for his Research at the Arboretum

Alexander Berger, a senior in the Science Magnet Program at Montgomery Blair High School in Silver Spring, Maryland, took top honors recently for work he performed at the National Arboretum as an intern in 2003. Under the mentorship of Dr. Margaret Pooler, research geneticist in the arboretum's Floral and Nursery Plants Research Unit,

Berger spent last summer examining molecular genetic diversity among clones of American elm, including arboretum cultivars 'Valley Forge' and 'New Harmony'. He was selected to be one of only 40 students from the state of Maryland to present his research in the prestigious Maryland Junior Science and Humanities Symposium in February. Additionally, he was also presented with the Dr. Vacarro Award at Blair High School. This award is presented in honor of the former director of NASA Goddard Space Flight Center who helped establish the mentoring program at Blair High School, and is presented to seniors who exemplify outstanding research and character attributes.



Student Alexander Berger conducting research.

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