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The Magazine of the American Horticultural Society September / October 2008

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## NOTES FROM RIVER FARM

**I**N OUR GARDENS, the onset of fall offers a wonderful time to take stock of our successes, to begin painting a picture in our minds of what we hope to accomplish next year, and to invest time and energy in endeavors that provide the greatest rewards in the months and years to come.

Just as individual gardeners pause to celebrate their achievements and reassess their direction, so do organizations like the American Horticultural Society. Looking back at the summer of 2008, we are greatly encouraged by the interest and participation we are seeing in the Society's national programs. As just one example, our 16th annual AHS National Children & Youth Garden Symposium in July attracted record attendance. You'll find a retrospective on the symposium and all of its activities starting on page 14.

The energy we are seeing from programs like this is very encouraging, but we need your help to keep up the momentum. As we look to the future, we want to be sure we are addressing the interests and expectations of all our members throughout the United States. For that reason we will be conducting a major AHS member survey this fall. We encourage you to take a few minutes to complete this survey and let us know how we are doing. To find out how you can participate in the survey, please turn to the news article on page 7.

We hear from many gardeners that fall is the time when they start thinking about new gardens, garden makeovers, and new plantings. Regardless of whether your dreams are big or small, we encourage you to take advantage of this wonderful time of year to demonstrate and share your passion for plants and gardening. If a new landscape project or a garden makeover is in your future, you will find inspiration in the movement that is afoot to place renewed emphasis on plants in garden design. In this issue of *The American Gardener*, we offer an introduction to plant driven design, with an excerpt from the newest book by acclaimed garden designers and writers Scott Ogden and Lauren Springer Ogden. If your interests run more towards fine tuning your garden and plant selection, feature articles on native magnolias, species tulips, and hardy terrestrial orchids will provide valuable information, ideas, and guidance.

In addition to spending quality time in your garden this fall, we hope you will take advantage of one of many opportunities to be involved with the AHS. No matter where you live, there are many ways to do this, including nominating one of your heroes for an AHS award in 2009 (the deadline is September 30), participating in our 50th anniversary Seed Exchange, registering for the next gardening webinar, or joining us at River Farm on September 20 for our annual fundraising gala with honorary chair Roger Swain. You'll find information on these programs and events in the "News from AHS" section starting on page 7 and on the AHS website.

Whatever your plans, we hope you enjoy the season. Happy gardening!

Susie Usrey, Chair, AHS Board of Directors

Tom Underwood, Executive Director



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## MEMBERS' FORUM

### SLUG CONTROL TIP

After reading the article "Understanding Slugs is Key to Control" in the July/August issue of the magazine, I thought I would offer a tip that I discovered this year. It also provides another use for those "disposable" water bottles. I slice off the top of a bottle at its widest point so it creates a funnel. Then I insert the funnel back into the bottle, so the funnel is pointing downward, and staple the edges together. I put some Sluggo (one of the iron phosphate-based slug controls) into the bottle and place it on its side under a hosta. The slugs crawl into the bottle to get the bait but they can't get out, and the Sluggo does not wash away or leach into the soil. I replace the bottle every few weeks, or when it gets too disgusting.

*Linda Bentler  
Issaquah, Washington*

### Membership Services

We love to hear from our members! If you have questions about your American Horticultural Society membership, would like to become a member, renew your membership, give a gift of membership, or update your mailing or e-mail address with the AHS, please call (800) 777-7931 ext. 119 or e-mail [membership@ahs.org](mailto:membership@ahs.org).



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### STATING HER MIND


I enjoyed reading the article about growing cactus in the Pacific Northwest (July/August). However, the editing pushed one of my buttons. I was born and raised in the state of Washington. I worked in Washington, D.C. There is *no* Washington State—just as there is no Massachusetts State or Vermont State. I understand that in the eyes of most of the world, Washington means the capital of the United States; however, that doesn't justify changing the name of my home state.

*Kathe Cook  
Sequim, Washington*

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## AHS Joins No Child Left Inside Coalition

AT THE American Horticultural Society's National Children & Youth Garden Symposium in July, Executive Director **Tom Underwood** announced the Society's official registration as a member of the national No Child Left Inside Coalition (NCLIC). The coalition, comprising more than 600 educational, environmental, and other groups across the United States, supports the development of high quality environmental education programs and outdoor learning activities that would focus on getting children actively engaged with the natural world around them.



The No Child Left Inside Coalition supports outdoor learning for kids.

“While many factors are contributing to the trend of young people becoming increasingly disconnected from nature,” says Underwood, “there’s so much all of us can do to help children experience the wonder and understand the importance of their outdoor environment.”

Currently, the NCLIC’s key goal is passage of the Federal No Child Left Inside Act (H.R. 3036 and S. 1981). This legislation would help fund environmental education initiatives in schools as well as informal outdoor educational programs. This bill will likely come to a vote before Congress this September, but if final passage does not occur this year the NCLIC plans to continue lobbying for the bill in 2009.

If you would like to voice your support for the No Child Left Inside Act, write or call your representative in Congress. Sample letters and more information on how to get involved are available at the organization’s website at [www.nclicoalition.org](http://www.nclicoalition.org).

## Dominion Foundation Awards Grant for River Farm

DOMINION, ONE OF the nation’s largest producers of energy, recently awarded the AHS a \$25,000 grant through its foundation to help support the first phase of critical infrastructure upgrades being planned at the Society’s River Farm headquarters in Alexandria, Virginia.

“This grant,” says **Trish Gibson**, River Farm manager, “will help complete the pre-construction and planning phase for the property’s transition from well water and a septic system to Fairfax County domestic water and sanitary sewer.”

The Dominion Foundation contributes more than \$20 million annually to nonprofit organizations in support of educational, environmental, cultural, civic, and other services.

## AHS Member Survey

IN A CONTINUING effort to ensure AHS programs and benefits are tailored to the interests of the Society’s members across the country, a major survey is taking place this fall. All members are invited to participate in the 2008 Member Survey and provide feedback that will play a critical role in development of

future programs and member benefits. The survey takes approximately 15 minutes to complete, and responses will be both anonymous and confidential.

If we have your current e-mail address, you will receive a survey via e-mail. If you’d prefer to receive a copy of the survey by mail, please contact the AHS membership department at (800) 777-7931, ext. 119, or e-mail your request to [membership@ahs.org](mailto:membership@ahs.org).

## 2008 Gala Celebrates Eating Locally

IN YEARS PAST, the Annual Gala, one of the Society’s key fundraising events, has been a formal affair that showcased and celebrated various garden aspects. With the theme “Local Harvest, Bountiful Earth,” the 2008 Gala on Saturday, September 20, will embrace the informal style and passionate enthusiasm that characterizes today’s renewed focus on sustainability and nutritious, locally grown food.



Roger Swain

The evening will feature **Roger Swain**, former host of PBS TV’s “The Victory Garden” and proponent of gardens that “taste as good as they look.” Locally grown



produce will star in flavorful light fare created by **Whole Foods** of Old Town Alexandria. Guests are invited to enjoy casual alfresco dining throughout River Farm's gardens and lively acoustic music by the **Mark Little Band**. A vintage couture auction, conducted by students from the **Art Institute of Washington**, will take recycling beyond the garden with an array of classic clothing. Guests may also participate in a raffle of gardening goods, books, and other select items that reflect the evening's theme. The gala will conclude with a special performance by the celebrated "**Compost Theatre**" of Ithaca, New York. This unique, off-the-wall theatre company will share its comical take on recycling and waste reduction through composting.

Proceeds from the gala support the stewardship of River Farm and the AHS's educational programs. For tickets and more information, e-mail [events@ahs.org](mailto:events@ahs.org) or call (703) 768-5700.

## Garden School in Denver

FORTY-ONE PEOPLE from 14 states attended the AHS's Garden School, "Gardening with Native Plants," held in Denver, Colorado in June. **Daryl Beyers**, an editor for *Fine Gardening* magazine who attended the event, called the presenters a "cast of champions." These included award-winning garden designer and author **Scott Calhoun**, who served as guest horticulturist, and other native plant experts **John Greenlee**, **Panayoti**



**Dan Johnson**, curator of native plants at the Denver Botanic Garden, center, gives Garden School participants a tour of the wildflower garden.

**Kelaidis**, **Robert Nold**, **Janet Rademacher**, and **David Salman**. Hosted by the Denver Botanic Garden (DBG), the two-day event immersed participants in the world of plants that are native to the western United States through presentations and tours of DBG and other nearby gardens. According to attendee **Donna Cuin** of the Cooperative Extension Service in Casper, Wyoming, the Garden School was, "in a word, wonderful. It was really a great topic and the speakers brought a lot to light. The tours just topped off the whole subject."

Sustainable gardening practices will be among the topics that upcoming AHS Garden Schools will focus on next year. For more information, visit [www.ahs.org](http://www.ahs.org) or call (703) 768-5700.

## Shades of Joy



**Caladiums** of all colors, such as speckled 'Gingerland' and green-edged 'Florida Sweetheart', brightened up the gardens at River Farm this summer. More than 2,000 bulbs were generously donated by **Darlene Phypers** and **Danielle Daum** of Happiness Farms in Lake Placid, Florida, one of the world's largest caladium producers.

## Seed Exchange Turns 50

FOR 50 YEARS the AHS Annual Seed Exchange has been a way for members to share seed with other gardeners nationwide and around the world. In celebration of this golden anniversary, the AHS invites past participants to share "Seed Stories" related to seeds received or donated through the Seed Exchange.

Stories may include details about your family enjoying a tasty vegetable grown from AHS seeds, an adventure you had collecting seeds, a tree you started from seed, or a cherished family heirloom you shared



with other AHS members. Images are also welcome. Selected stories and images will be posted in a section of the AHS website dedicated to this occasion, and the very best will be selected for publication in *The American Gardener*. Please send your stories and pictures to Seed Stories, American Horticultural Society, 7931

East Boulevard Drive, Alexandria, Virginia, 22308. Stories can also be e-mailed to [editor@ahs.org](mailto:editor@ahs.org) (please type "Seed Stories" in the subject line). For questions, call (703) 768-5700 ext. 115.

If you would like to participate in this year's Seed Exchange, see the insert between pages 8 and 9 of this issue.





# THE AMERICAN HORTICULTURAL SOCIETY TRAVEL STUDY PROGRAM 2009 TOURS

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*AHS host to be announced  
Tour escorted by Mary Kroening  
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### **Art and Gardens of the Netherlands**

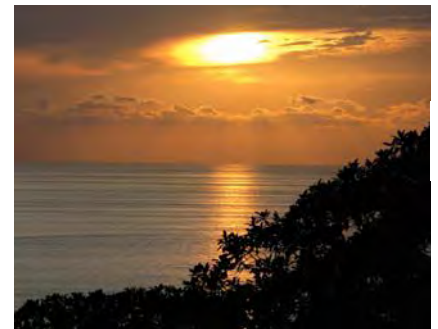
*AHS host to be announced  
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### **Gardens of Florence**

*AHS host to be announced  
Tour escorted by Susie Orso  
May 22 – 30, 2009*

### **Gardens of Chile**

*AHS host to be announced  
Tour escorted by Mary Kroening  
October 8–21, 2009*



**For more information about the AHS Travel Study Program,  
visit [www.hiddentreasuresbotanicaltours.com](http://www.hiddentreasuresbotanicaltours.com) or call (573) 881-6316.**



## Longwood Fellow's Research Aids AHS Plans for Children's Programs

GRADUATE STUDENT **Grace Chapman** recently completed her thesis project that focused on educational programming options for the Family Discovery Garden being planned for AHS's River Farm headquarters.

A student in the Longwood Graduate Program in Public Horticulture through the University of Delaware, Chapman used interviews, surveys, and focus groups to assess what kind of children's programs would be of interest to River Farm visitors and residents of the surrounding community. She also interviewed designers and educators from across the United States to identify some of the most successful elements of children's gardens and youth programs.

"Understanding the wants and needs of our visitors is an important part of our planning for future educational programs," says **Stephanie Jutila**, the AHS's education programs manager. "Grace's research will be very valuable as the AHS develops the Family Discovery Garden and we start conceptualizing programs for children, youth, and their families."

The Family Discovery Garden, which is a major element of the AHS's master plan for River Farm, will be an innovative space for interactive learning and play. Currently in the design phase, it will include both indoor and outdoor spaces for children of all ages to explore plants, horticulture, and nature.

## Dr. Cathey Day Lecture at River Farm

EACH YEAR at River Farm, the AHS celebrates Dr. H. Marc Cathey Day in honor of its former president, who was also a U.S. Department of Agriculture research scientist. For this year's fourth annual event on October 23, the Society will host a presentation



**H. Marc Cathey and Katy Moss Warner**

on "The Science and Magic of Flowers" by AHS President Emeritus **Katy Moss Warner**. Pick up ideas for your garden as Warner describes some of the newest and most exciting plant selections that have been introduced to the horticultural market. She will also discuss the science behind how

breeders create these outstanding new selections that feature longer lasting, larger flowers in a full range of colors.

The lecture will begin at 7 p.m. and tickets are \$12 for AHS members and \$15 for non-members. Call (703) 768-5700 or visit [www.ahs.org](http://www.ahs.org) for more information about this event and other upcoming programs at River Farm.

AHS STAFF

## Gifts of Note

*In addition to vital support through membership dues, the American Horticultural Society relies on grants, bequests, and other gifts to support its programs. We would like to thank the following donors for gifts received between June 1 and July 31, 2008.*

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*In memory of Maita Fisher*  
 Mr. and Mrs. Joel Goldman

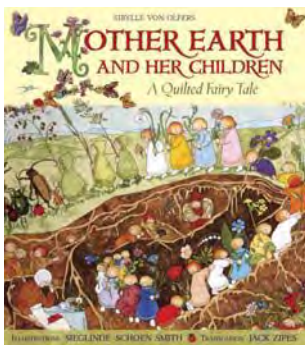
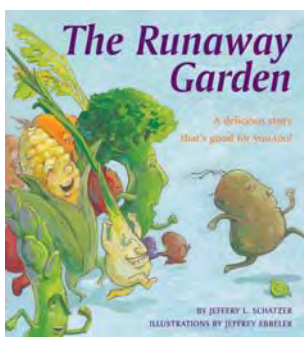
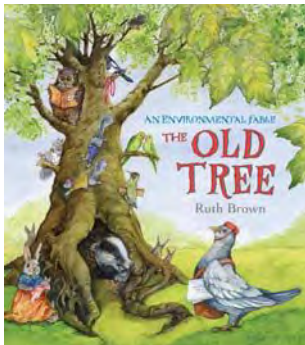
*In memory of Kevin McNamee*  
 Ms. Sharon Jones

If you would like to support the American Horticultural Society as part of your estate planning, as a tribute to a loved one, or as part of your annual commitment to charitable giving, please contact: Stephanie Perez, (703) 768-5700 ext. 127 or [sperez@ahs.org](mailto:sperez@ahs.org).



## Growing Good Kids Children's Book Award Recipients for 2008

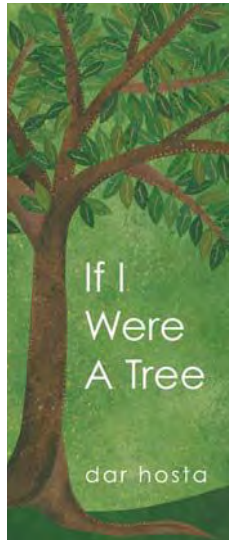
THE FOUR WINNERS OF the 2008 "Growing Good Kids—Excellence in Children's Literature Award" were announced during the AHS's National Children & Youth Garden Symposium in July. This annual award program, initiated in 2005, rec-



*Children* by **Sibylle von Olfers**, illustrated by **Sieglinde Schoen Smith** and translated by **Jack Zipes**.

"The four award winners come from large and very small publishers alike, and we hope this award brings new recognition and a wider audience of young readers to these very deserving titles," says **Randy Seagraves**, national curriculum coordinator for the Junior Master Gardener program, which jointly administers the award program with the American Horticultural Society.

Award nominations for books published in 2008 will be accepted until April 24, 2009. For nomination instructions, a list of past winners, and additional information about the "Growing Good Kids" book award program, visit [www.jmgkids.us](http://www.jmgkids.us) or contact Randy Seagraves at (979) 845-8565 or [seagraves@tamu.edu](mailto:seagraves@tamu.edu).



These four children's books received the 2008 Growing Good Kids—Excellence in Children's Literature Award.

ognizes children's books that effectively promote an appreciation for gardening, plants, and the environment.

Selected from books published in 2007, this year's winners are: *The Old Tree* by **Ruth Brown**; *If I Were a Tree* by **Dar Hosta**; *The Runaway Garden* by **Jeffery L. Schatzer** and illustrated by **Jeffrey Ebbeler**; and *Mother Earth and Her Children*

### AMERICAN HORTICULTURAL SOCIETY INTERNSHIPS

AT RIVER FARM

Offering hands-on, practical experience, internships are one of the Society's most important educational programs. Internship opportunities available in 2009 include positions in publications, horticulture, and education.

Deadlines for 2009 internships are Nov. 1 for Winter/Spring; March 1 for Summer; and August 1 for Fall.

Visit [www.ahs.org](http://www.ahs.org) or call (703) 768-5700 ext. 121 for more information.

## It's not easy being me

**This holiday season, help a manatee. Adopt one.**

[www.savethemanatee.org](http://www.savethemanatee.org)  
**1-800-432-JOIN (5646)**  
**Save the Manatee Club**

Photo © Laura M. Osteen

## AHS Webinars Cast Spotlight on Garden Design

NEARLY 200 PEOPLE from 40 states participated in “Designing with Color and Texture for Visionary Effects,” an on-line seminar presented exclusively for AHS members by designer and author **Tracy DiSabato-Aust** in July. The event included an hour-long slide presentation and a lively question-and-answer session. For a taste of what was discussed, see the sidebar to the right.

The next AHS webinar will be “Design and Plants for Woodland Gardens” on October 16, presented by plantsman, author, and landscape designer **C. Colston Burrell**. Burrell has twice won the AHS book award: most recently in 2007 for *Hellebores: A Comprehensive Guide*, and in 1998 for *A Gardener's Encyclopedia of Wildflowers*. During the webinar, he will focus on the challenges of designing shaded spaces and discuss the many plants, both native and nonnative, that thrive in woodland or shade gardens.

Registration will open on September 17 in the members-only area of the AHS website at [www.ahs.org](http://www.ahs.org) (see page 4 of this issue for the current password). Because space for the webinar is limited, early registration is encouraged. A high-speed or broadband Internet connection is also recommended.


## Green Garage at Green Festival

THE AHS will participate as a community action exhibitor in the Green Festival™, which will be held November 8 and 9 at the Washington Convention Center in the nation's capital. This event, a joint project of the national nonprofits Global Exchange and Co-op America, brings together socially responsible businesses and environmental, social justice, and community organizations to celebrate sustainable living. The AHS exhibit will include a model of the Green Garage® to promote environmentally responsible gardening. For more information on Green Festivals, visit [www.greenfestivals.org](http://www.greenfestivals.org).

## Volunteer's Bequest Supports AHS Programs

**JANE STEFFEY**, who had been involved with the AHS in various capacities for several decades, died April 21. Through her estate, she left a \$50,000 bequest to the Society.

Steffey's association with the AHS began shortly after World War II, when she became a member of the organization and volunteered with the Annual Seed Exchange. In the 1970s, she served as an editor and columnist for the *American Horticulturist*, which was the former title of *The American Gardener*. Her assignments included writing a regular column, titled “Strange Relatives,” that explored the intriguing relationships within plant families.

Steffey became an AHS President's Council member in the 1990s and in 2001, she donated \$50,000 to the Society to be used for staff education. Her current gift will be used to support the AHS's educational programs and the stewardship of River Farm. 

*News written by Editorial Intern Kirsten Winters.*

*During the “Designing with Color and Texture for Visionary Effects” webinar, Tracy DiSabato-Aust took questions from her enthusiastic audience. Here are a few examples.*

**With the strong sunlight and high humidity in summer, my garden looks tired and washed out. Do you have suggestions for gardening in high summer?**

*Robin Ferguson-Gonzalez  
Chapel Hill, NC*

To keep the colors fresh, select vivid saturated colors such as rich yellows, oranges, reds to peak in mid-summer, *Heliopsis*, *Lilium henryi*, *Crococsmia* ‘Lucifer’ are good choices. Deadleafing—removing brown or tatty foliage in midsummer—will give the garden a “face lift.”

**What plants have bold spiky form and will grow in shade?**

*Maggie Raywood  
North Bergen, NJ*

That can be a challenge. However, ti plant (*Cordylina australis* ‘Atropurpurea’) and sago palm (*Cycas revoluta*) will both grow in part shade.

**Do you know of any particular colors in leaves and flowers that deer avoid?**

*Willis Johnson  
Greensboro, GA*

I've never heard of deer avoiding a particular color. Wouldn't that be helpful!



### AHS NATIONAL EVENTS AND PROGRAMS

## 2008 CALENDAR

**M**ark your calendar for these national events that are sponsored or co-sponsored by the AHS. Visit [www.ahs.org](http://www.ahs.org) or call (703) 768-5700 for more information.

- SEPT. 20. **AHS Annual Gala.** George Washington's River Farm, Alexandria, Virginia.
- OCT. 16. **Webinar: Design and Plants for Woodland Gardens** by C. Colston Burrell.
- OCT. 23. **Dr. H. Marc Cathey Day.** George Washington's River Farm, Alexandria, Virginia.
- DEC. 1–23. **Holiday Trees Display.** George Washington's River Farm, Alexandria, Virginia.
- DEC. 11. **Annual River Farm Holiday Reception.** George Washington's River Farm, Alexandria, Virginia.





American Horticultural Society  
2008 Annual Gala

AMERICA'S GARDEN CELEBRATION

# *Local Harvest, Bountiful Earth*



September 20, 2008  
River Farm, Alexandria, Virginia



Honorary Gala Chair,  
Roger Swain

The 2008 American Horticultural Society Annual Gala will be a true celebration of the bounty of the earth and American gardens. Join us for an elegant evening to savor the seasonal flavors of the local harvest. Roger Swain, America's garden champion and beloved host of "The Victory Garden," is serving as Honorary Chair for this extraordinary event. Proceeds from the gala support the stewardship of River Farm and the Society's educational programs.

For tickets, call (703) 768-5700 ext. 119

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# Growing Fertile Minds *and* Communities

Garden visits, educational sessions, and shared experiences motivate participants at the 16th annual National Children & Youth Garden Symposium.

BY DENISE COWIE



that was held in the Greater Philadelphia area from July 24 to 26, expanded that idea into an award-winning series of Take-a-Walk® books as well as radio and television programs that urge young people to “take a minute to be in it.” Since that day a decade ago, she has inspired countless schoolchildren—and numerous adults—to open their eyes and really look at the natural world around them.

## LEARNING TO LOOK UP

Kirkland’s campaign to excite children about the natural world was a perfect fit for the 16th annual symposium, “Growing Fertile Minds and Communities,” which focused on promoting programs for children and young people that involve plants, gardening, and nature.

About 330 people attended the symposium, based at the University of Delaware’s Newark campus, says **Stephanie Jutila**, AHS education programs manager. The participants came from 35 states plus the District of Columbia, and included representatives from Barbados, Canada, New Zealand, and the U.S. Virgin Islands.

Four local hosts also contributed their expertise and gardens to the symposium: Camden Children’s Garden in southern New Jersey; Longwood Gardens in Chester County, Pennsylvania; the Pennsylvania Horticultural Society in Philadelphia; and Winterthur Museum & Country Estate in northern Delaware.

For some in the audience who listened raptly to Kirkland’s tales, attending the symposium for the first time was a bit like “looking up.” Three days of educational sessions and field trips to several out-

**O**NE DAY, on a trip to her local grocery store in Chester County, Pennsylvania, **Jane Kirkland** looked up and saw a bald eagle soaring high over the parking lot.

A bald eagle—America’s symbol—flying right above her head! She could scarcely believe it.

That glance skyward changed her life, Kirkland told hundreds of horticulturists, educators, and children’s gardening advocates at the American Horticultural Society’s National Children & Youth Garden Symposium in July. Because of that bald eagle, she quit a successful ca-

reer as a writer of computer books and began writing for young people about nature, wildlife, and outdoor adventures.

But it wasn’t because spotting an eagle in the skies above her hometown was so extraordinary—quite the opposite, in fact. “Bald eagles had been flying over that part of Chester County for 20 years,” Kirkland soon discovered. “But I had never seen one before—because I had never looked up.” If one glance could reveal bald eagles overhead, she figured, imagine what regular breaks to observe nature could do.

Kirkland, the opening keynote speaker for the youth gardening symposium

Poster session participants, left to right, David Simpson, Mariana Haque, and Renee Byrd of Clemson University at the 2008 National Children & Youth Garden Symposium.





**Above:** Jane Kirkland inspires the audience with an animated keynote presentation. **Right:** Author and artist Dar Hosta speaks about cultivating creativity in young people.



standing children's gardens presented possibilities that they might never have considered otherwise.

Among them was **Joelle Morris** of Bethesda, Maryland, who had only a vague knowledge of the American Horticultural Society before she came across a postcard promoting the symposium. Morris, a naturalist at Locust Grove Nature Center in Bethesda, decided to attend—and came away with a new perspective on her job.

"I had all these things that I wanted to try, but just didn't have the courage to get it together. At the symposium, though, everything gelled," she says. "One session

in particular, the Nature-Curriculum Connection, gave me a lot of ideas for how my nature center can support teachers in their curriculum for getting kids outside."

For another first-timer, **Mona Margarita**, the symposium brought validation that the kind of work she does as an educator at Philadelphia's inner-city Awbury Arboretum is not only about fun but is important as well.

Margarita was especially inspired by Kirkland and by New Jersey author **Dar Hosta's** supercharged sessions on creativity, as well as by the Brooklyn Botanic Garden's multi-layered strategies for recruiting teenage interns.



**Stuart Nunnery describes his group's plans for creating school gardens in Rhode Island.**

"I feel very empowered," Margarita says of her experience. "We will actually be having the children 'look up' in our summer nature program at Awbury and Dar Hosta's book *If I Were a Tree* will be a lesson for our Tree Jubilee."

### SHARING IDEAS AND INSPIRATION

All participants sought to share ideas and experiences that have successfully sparked young people's interest in gardens and nature. And share they did. Nearly three dozen educational sessions were presented over two days, in addition to interactive poster displays and daily field trips to children's gardens.

Here are some of the highlights from these sessions:

■ The Rhode Island Children's Garden Network team outlined its plan that every school and youth organization in Rhode Island will have a garden by 2010. Such gardens—designed and developed by students and the community—are essential to grow the next generation of land stewards, environmentalists, and gardeners, team member **Stuart Nunnery** said, and to provide a link to careers in horticulture, agriculture, and the environment.

■ **Debbie Greene** of the Pilcher Park Nature Center in Joliet, Illinois, related how the center's after-school program celebrates diversity and imparts American history by using the Underground Railroad from Joliet to Canada to teach lessons on gardening and nature. What seeds might these escaped slaves have carried with them? And what foods would make them healthy enough to survive the trip?

■ Philadelphia teacher **Chuck Lafferty** showed videos of some of the country's youngest entrepreneurs—his kindergarten students at Longstreth Elementary School. They held a penny drive to fund a school garden that evolved into an award-winning schoolyard wildlife habitat in inner-city Philadelphia. The students also harvest the seeds and sell them in hand-decorated packs for their Kinder-Garden Seed Company. Lafferty, who acts as CEO, says people shouldn't underestimate what kindergarteners can do.



■ **Dave Francis** shared some of the hands-on activities from his Environmental Science Field Guide. The guide, designed to grab the attention of middle-school students, includes fun activities such as making biodegradable plastic and using Global Positioning System technology. Francis, who's with the Utah State University Extension 4-H program in Ogden, uses garden settings to teach environmental science. "We can't return the earth to a pristine state," he says, "but we can empower kids with the knowledge to make the earth a better place."

■ **Carol Rathmann** talked about a special therapeutic program at the Humane Society's Forget Me Not Farm in Sonoma County, California, where abused children are helped to heal by learning to care for plants and animals.

■ Think gardening is low-tech? Not for the fourth-grade students from Washington Elementary School in Summit, New Jersey. **Natalie Cassidy** and **Cindy Hedin** detailed how the students parlayed a simple salad garden into lessons that satisfied a host of curriculum "technology competencies." The students made a movie of the various stages of their garden, complete with music and voice-overs, then designed and printed invitations to attract an audience to view it.

## GARDEN VISITS AND FIELD TRIPS

As a counterpart to the educational sessions, the children's gardens at Longwood, Winterthur, and Camden showcased many different approaches for engaging children's imaginations.

Longwood's new Indoor Children's Garden, for example, shows the influence of classic Italian gardens in child-scale mazes, grottoes, and water features. At Winterthur, the fairy-themed Enchanted Woods promises magical outdoor adventures. And at the four-and-a-half-acre, stand-alone children's garden in Camden, gardens ranging in theme from dinosaurs

## Cleveland 2009

Mark your calendar now for next year's National Children & Youth Garden Symposium, which will be hosted by the Cleveland Botanical Garden from July 23 to 25.



**Above: Symposium attendees explore the Faerie Cottage in Winterthur's Enchanted Woods. Right: The living sculpture display at Longwood Gardens was part of a pre-symposium workshop.**

to "Three Sisters" vegetable plots offer urban youngsters a place to play and learn.

Whatever the approach, though, children's gardens are becoming more popular than ever.

"Children's gardens are exploding now," says **Jane Taylor**, whose 4-H Children's Garden in East Lansing, Michigan, was on the vanguard of the children's gardening movement. "Pick up a newspaper any day of the week, and you'll read about a school starting a garden. Teachers are realizing this is how they can teach any number of subjects, and nutritionists are delighted."

The designer of Winterthur's Enchanted Woods agrees. "If public gardens don't have a children's garden now, they're planning one," says **W. Gary Smith**, who participated in a panel discussion about design held on a field trip to Longwood. And because of this trend, children's gardens are now on the cutting edge of garden design, adds **Tres Fromme** of Mesa Design Group



in Dallas, Texas, who served as lead designer for Longwood's indoor garden.

In addition to the garden visits during the event, a pre-symposium workshop provided the opportunity to help build a living sculpture at Longwood Gardens. Participants molded soil and covered it with sod to create three large interlocking circles around three weeping redbud trees. **Marcia Eames-Sheavly**, a senior Extension associate at Cornell University in Ithaca, New York, who led the workshop, notes that creating living sculpture is a particularly effective activity for engaging high-school-aged youth, a group that children's gardens often struggle to reach. Living sculptures can be any shape that might grab teens' attention, for example sofas and cows, which Eames-Sheavly has



helped create as part of Cornell's Garden Based Learning Program.

Sod sofas sound like a great idea to **Sandy Livermore**, president of the yet-to-open Bookworm Garden in Sheboygan, Wisconsin. Since this stand-alone garden is based on 74 works of children's literature, Livermore says, "we need a couple of those for kids to sit on and read our books."

### CREATING CONNECTIONS

But the Symposium wasn't only about workshops and educational sessions. It was also about relaxing and socializing during an ice cream social at Winterthur, enjoying a ride on the carousel horses at Camden, and dining in the magnificent conservatory at Longwood.

"My favorite memory is sitting in the conservatory at Longwood Gardens with like-minded people," says Joelle Morris. "I learned a lot from them."



**Norm Lownds of Michigan State University comes out of his shell at the Dinosaur Garden at Camden Children's Garden.**

Small wonder, then, that when the 16th annual symposium concluded with singer/songwriter **Erica Wheeler's** concert of sometimes-funny, sometimes-poignant songs about our connection to the environment, members of the enthusiastic audience lent their voices to the rousing chorus:

"Inch by inch, row by row,  
Gonna make this garden grow.  
All I need is a rake and a hoe  
And a piece of fertile ground..."

*Denise Cowie is a former garden columnist for the Philadelphia Inquirer.*

## PANEL DISCUSSION FOCUSES ON ART IN BLOOM



During a panel discussion on "Garden-Based Education: The Philadelphia Story" at the symposium, Pennsylvania Horticultural Society (PHS) staff members shared their experiences with a traffic-stopping garden built by seventh-grader students of St. Francis Xavier School in Philadelphia. It's a living work of art—an Art Garden inspired by famous artists whose work hangs in the Museum of Art down the street. Under the guidance of teachers **Terri O'Brien** and **Patty Carr**, and religion coordinator **Brendan Petersen**, the students visited the museum to see the paintings, then planted beds of sunflowers for Vincent van Gogh, poppies for Georgia O'Keefe, and irises for van Gogh and Claude Monet.

They mounted colorful frames on the fence surrounding the garden—so passersby could view their floral art as though it were in a gallery—along with their poems, essays, and illustrations. Their teachers used the garden for lessons on art, literature, botany, and other sciences.



**"Framed" poppies, top, grow in an Art Garden created by students at St. Francis Xavier School, above.**

The project grew out of the students' participation in the PHS's Green City Youth program, which involves young people in schools all over Philadelphia in creating green spaces to improve their communities. "This program is a dream come true," says **Larry Stier**, a former teacher who now heads up the greening initiative for PHS.

Launched in 2005, Green City Youth led to the creation last year of Green City Teachers, which shows Philadelphia-area educators how to build gardens as well as how to incorporate horticulture and environmental education into their curricula.

At St. Francis Xavier, participation in the project also showed the students the meaning of community: While school is closed for the summer, older volunteers from the neighborhood are keeping the Art Garden alive by watering and weeding.

—D.C.

# Terrestrial Orchids *for temperate gardens*

Add a touch of the exotic to your garden with these hardy orchids.

BY BRIAN F. JORG

**T**HOUGH OFTEN associated with lush tropical jungles, orchids can actually be found on every continent except Antarctica. The orchid family (Orchidaceae) includes some 1,000 genera and between 15,000 and 20,000 species that grow from the Arctic Circle to the equatorial rain forests.

Orchids boast some of the most complex flowers in the plant kingdom. The blooms so intrigued Victorian plant collectors that it sparked the infamous orchid craze of the 19th century. Orchid hunters were commissioned to travel to tropical regions and collect as many new varieties as they could find. They sent them back to England, where most of the plants died.

Most of the tropical orchids that so excited early collectors were epiphytic, that is they live on the branches of other plants, typically trees, where their aerial roots absorb moisture and nutrients from the atmosphere. But other kinds of orchids, known as terrestrials, make their home at ground level, rooting in soil.

For years orchids were limited almost exclusively to collector gardens, but today, tropical orchids are sold at supermarkets and hardy terrestrial varieties are becoming increasingly popular additions to temperate gardens.

So why has it taken so long for these elegant plants to become the “hot” item in American gardens? The principal reason

is propagation, which, until recently, had to be done by seed or clump division. Because these methods are too slow for commercial purposes, many species of orchids have been collected from the wild, an un-

“The market for terrestrial orchids may develop in a manner comparable to the market for tropical orchids, just 50 or 70 years later,” says Michael Weinert of Frosch Exclusive Perennials in Germany, which produces hybrid lady’s slipper orchids for the wholesale market with worldwide distribution.

## SLIPPER ORCHIDS

Among the first temperate orchids to be mass-produced, the slipper orchids (*Cypripedium* spp.) dominate the commercial market for hardy natives. Found growing over a wide range of North America, they’re a good orchid for the garden.

As a rule, *Cypripedium* species grow best in moist, but not wet sites, in soil that is light and porous and of the proper pH, which varies according to species. They are not drought tolerant and may require supplemental irrigation through dry periods in summer. Most species can be grown in open, light shade and will benefit from morning sun, but should be protected from direct midday sun.

Most slipper orchids bloom from spring to early summer. They are lovely combined with ferns, hostas, epimediums, and spring ephemerals. Because orchids do not like root competition, they should not be planted near trees with lots of surface roots, such as maples.

Among the most popular of the slipper orchids, the large yellow lady’s slipper



**Showy lady's slipper (*Cypripedium reginae*) bears three-inch-wide blooms in spring.**

tenable practice that has led to the decline of many native orchid populations. However, with advances in laboratory propagation (see “Orchid Propagation Today,” page 22), certain orchids are now being produced in large numbers.





**Above:** Spring-blooming 'Gisela' is a *Cypripedium* hybrid with exceptional vigor. **Right:** The easy-to-grow yellow lady's slipper (*C. parviflorum* var. *pubescens*) adds spring color to a bog garden.

(*Cypripedium parviflorum* var. *pubescens*, USDA Hardiness Zones 2–9, AHS Heat Zones 9–1) is native to eastern North America, from Nova Scotia and Ontario to the mountains of North Carolina and eastern Tennessee. One of the easiest native orchids to grow, it thrives in the open shade under a high canopy but will also do well with direct morning sun. Soil should be rich, moist—but well drained—with a neutral pH. This species grows two feet tall and produces beautiful two-inch yellow flowers in early May in my Cincinnati, Ohio, garden.

The pink lady's slipper (*C. acaule*, Zones 3–7, 7–1) also occurs over a wide range of eastern North America, inhabiting hummocks in bogs in the north and dry pine and oak woods in the Appalachians. Producing a pair of basal leaves in early spring, this acid-loving orchid typi-



cally bears its blooms atop a 10- to 14-inch stem in June over much of its range. Although pink lady's slippers can be found thriving in a well-suited natural habitat, they are extremely finicky when it comes

to most cultivated situations. They require a pH near 4.5, so necessitate special consideration in most gardens, such as adding pine needles and sphagnum peat to light, sandy soil. I also use low rates of cider vinegar added to rain water to help acidify the growing area. Even with these extreme measures, this orchid remains a challenge in my garden, where the natural pH is near 7.5.

Another of my favorites is the showy lady's slipper (*C. reginae*, Zones 2–7, 7–1). In its native habitat, from maritime Canada to the mountains of North Carolina and Tennessee, the plant requires fairly specific site conditions, and is usually found near a bog or fen, where it can form large colonies. In cultivation, it requires moist, well-drained soil. I grow it in an area in the garden that is one-third native garden soil and two-thirds a mixture of perlite and sand. Plants produce a single or, sometimes, double blossom in late May to early June. The large white bloom is tinged with pink. Occasionally, pure white-blooming forms are commercially available. Plants grow from 18 to 30 inches tall, depending on growing conditions.

The Kentucky lady's slipper (*C. kentuckiense*, Zones 6–10, 10–6) can produce one of the largest blooms of any *Cypripedium* species. This robust orchid grows in alluvial habitats, often acidic sand, from Virginia to Texas. With its distinctly southern range, it has better heat tolerance than other native *Cypripedium*. The large, cream-colored bloom appears in mid-May in my garden. This plant will often reach 30 inches in height, and over time will form large clumps that can be divided and transplanted.

Several hybrid *Cypripedium* have been selected for their form, color, and vigor. Hybrids are often much heartier in cultivation than their parents, so are a good choice for the novice to grow. 'Gisela' (Zones 3–6, 7–2) is a vigorous hybrid of *C. parviflorum* and *C. macranthos* that produces large burgundy-red and creamy yellow flowers in spring. Plants grow 16 to 24 inches tall. 'Hilda' (Zones 4–8, 8–1) is a





Above left: Rose pogonia requires constant moisture. Right: *Bletilla striata* combines well with hostas and Solomon's seal in a perennial border.

cross between *C. kentuckiense* and *C. macranthos* var. *ventricosum*. It bears large blooms in June or July that range from yellow to red and purple.

#### OTHER SPECIES OF NOTE

A native of China and Japan, the Chinese ground orchid (*Bletilla striata*, Zones 5–8, 8–5) is a wonderful addition to the perennial border. It adapts to full sun or part shade and most good garden soils. In the colder areas of its range, a layer of mulch is advisable. Blooming for up to three weeks in early summer, it produces many intricate purple to pink blossoms along an 18- to 24-inch flower spike. The variety *B. striata* var. *alba* has white flowers tinged with pink. Provided adequate moisture until flowering, this orchid tolerates drier conditions.

The rose pogonia or snake mouth orchid (*Pogonia ophioglossoides*, Zones 3–8, 8–2), can be found growing in bogs and wet areas over the eastern half of North America, from Canada to Florida. This delicate orchid needs acidic, moist soil to thrive. Growing in full sun under favorable conditions, it will form a dense colony. In summer, each plant typically produces a single fragrant pink flower on a stem

**A popular selection of the nodding lady's slipper, 'Chadds Ford' bears vanilla-scented flowers in fall.**

that is usually less than nine inches tall. I grow this orchid in my bog garden, along with lobelia, grass pink orchids, pitcher plants, and cranberries.

Downy rattlesnake plantain (*Goodyera pubescens*, Zones 6–9, 9–6) grows in shady and semi-shady habitats in acidic soils, forming dense colonies when conditions are right. Another native of the eastern United States, it is prized for its distinctive silvery green foliage highlighted with white veins. The evergreen foliage outshines the numerous small, white flowers, which



bloom in late summer on a 12-inch spike. The limestone-derived soil in my garden is not conducive to such an acidic-soil-loving plant, so I grow it in an area where I have artificially lowered the pH by acidifying the irrigation water and mulching with pine fines. So far it is thriving.

There are five species of grasspink orchids (*Calopogon* spp.) found in the eastern half of North America. The tuberous grasspink (*Calopogon tuberosus*, Zones 3–10, 9–2) is the most commonly found in commercial trade. It blooms in early summer, producing one, or, occasionally two, beautiful two-inch magenta flowers atop an 18-inch stem. Its leaves are grasslike, hence the common name. Grasspink orchids are typically found in moist, boggy environments in full sun. They are most dependent on moisture as seedlings, becoming more adaptable to dry conditions as plants mature.

"Once established, this species will reproduce prolifically in the garden," says William Mathis, founder of the Wild Orchid Company, which produces hardy, terrestrial orchids native to North America, Europe, and Asia. Mathis grows grasspink orchids primarily from seed; he is able to grow *Calopogon* from flask to bloom in just three years.

There are some 30 species of lady's tresses (*Spiranthes* spp.) native to North America, but for gar-



## OTHER HARDY ORCHIDS

Name	Height (inches)	Flower Color/ Bloom Time	Cultural Notes	Origin	USDA, AHS Zones
<i>Bletilla</i> 'Kate'	12–18	pale lavender-rose/ summer	full sun to part shade, keep constantly moist until after flowering	hybrid origin	6–9, 9–6
<i>Calanthe seiboldii</i>	12	yellow/spring	humus-rich, moist soil, part shade (evergreen)	Asia	7–9, 9–7
<i>Cypripedium</i> × <i>andrewsii</i>	12	white sometimes tinged with rose/ early spring	neutral to alkaline soil, keep damp, not wet; open shade	naturally occurring hybrid	3–6, 6–2
<i>C. guttatum</i> (Alaska lady's slipper)	4–13	white with pink markings/late spring to early summer	requires very cool climate, slightly acid, humusy soil, dappled shade	Alaska, NE Asia	2–4, 4–2
<i>C. parviflorum</i> var. <i>parviflorum</i> (small yellow lady's slipper)	12	yellow with maroon sepals/spring	constantly moist, acid to neutral soil, part shade	Newfoundland to Georgia	2–9, 9–2
<i>C.</i> 'Emil'	14–19	dark purple sepals with yellow pouch/late spring	open shade, moist, not wet soil	hybrid origin	4–8, 8–3
<i>C.</i> 'Hank Small'	12–18	maroon sepals with yellow pouch/late spring	open shade, moist, not wet soil	hybrid origin	4–7, 7–4
<i>C.</i> 'Michael'	10–12	purple and white/late spring	part sun or dappled shade moist, slightly alkaline soil	Chinese hybrid	5–7, 7–4

den cultivation the standout is fragrant nodding lady's tresses (*S. cernua* var. *odorata*, Zones 4–8, 8–4). Sometimes listed as *S. odorata*, this orchid is native to moist sites in sun to part shade from New Jersey south to Florida, Louisiana, and Texas.

A vigorous selection called 'Chadds Ford' is an ideal choice for anyone trying a first terrestrial orchid. From a basal rosette of glossy, evergreen leaves, it sends up a two-foot spike of spiraling, vanilla-scented white flowers that bloom in fall. It spreads by stolons as well as by seed and, if conditions are to its liking, will reward the gardener with rapidly expanding colonies. It grows best in slightly acidic soil that stays moist throughout the year, but is quite adaptable and will grow in any moisture-retentive soil that supports plants such as hostas or astilbes. A site in part sun or the open shade of a high canopy is ideal.

Western gardeners who live in cool climates might consider the western false hellebore (*Epipactis gigantea*, Zones 3–6, 6–2), found in cooler areas of the western United States. It prefers full sun and constantly moist, acidic soils. In summer, it produces flowers in shades of brown, yellow, and red. Paul Martin

Brown, an orchid expert and author of several field guides for native North American orchids, recommends it only for gardeners in areas of the West where it grows naturally. "Those who have

tried it in the East have not been successful," says Brown. When purchasing, take care to choose sustainably propagated plants. For more hardy orchid selections, see the chart above.



**Under ideal conditions—boggy soil, full sun, and a cool climate—the western false hellebore will self seed to form large colonies that bloom from late spring to early summer.**

## Resources

**American Orchid Society**, [www.aos.org](http://www.aos.org).

**The Gardener's Guide to Growing Hardy Perennial Orchids** by William Mathis. The Wild Orchid Company, Carversville, Pennsylvania, 2005.

**Growing Hardy Orchids** by John Tullock. Timber Press, Portland, Oregon, 2005.

**Native Orchid Conservation Committee**, [http://newisos.org/Conservation/Native\\_Orchid\\_Conservation.htm](http://newisos.org/Conservation/Native_Orchid_Conservation.htm).

## Sources

**Asiatica**, Lewisberry, PA. (717) 938-8677. [www.asiaticanursery.com](http://www.asiaticanursery.com).

**Fraser's Thimble Farm**, Salt Spring Island. B.C. (250) 537-5788. [www.thimblefarms.com](http://www.thimblefarms.com).

**Plant Delights Nursery**, Raleigh, NC. (919) 772-4794. [www.plantdelights.com](http://www.plantdelights.com).

**Raising Rarities**, Toledo, OH. (419) 866-4241. [www.raisingrarities.com](http://www.raisingrarities.com).

**Vermont Ladyslipper Company, Ltd.**, [www.vtladyslipper.com](http://www.vtladyslipper.com).

**The Wild Orchid Company**, Carversville, PA. (215) 297-5053 [www.wildorchidcompany.com](http://www.wildorchidcompany.com).

## ORCHID CULTURE

Although orchids grow in a wide range of habitats, individual species are not very adaptable. To grow a hardy orchid successfully, you must be able to replicate the growing conditions of its natural environment in your garden. "Know the soil requirements of the species in the wild—lime, acid, serpentine, moisture levels, etc.," says Brown. For novice orchid growers who have a bog garden, "*Calopogon tuberosus* and *Pogonia ophioglossoides* are easy to grow in most any climate."

William Cullina, the former director of horticultural research for the New

## ORCHID PROPAGATION TODAY

A great revolution in orchid propagation transpired in the latter third of the 20th century. Today, sustainable laboratory propagation enables growers to produce large numbers of orchids in relatively short periods of time. This advancement replaced propagation using clump divisions, a method that took quite a long time to develop large numbers of plants.

In the 1980s, propagators started to cultivate orchid seed in the lab. By artificially supplying nutrients to the embryo, growers were able to develop the seed without mycorrhizae, the symbiotic fungi on which the plant is dependent for germination in the wild. This breakthrough modernized orchid propagation. Growers found that lab propagation produced a superior plant to most specimens collected in the wild. These lab-produced plants helped satiate a growing demand—orchids could now be sustainably propagated on a commercial scale, helping to reduce collecting pressures that were decimating some wild populations.

William Cullina, who until recently was the director of horticultural research for the New England Wild Flower Society (NEWFS) in Framingham, Massachusetts, says that the society began selling clump divisions of lady's slippers from the original plantings at the gardens. "By the late '60s, we had large numbers of mature specimen yellow lady's slippers. These clumps were informally divided and sold at the spring plant sale," says Cullina. When Cullina arrived in 1995, he expanded the propagation beds for slipper orchids. The following year he began purchasing the first seedlings from outside labs. Today, the orchids at NEWFS are all lab propagated.

With commercial, sustainable propagation a reality, it is imperative to make sure you are purchasing plants from an ethical source. Plants collected from the wild still abound. I have personally seen orchid colonies decimated by illegal digging. The hope for the future is that those who admire and love these plants in their garden will do the right thing and only purchase plants from sustainable sources. —B.F.J.



Provided with a nutrient-rich medium, orchid embryos grown in test tubes produce superior plants in a short time.

England Wild Flower Society, recommends the large yellow-flowered lady's slipper, followed closely by the Kentucky lady's slipper, for novice orchid growers, especially if they have lighter soils. Michael Weinert believes that *Cypripedium* hybrids such as 'Gisela', 'Emil', and 'Hank Small' are the easiest orchids for the home gardener to grow successfully. "There will be some collectors who prefer the straight species, but most hobby growers will enjoy the more rewarding and easy-to-grow hybrids," says Weinert.

## TAKE THE CHALLENGE!

It is obvious that there are quite a few op-

tions for the beginning orchid grower. By choosing reputable retailers, you can help reduce the unethical harvesting of these intriguing plants from the wild, which is a practice contributing to the decline of native species.

So select an orchid that suits the growing conditions where you live, purchase a sustainably produced plant, and grow it in your garden. With just a little effort, you will be well rewarded with a true garden gem.

*Cincinnati resident Brian F. Jorg is a horticulturist and photographer who has been growing native plants for nearly 30 years.*



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# Species Tulips

BY JOAN DE GREY

Returning reliably year after year, species tulips are elegant additions to the spring bulb garden.

**A**T THIS TIME of year, it's hard to resist the glossy color photos of hybrid tulips in the catalogs that flood our mailboxes. But the majority of these tulips are one-year wonders that require fresh bulbs to be planted each year. If you're looking for something more permanent, consider species tulips. When grown in suitable conditions, species tulips naturalize to form large, perennial clumps that bloom year after year. They are wonderful additions to rock gardens, at the front of

**Top right:** A selection of *Tulipa pulchella* (USDA Zones 5–8, AHS Zones 8–5), 'Persian Pearl' is stunning in rock gardens. Fragrant, classic tulip-shaped flowers bloom in early spring on eight-inch stems with blue-green leaves.

**Bottom right:** *Tulipa tarda* (Zones 4–8, 8–4) naturalizes quickly to form large clumps of star-shaped, fragrant flowers. The two-inch blossoms are borne on ground-hugging four- to six-inch stems in early spring.

borders, along pathways, beside doorways, in terrace and patio gardens, and in containers. "We've heard people have success perennializing these tulips, especially in gardens with good drainage that stay dry in the summer," says bulb expert Becky Heath of Brent & Becky's Bulbs in Gloucester, Virginia. "Species tulips are becoming more popular because it seems voles have a harder time finding them. Also, many rock gardeners grow species tulips by duplicating the bulbs' native habitats, where they love baking in the summertime sun."

From among the approximately 100 species tulips that have been identified, gardeners can select from a luscious palette of colors. The flowers open widely in response to the warmth of the sun, then close in response to darkness, overcast skies, and cooler temperatures. Because of this, tulips



TOP: DAVID CAVAGNARO. BOTTOM: ALAN AND LINDA DETRICK.



with contrasting exterior and interior colors often appear to be changing hue as they open and close.

Species tulips do have slightly more demanding site requirements than the standard garden tulips. Ideally, the planting site should be in full sun and offer free-draining soil that dries quickly after rain. Heath recommends creating raised beds if

your soil isn't sandy enough. Since species tulips need space to spread, leave room between them and other perennial plants.

### CARING FOR SPECIES TULIPS

"After the flowers bloom, pinch off the spent flower so the bulb can channel its energy to regenerating a bloom for the next year," says Heath. "As you would for daf-

fodils, leave the leaves in place until they begin to turn yellow and flop over."

As with most spring-flowering bulbs, autumn is the best time to plant species tulips. The optimum months depend on where you live in the country: September and October for USDA Hardiness Zones 4 and 5, October and November for Zones 6 and 7, and November and December for Zone 8. If you live in an area that seldom or never experiences freezing temperatures, most tulips won't get enough cold conditioning to bloom successfully outdoors.

Whether in containers or in the ground, plant the bulbs four to six inches deep, with their roots or basal plate facing downward. Space the bulbs four to six inches apart to provide room for them to naturalize over time.

Species tulip bulbs benefit from annual amendments of compost or well-rotted




**Top left:** *Tulipa turkestanica* (Zones 5–8, 5–8) is one of the first taller species to bloom in early spring. It has narrow, blue-green leaves and arching 10-inch stems that bear multiple fragrant cream and yellow flowers.

**Bottom left:** *Tulipa bakeri* 'Lilac Wonder' (Zones 4–8, 8–4) is a late-season cultivar featuring large, fragrant flowers on eight-inch stems. The bulbs require mild winters and warm, dry summers, making it suitable for gardens in southern California.



manure. Alternately, apply a balanced, slow-release fertilizer such as 10-10-10 in late summer. Protect newly planted bulbs from squirrels and voles by placing wire mesh over the planting site and covering it with a layer of mulch. Some growers mix sharp volcanic stone with the planting soil, which helps deter burrowing animals.

The time spent now in selecting and planting your bulbs will pay off in spring, when the flower stalks emerge almost miraculously from the earth and the blooms add their delicate beauty to the awakening garden. 

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*Joan de Grey is a freelance writer based in Toronto, Ontario.*

**For a chart that provides additional information about species tulip selections, click on the "Web Special" linked to this article on the AHS website ([www.ahs.org](http://www.ahs.org)).**



## THE TAMING OF WILD TULIPS

We tend to connect tulips with the Netherlands because the bulb industry is so established there, but of course, the ancestors of cultivated tulips originated in areas such as temperate southern Europe, the Middle East, and Asia that have dry summers and cold winters. Two recent books recount the dramatic history of tulips: Anna Pavord's *Tulip* (Bloomsbury Publishing, 1999) and Mike Dash's *Tulipomania: The Story of the World's Most Coveted Flower & the Extraordinary Passions It Aroused* (Three Rivers Press, 2001).

Essentially, the tulip made its way to Europe in the 16th century. According to Pavord's book, "The flowers fitted admirably with the spirit of the age and the prevailing craze for 'curiosities' to be displayed in horticultural *Wunderkammer*, with each rare and cherished flower exhibited like a jewel." Quickly, the tulip became a status symbol in gardens of the rich throughout Europe.

The most infamous period during the tulip's rise in popularity is a public craze dubbed 'Tulipomania' that occurred in Holland during the 1630s. Dutch citizens from all income groups started paying vast sums of money or bartered commodities such as real estate and livestock for the prized bulbs. The most valuable tulips were those with variegated, striped, or streaked flowers, known as "broken color." In winter, people gambled on the speculation that an individual bulb would produce the highly desirable broken colors the following spring. The tulip market abruptly crashed in 1637, leaving the Dutch economy close to ruins. The Dutch government later passed a law forbidding speculation on tulip bulbs.

Interestingly, not until the 20th century did scientists discover that the unpredictable color patterns on tulip flowers were caused by a virus that weakens the bulb so that offsets are not produced as easily.

—J. de Grey



*Tulipa kaufmanniana* (Zones 4–8, 8–4) is early to bloom and especially suited to rock gardens. Also called the water lily tulip for the shape of its flowers, the species is difficult to obtain, but numerous cultivars—such as 'Ancilla', shown—are available in a range of colors: cream or yellow; pink or greenish outside; or pink, orange, or red often with contrasting basal markings. Flowers grow larger and brighter as they mature, eventually opening up almost flat in early spring.



In late spring, *Tulipa clusiana* (Zones 4–8, 8–4) has an abundance of fragrant flowers boasting deep-purple centers, yellowish-white inner petals, and bands of pinkish red on the outer segments on 12-inch stems. When the blooms are closed, only thin white stripes show between the mid-rose exterior petals. Brent Heath of Brent & Becky's Bulbs in Gloucester, Virginia, recommends the adaptable cultivar 'Lady Jane', which is slightly paler than the species.



*Tulipa linifolia* (Zones 4–7, 7–4) produces narrow, straplike leaves and long-lasting, bowl-shaped flowers on six- to eight-inch stems in mid-spring. The flowers open widely and have a purple-black base, often with yellow marginal marks. This species is spectacular whether grown alone or mixed with other spring bloomers.





*Tulipa acuminata* (Zones 4–8, 8–4) has been grown in gardens since the 16th century but is unknown in the wild. Stems grow 14 to 16 inches tall. The flowers have narrow, four-inch-long petals that twist and curl, reminiscent of a bad hair day. The flowers are yellow or pale red, usually streaked with red or green. The stamens have red-brown anthers and yellow or white filaments.

## Sources

**Brent and Becky's Bulbs,**  
Gloucester, VA. (804) 693-3966.  
[www.brentandbeckysbulbs.com](http://www.brentandbeckysbulbs.com).

**John Scheepers, Inc.,** Bantam, CT.  
(860) 567-0838.  
[www.johnscheepers.com](http://www.johnscheepers.com).

**McClure and Zimmerman,**  
Friesland, WI. (800) 546-4053.  
[www.mzbulb.com](http://www.mzbulb.com).

**Odyssey Bulbs,** South Lancaster,  
MA. (800) 517-5152.  
[www.odysseybulbs.com](http://www.odysseybulbs.com).

**Van Dyck's Flowerbulbs & Perennials,**  
Virginia Beach, VA. (800) 248-  
2852. [www.vandycks.com](http://www.vandycks.com).

## Resources

**Bulbs** by John Bryan. Timber Press,  
Portland, Oregon, 2002.

**Tulipomania: The Story of the World's  
Most Coveted Flower & the Extraordi-  
nary Passions It Aroused** by Mike  
Dash. Three Rivers Press, New  
York, New York, 2001.

**The Tulip** by Anna Pavord. Blooms-  
bury Publishing, London, England,  
1999.



Recommended for milder and southern climates, *Tulipa sylvestris* (Zones 4–8, 8–4) features light green leaves that grow to eight inches long. The sweetly scented flowers bloom singly or in pairs from mid- to late spring and grow up to three inches across. *T. sylvestris* spreads rapidly and will naturalize well in grass for a meadow garden.



**H**OW DO PLANTS end up where they do in a garden? Two scenarios present opposite extremes. The designer sits at the drawing board, sketching out a plan on paper and eyeing a particular space. Mind connects with page as well as a mental image of the site. Visual possibilities begin to spill forth . . . something tall and columnar will look good here, some fuzzy low shapes are called for over here, and definitely something with red foliage there. Now to find plants that fit those descriptions.

Then there's the plant-collecting gardener visiting the nursery, stalking down the aisles and eyeing a particular plant. A narrow 'Sutherland' tree caragana gets pulled from the pack. What's that fuzzy asparagus species over there? Wow, look at the red leaves on that dahlia! While the gardener is unloading the new acquisitions at home the conundrum arises, now to find places for these plants.

Both these approaches have their merits and their pitfalls. The best way to bring plants into a garden combines some of each. A designer's visualization of the site is a way to discover and explore what it offers in terms of plant opportunities, and the collector-gardener's attraction to certain plants and insistence on giving them a home ensures ongoing interaction and personal response. So ideally when a plant is invited into a garden, the person making that decision has been both designer and plant collector in the process.

What the extreme scenarios miss entirely is that plant and site are inextricable. They influence each other continually—how the plant grows there, how the site changes by its presence. Neither should be considered before the other; rather, they ought to occur simultaneously. By selecting plants with an understanding of their needs and character, and by placing plants with regard to matching their cultural requirements and intrinsic qualities to a well-understood and well-explored existing site or creating a new site that meets these needs and respects these qualities, one combines the best of both designer and collector approaches.

Truly transcendent gardens are made from a starting point of attraction to and at least a budding familiarity with plants. Having an understanding of a plant refers



# Plants *with* Presence

In the design process, take into account a plant's needs, but also its character and how it reflects a sense of place.

ARTICLE AND PHOTOGRAPHS  
BY SCOTT OGDEN AND LAUREN SPRINGER OGDEN





Above: In the authors' garden in Austin, Texas, temperate maritime and subtropical climates sustain innumerable plants with strong presence. Combining them to show off their power while still allowing other plants and aspects of the garden their due play takes sensitivity and understanding. Opposite page: Garden-making in a natural setting is more challenging than most other design scenarios. Site and plants are inextricable, a truth that applies anywhere. *Penstemon pinifolius* and crack-filling *Gazania linearis*, *Veronica pectinata*, and *Thymus pseudolanuginosus* mingle in this Ogden-designed northern Colorado garden.

most obviously to cultural requirements. A plant must have its climatic tolerance, soil predilection, and growth habit accommodated, and its moisture and light demands met. But understanding also involves what the gardenmaker can do to honor the plant's spirit.

### CAPTURING A PLANT'S SPIRIT

All plants have presence; as individuals each offer something special. This relates

to the obvious: their physical attributes and what is particularly striking or unique about them, such as size, shape and growth habit, color, texture, scent, flower or foliage, and the like. It also relates to things more subtle and subjective: emotional, often highly personal responses to them, which can be an experience of magnificence, sweetness, sensuality, exuberance, and such, or linked to a particular association or memory. To discover the unique

spirit of a plant, ask what makes this particular plant different from other plants, and what attracts you personally to it.

Sometimes this characteristic or set of qualities may seem obvious, but there's still much to be explored. For example, many people will probably concur that if indeed they like lamb's ears (*Stachys byzantina*), it's because they are attracted to their soft countenance. Knowing this isn't enough to translate into ideal garden placement. What makes this plant seem soft? The hair on its foliage feels soft to the touch. And the shimmer of this hair gives the plant an indistinct outline when light washes over it. Also, the gray color mixes and blends so well with other plants.

These diverse attributes of softness all call for different approaches to placement. To touch lamb's ears, place them along an edge of a planting where people pass by. To create a shimmering halo, orient the plant to either an eastern or western exposure so that the low light of morning or evening can pass over it. To intensify its softening color effect, repeat and thread it throughout a planting so it can join with many companions. But there may be other reasons for liking the plant. In many of the dry, sunny gardens we are asked to design, we choose lamb's ears as a favorite to mingle among others because it has a larger-textured, more settled form than most drought-tolerant plants, especially silver ones, which tend toward fine textures and sometimes scraggly or spindly shapes.

### A PLANT FOR THE SITE, A SITE FOR THE PLANT

Once plants' intrinsic qualities are discovered and the gardenmaker has a mind jammed full of favorites, it becomes natural not only to find the right place for them on a given site but also to follow the opposite process: approach a particular spot on a site and consider which plants would enhance the space. Much of our home garden in northern Colorado—the entire backyard—faces west to a private

This excerpt is from *Plant-Driven Design: Creating Gardens That Honor Plants, Place, and Spirit* by Scott Ogden and Lauren Springer Ogden, scheduled to be published in October 2008 by Timber Press, Portland, Oregon.





**Backlighting effects through the seasons** in the authors' garden in Fort Collins, Colorado. Above: Early spring sun catches *Tulipa vvedenskyi*, *T. sylvestris*, *T. humilis*, *Pulsatilla vulgaris* in seed, and *Phlox bifida* 'Betty Blake'. Right: In the steppe garden in October: *Liatris punctata* (prairie gayfeather), *Gutierrezia sarothrae* (broomweed), *Bouteloua gracilis* (blue grama).

view of the foothills. Early on we noticed that afternoon light transforms the space. In the morning, a walk around the back reveals what the day's chores might include—the strong, flat, clinical light from the east exposes overlooked weeds, sagging transplants, and tattered flower stalks gone over, motivating the day's work. By contrast, our favorite late afternoon strolls following the same route, drink rather than weed bucket in hand, feel entirely different. As the light changes and comes from behind, it illuminates colors and highlights textures, meanwhile casting a shimmering haze that diminishes contrast, unifying the space. Knowing this, we now consciously seek out and add plants to this part of the garden that respond especially favorably to backlighting—those with translucent petals, foliage, or fruits, and with hairy or spiny stems and leaves, fuzzy seeds, fine linearity, and such.

Our home garden in central Texas also affords an area to play with backlighting,



most notably in late fall, winter, and early spring, as the back garden has a southern orientation that basks in the low angle of the sun during those times of the year. The plants we choose for rewarding effects are in many ways different from those we've chosen in Colorado. Not only do individual species vary in response to climate, but what's looking good during those seasons when the sun tracks lower in the sky—glittering broadleaf evergreens, translucent paperwhite narcissi, and glowing aloe blossoms—is distinct from what's full on during high season up north. Also,

what fits with the garden's character—a subtropical, small urban Texan oasis—makes for a palette distinct from that suggested by the wide-open natural model that inspires our Colorado meadow and steppe garden.

## REGIONAL INTERPRETATIONS

Such contrasts in the spirit and character of a place and how they affect plant choices highlight the main limitation on giving specifics about anything to do with gardens: obviously the medium—plants—varies from region to region. More and more, regional information is rising to the forefront to assist in plant selection. However, design information lags sorely behind in this regard. Most people who entitle themselves to giving opinions on designing gardens seem to believe there are universal rules, principles, and ideals that need no translation or revision, no matter what the region. We believe this is wrong and one of the biggest shortfalls of garden design today. Certainly there are universal concepts, but these must be explored regionally before anything close to a rule, principle, or ideal can be discussed.

Once again, plants are key. Observing not only the individual species that make up the core of a region's natural and horticultural identity but also how plants in general in a given locality differ from those in other places in the way they grow and



look invites discovery that enables the gardenmaker to create spaces that acknowledge and celebrate regionality. This immediately grounds a garden, places it in a locally resonant context, and gives it that elusive sense of place.

Take for instance a very specific example, that of large trees. Most gardens, even the smallest, have some need for at least one or two shade trees. Designers and gardeners often spend a lot of time thinking about this selection, and rightly so as a large tree is a big investment, both up front in terms of cost and effort of installation, and also in terms of time as it will be several years before the tree settles in and begins to create the desired effect. Obviously, a good choice marries the conditions on site with the tree's character and cultural needs, and joins the aesthetic prejudices of the person who will live with the tree with what's possible in terms of plant options. Tree palettes and purposes vary from region to region, as is to be expected. But there's surprising overlap, and the same overused, generic choices and placements show up in the most far-flung places.

Beyond overcoming timidity regarding trying the more unusual tree, there's more to expressing regionality with tree selection. Trees mature differently in different climates. What grows straight and tall in temperate and northern regions grows crooked, gnarly, and picturesque or even picaresque in hotter and/or drier climates. It makes all the difference to find a tree that gives the right sense of place, and then plant it where it can grow comfortably and show off its special qualities.

The well-worn design concept of the garden room illustrates another hazard of applying a principle universally. While the European tradition of enclosing an outdoor space has its roots in walled gardens developed during times in human history when safety was a pressing concern, the

same psychology of comfort applies today to creating enclosures. In urban settings, garden rooms function as oases to block noise and unattractive views; in suburbia they afford a chance to create intimacy and privacy for personal expression that is often otherwise lacking.



**Gardens comfortable with their climate and conditions have a grace no overworked design can match. At Mercer Arboretum and Botanic Gardens, in Humble, Texas, palms (*Butiagrus nabonnandii*, *Syagrus romanzoffiana*), gingers (*Costus speciosus* 'Variegatus', *Hedychium* sp.), and bamboos celebrate their subtropical Gulf Coast home with unbridled ebullience.**

Transposing the garden room to any site or region will not always work, however. In much of this continent—the Midwest, Plains states, interior West, and the Southwest—a feeling of expansive openness pervades the natural landscape. More often than not, garden rooms feel

contrived and claustrophobic in these regions, especially for local people who have grown up far from the sheltering, enclosing spirit of a forest. What's more, the distinctive plant choices of these regions offer much less in the way of good-looking, hardy, dependable hedge-making material than more temperate maritime palettes do, and one is often left with only walls and fences as options for enclosure.

The openness intrinsic to the interior of the North American continent is actually defined by plants, or in the case of drier regions, by a lack of them. The ratio of plants to nonplant elements—sky, stone, and soil—is different in the interior, resulting in a peculiar prairie, western, or desert feel. Roughly west of the 98th meridian, where less than 25 inches of rain falls annually, trees recede altogether except near water or at high elevation, and short grasses and low scrub take over. Much of this half of the continent isn't covered by plants at all: bare earth and rock define the strong outlines and forms characteristic of these western landscapes, and paint that starkly scenic world in brown, tan, buff, red, and ochre.

When gardens reflect these differences in plant stature, texture, and density, and in the overall dominance of green, a sense of place emerges. Here again the universality of design ideals comes into question. The vast swaths of greenery composed of lawns, shade trees, and shrub plantings traditionally used to create repose need to be questioned in these regions, not only culturally but also aesthetically. Serenity can be interpreted as panels of tawny grasses interwoven with perennials, or water-thrifty plants more silver and blue than green in color, combined with stone or gravel. Beds and borders usually expected to be filled to the gills with lush, leafy plants can in turn make use of wider

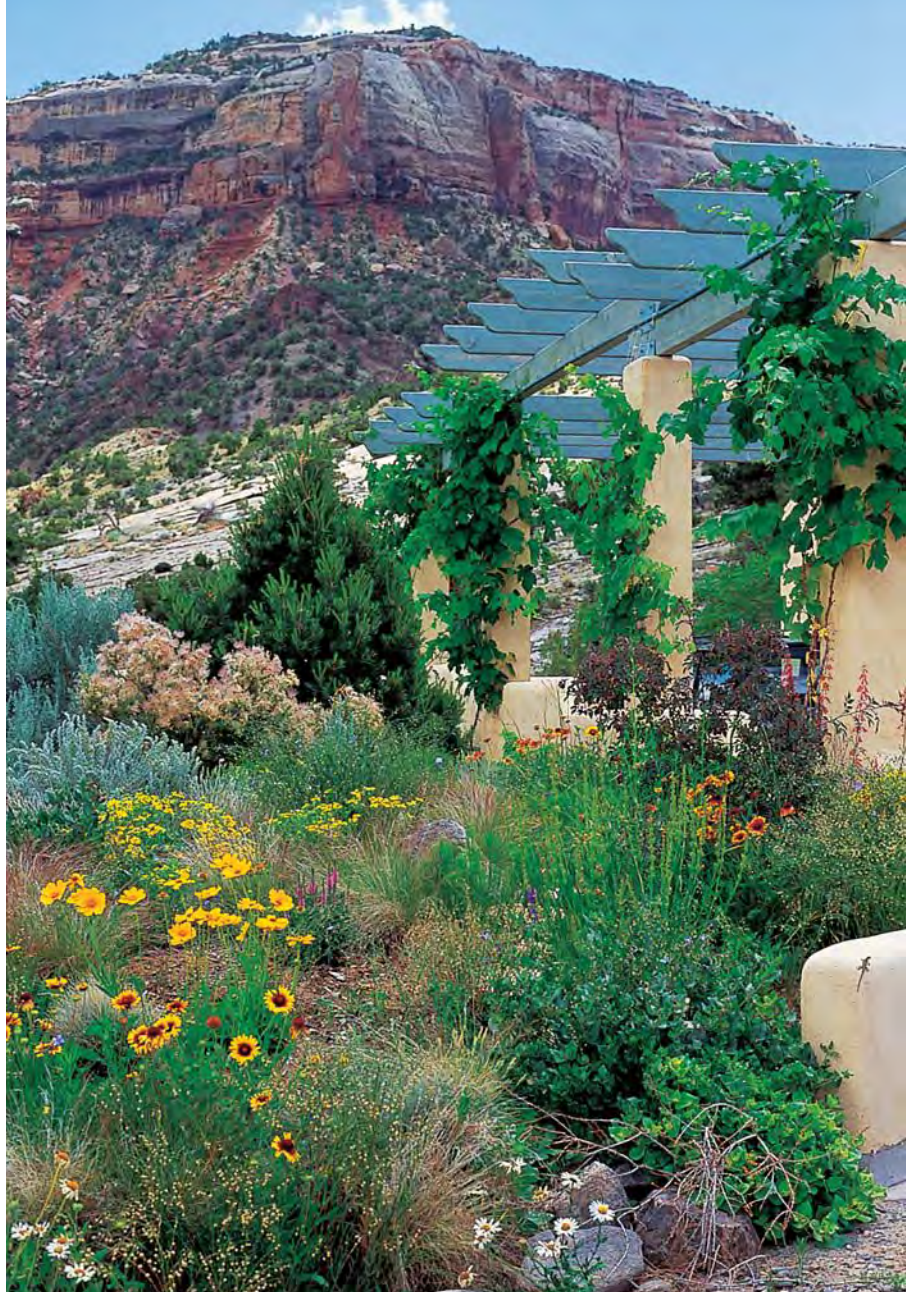


spacing with rocks or grasses or architectural succulent and fiber plants interspersed amid the floral melee, whether in a formal pattern or naturalistically. Here and there gardeners and designers are experimenting along these lines, but the majority still adhere to design tenets created in and for other regions.

Regional design interpretation deserves consideration also in relation to the oft-touted ideal of continuous bloom. It was a breath of fresh air for us to hear a client, unlike most, say that she actually did not want flowers all season, that she longed for the tranquility of greens and tans and textures. Most parts of the world experience times of floral extravagance punctuated by partial quiescence or complete dormancy. In cold regions this follows the calendar seasons; in warm climates it is in rhythm with the rains. Following this in the garden with plants that respond as do those in the surrounding natural landscape would be a much more intelligent design ideal than continual bloom. Not only is it environmentally more feasible—requiring less water, fertilizer, and rotation of plants—but it also gives a sense of connection with the rhythm of nature and provides anticipation and the excitement of special floral events.

The ebb and flow of floral versus textural emphasis makes for a dynamic garden, one that mirrors the surge in popularity of perennials and plants with foliar interest over flowering annuals during the last three decades. People like gardens that look different throughout the year, and they like plants that look good out of bloom. Where we work and garden, flowers are often fleeting and many herbaceous perennials look tawdry for much of the year. As a starting point in our design process, we give overall plant texture priority over floral choices. We see flowers as the much-anticipated and expected dessert that we provide with panache, but not as the main course.


Still, for most people flowers remain the most cherished happenings in the garden. Finding plants that present them at different times of the year, marking floral time, is something most gardeners will continue to try to achieve. Some climates have a season of floral explosion—high-elevation and far northern gardens show this off, where perennials bloom for several months



Western North American natives *Fallugia paradoxa*, *Pinus edulis*, and *Gaillardia aristata* blend into this arid, distinctively western site at the Arlen Bemer garden in Grand Junction, Colorado.

on end in a brilliance of color display matched only by its opposite, the depths of gray, brown, and white that the other side of the year endures. Warm and hot climates have floral sputterings over most of the year, accentuated by rain. Trying to have flowers most of the year while forcing enthusiasm about so-called winter interest in the North, or trying to have a summer-long “flogasm” in the South amount to a futile battle against these climates and an insensitivity to plants adapted to them, but that is exactly what most gardeners in those regions long for and attempt.

It all comes back to plants as the starting point for design. More than any other element in a garden, plants determine the

ultimate outcome and continue to affect and change it over time. If an outdoor space is to be a garden, not merely an extension of an indoor space or a landscape installation, both choosing plants and selecting the best places for them on the site have a more powerful effect than opting for any particular style, color scheme, or artifact. Those latter dimensions should be developed in tandem with plant selection or subordinate to it, not prior to choosing plants as is frequently the case. 

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*Scott Ogden and Lauren Springer Ogden are garden designers, authors, and lecturers. In their spare time, they tend acclaimed gardens in Fort Collins, Colorado, and Austin, Texas.*





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# Holly Shimizu

## *transforming public horticulture*



**H**OLLY HARMAR SHIMIZU has spent 36 of her 53 years totally immersed in the field of horticulture. In that time, she has worked in botanic gardens around the world, written articles and books, spoken to hundreds of garden groups in the United States and abroad, and hosted the television series, “The Victory Garden.” As executive director of the United States Botanic Garden (USBG), she has been involved with the \$33.5 million renovation of the new conservatory and the installation of a three-acre National Garden on the Mall in Washington, D.C.

“Holly Shimizu is providing inspired leadership to the public garden world, and beyond,” says American Horticultural Society President Emeritus Katy Moss Warner. “Through strategic partnerships and thoughtful, timely, and innovative exhibits at the USBG, she is bringing critical messages about pollinators, food, sustainability, and beauty to Americans throughout the country and the world.”

“She is the spokesperson most known by the media and Congress,” says USBG Administrative Officer Betty Spar, “and she is associated with fine gardening not only in Washington but nationally.”

Indeed, her achievements have earned her the American Horticultural Society’s Professional Award earlier this year, given as part of the AHS’s Great American Gar-



deners Awards program. Yet none of this—the awards, the books, the lectures, and the promotion of gardening with enlightened leadership—would have hap-

Once unsure of her direction in life, United States Botanic Garden Executive Director Holly Shimizu is living proof that plants have the power to profoundly change lives.

BY CAROLE OTTESEN

pened if Shimizu had not had the opportunity to work with plants at crucial moments in her young life.

### PLANTS PROVIDE TURNING POINT

As a youth growing up in Philadelphia, Shimizu did not feel any strong ambitions. “In my whole school, I was the least likely to make anything of my life,” she remembers. Restless at her prep school, she switched to an alternative school downtown. It was the kind of place “that attracted diverse students. There were Hare Krishnas in the hall.” But toward the end of high school, Shimizu hadn’t applied to any colleges or, for that matter, formulated any plans whatsoever for the future. As she puts it, she was “truly a lost soul without real direction...and no trust fund!”

That’s when her mother stepped in. Knowing Holly’s affinity for the outdoors from summers spent with her grandfather in Rhode Island “picking sun-warmed raspberries and pears and eating parsley down to the stubs,” Holly’s mother took her to Temple University. There, in the program for applied horticulture, she saw students studying and working with plants and it amazed her. “I couldn’t get over that I could make a living by studying plants,” she says. “It wasn’t one of the topics ever discussed as a career choice and was a relatively new area for women.” She enrolled at Temple

Holly Shimizu, center, is the executive director of the U.S. Botanic Garden, which includes the National Garden, top.





**Above:** As a student at Temple University, Shimizu began to explore the field of horticulture. **Right:** At Hillier Arboretum in England, Shimizu gained hands-on training.

University, Ambler School of Horticulture in 1972.

“At Temple, I wasn’t a good student,” Shimizu says. “My focus was on having fun, friends, and relationships.” Nonetheless, she graduated in 1974 with an Associate of Science degree. Just as before, she approached graduation without any firm plans for the future. At the time, she was working part-time at a nursery transplanting seedlings. Bored with the repetition, she applied to Penn State for a four-year degree program in horticulture.

At Penn State, she finally started “to study and focus.” Then she received an offer that opened her eyes to the opportunities available in the world of horticulture: “My advisor asked me if I would like to be a summer student at Longwood.” She applied and was accepted for the summer of 1975, between her junior and senior years.

“It was heaven, and life changing,” Shimizu says of her experience at Longwood Gardens in Kennett Square, Pennsylvania. There, she came in contact with people who “were really into plants” such as the late Judy Zuk, who became president of Brooklyn Botanic Garden in New York, and Paul Meyer, a founding member of the North American Plant Collections Consortium, who became director of the Morris Arboretum of the University of Pennsylvania in Philadelphia. These role models helped to widen her horizons.

“Meyer had worked in England. That planted a seed,” Shimizu recalls. About his



go to Jamaica and help people grow vegetables,” she got a letter from Sir Harold Hillier from the Hillier Arboretum. “How soon can you get here?” he asked.

### NEW OPPORTUNITIES ABROAD

Immediately after graduation, Shimizu made haste to England. There, thrilled to be working abroad in an outstanding garden, she was euphoric. “I cannot tell you how lucky I felt, even sweeping the walkways or picking up trash.” Her experience at Hillier also helped her to discover that “horticulture was this huge world and the people in it were characters.”

And it was at Hillier that she first met Osamu Shimizu, a young landscape designer from Okayama, Japan. “I didn’t like him and he didn’t like me,” she says of their first impressions of each other. But as their paths kept crossing in Europe, these initial attitudes were to change.

From Hillier, she went on to the Hatt Nursery in Munster, West Germany. Then, she worked at Kalmthout Arboretum in Belgium, noted for its collections of heritage roses and rare plants from around the world. As fate would have it, Osamu Shimizu worked at Kalmthout, too. There, the two revised their first impressions of each other—at lightning speed. In just over three months, they were engaged.

experience at Hillier Arboretum in Hampshire, England, Meyer says, “I was very enthusiastic about my time there because, though the wages were low, opportunities were high for experiencing a new culture, meeting other students from around the world, and working with amazing plant collections.”

In her senior year at Penn State, Shimizu began investigating internships at gardens abroad. She sent out 20 letters without success. Just as she was ready to give up and “sign on to the Peace Corps to



**As curator of the herb garden at the National Arboretum, Shimizu often made guest appearances on “The Victory Garden” television show with its host, Bob Thompson, right.**



Before marrying, the couple toured many of Europe's great gardens and continued to enhance their horticultural skills. Shimizu left Kalmthout for a stint at a nursery in Holland where she learned propagation techniques. She then concluded her European training at Wisley, the renowned garden of the Royal Horticultural Society, where she was involved in the renovation of herbaceous borders and major changes to the rose gardens, as well as the installation of a new herb garden. Wisley, much like Longwood, made a profound impression on her. "Longwood changed my direction. Europe cemented my path." She set her sights on a career in public horticulture.

### BUILDING A PLANT-CENTERED CAREER

Holly Harmar and Osamu Shimizu returned to the United States in 1979 and were married the same year. The newlyweds pursued careers in horticulture—he, by establishing the Shimizu Landscape Corporation; she, by studying for her Masters degree in horticulture at the University of Maryland and by landing her dream job: working with herbs.

As the first curator of the National Herb Garden at the U.S. National Arboretum in Washington, D.C., she enjoyed wonderful creative freedom in assembling the collection. "It fulfilled my desire to learn and teach about plants as well as grow everything herbal I could find," she says.

Also, beginning in 1981, Shimizu became involved with "The Victory Garden" when then-host of the show, Bob Thompson, did a segment on the National Herb Garden. "They would call me occasionally to do segments if they related to herbs," she says. "Then I started as a special correspondent, covering a variety of stories. I traveled to several different countries and went to some amazing gardens."

The Shimizus were as busy in their personal lives as they were in their careers. They acquired a 100-year-old cottage in Glen Echo, Maryland. They became the parents of two children, Bevan and Alexa—in fact, Holly gave birth to their first child days after completing oral exams for her Masters degree in 1984. And they began their garden, which, like their marriage, is a comfortable mixture of East and West. "Plants," she says, "are what brought



**Above:** Shimizu gives a tour of the USBG conservatory. **Top:** Shimizu and Robert Pritchard, gardener supervisor for the USBG's outdoors gardens, discuss details of the AHS Green Garage® installation, part of the "One Planet—Ours" exhibit.

us together. Plants were what we fought about." And, sometimes, they may still disagree over the choice, placement, or care of a plant. (For more details, see "The Shimizus' Home Garden" on page 37.)

With the herb garden complete and thriving after eight years, Shimizu left the arboretum to become public programs of-

ficer of the USBG, then, eventually, assistant executive director.

In 1996, she became managing director at the Lewis Ginter Botanical Garden in Richmond, Virginia.

"At the time, we were actively building gardens," says Lewis Ginter's Executive Director Frank Robinson, "so Holly's extensive horticultural expertise was particularly helpful to us." She also oversaw the garden's educational programs.

In November 2000, Shimizu returned to the USBG as executive director. Under her leadership, the USBG has witnessed monumental changes. From being one of the quietest places on the National Mall, it has morphed into one of the most exciting, horticulturally speaking.

And the excitement is not always planned. A year after her return, a new conservatory was slated to open. The new structure would look like the former grand Art Deco glasshouse that was demolished in 1992, but with state-of-the-art infrastructure. The USBG staff was working at full throttle to meet a November grand opening deadline. Then came the September 11 terrorist attack, followed by the anthrax mailings scare. Alan M. Hantman, the Architect of the Capitol at the time, directed Shimizu to turn the West Gallery of the new conservatory into a command center for FEMA, the Coast Guard, the Centers for Disease Control and Prevention, and the Envi-



ronmental Protection Agency. She and her staff coped, working around the agencies investigating the anthrax incidents. Amid the chaos, they received, installed, and cared for plants, managing to open only a month behind schedule.

The grand opening was December 11, 2001, three months to the day after September 11. That particular date was not a conscious plan, but in those uncertain days after the terrorist attack, a garden



**Holly Shimizu and her husband Osamu share a laugh at their Maryland home.**

opening “represented solace and healing,” says Shimizu.

### SETTING AN EXAMPLE

When the three-acre National Garden that adjoins the conservatory opened on October 1, 2006, USBG attendance soared to unprecedented numbers. Shimizu estimates visitation at “close to a million per year,” but she concedes the figure “includes those that don’t even know they’re there and many who are just looking for a bathroom.”

No matter why they get there, those who wander into the National Garden often leave with a better appreciation for plants and their importance to the earth.

“We try to instruct by example by not using toxic chemicals,” says Shimizu. “We select plants that grow well for us, rather than those that don’t.”

In addition to the plants, extensive exhibits around the conservatory enhance the overall learning experience at the USBG. These exhibits, created through partnerships with other organizations from around the country, also provide a way for the USBG to increase its national scope. “We are always open to celebrating the work of others that promotes the impor-

## THE SHIMIZUS’ HOME GARDEN

In her garden in Maryland, Holly Shimizu is “really interested in plants that attract pollinators.” She makes sure to include both nectar providers and plants that larvae like to feed on. She selects plants so that there is a long season of bloom and plenty of diversity, which are key factors for attracting pollinators. “Learning about pollinators and experiencing the richness they bring to gardens is important to me,” she says. “They are the way I measure the success of my garden.”

And though she still loves herbs, much of her garden is shady, so she grows them with vegetables in her roof garden. Some of her favorites include lemon grass (*Cymbopogon citratus*), lemon verbena (*Aloysia triphylla*), fennel (*Foeniculum vulgare*), basil (*Ocimum* spp.), and lavender (*Lavandula* spp.).

The shady heart of the garden is a sylvan retreat her husband created behind the house. A stream tumbles over boulders, falling first into a small, and then into a larger, deeper pool. Shimizu finds the sound of the waterfalls has a calming effect, something she appreciates when she returns home from a day at her demanding job at the U.S. Botanic Garden.

“I don’t think it is ever complete,” Shimizu says of her garden, “because it keeps changing and problem areas arise where you need to divide plants, or improve soil, and Osamu is always pruning.” She also admits that “whenever I travel I always come home with interesting plants.” —C.O.



**The Shimizus’ backyard garden, designed by Osamu, features a series of waterfalls that flow into a serene pool.**

tance of plants and the environment to us all,” says Shimizu.

The current exhibit, “One Planet—Ours! Sustainability for the 22nd Century,” running until October 13, is geared toward greener living. Among the nearly 40 partnering organizations of the exhibit, the American Horticultural Society is participating with its Green Garage® display showcasing environmentally friendly gardening tools and techniques.

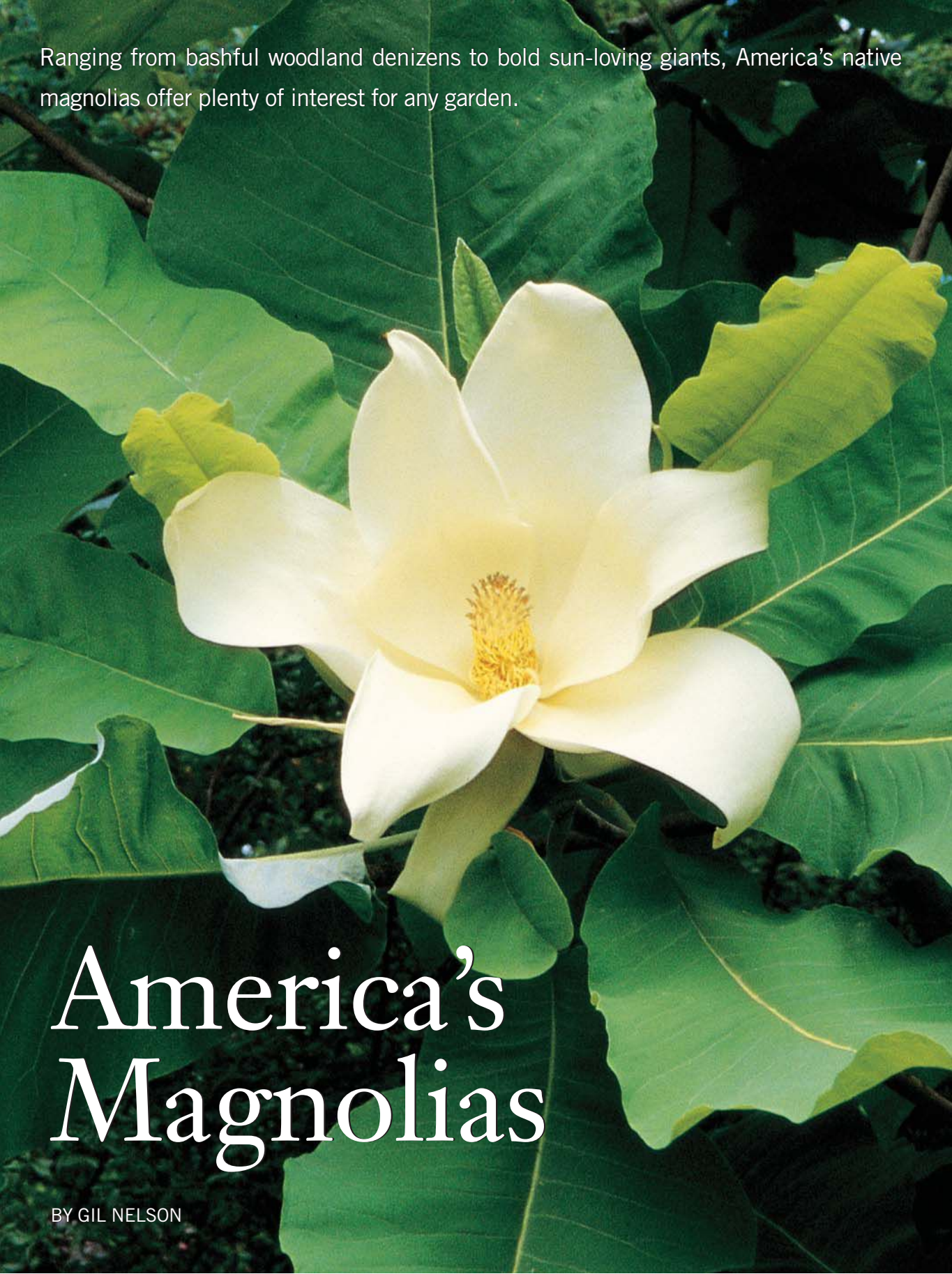
“We have the perfect location to reach a lot of people,” says Shimizu. The trick is to make important topics, such as alternative energy sources and using plants to clean polluted water, compelling so that

visitors enjoy these exhibits but can also draw their own conclusions about how to make environmentally friendly choices. “People want to do the right thing,” she concludes, “but they need guidelines.”

Shimizu sees her mandate as “bringing people and plants together.” If people respond to plants, they will respect the green world, care about it, and, ultimately, want to save it. Her bedrock belief is that plants are good for people. They are beautiful and necessary. And they have the power to change people’s lives—as they did hers. 🌿

*Carole Ottesen is a contributing writer for The American Gardener.*





Ranging from bashful woodland denizens to bold sun-loving giants, America's native magnolias offer plenty of interest for any garden.

# America's Magnolias

BY GIL NELSON

JOSEPH G. STRAUCH, JR.



**M**AGNOLIAS ARE the aristocrats of America's native trees, primordial relicts thousands of millennia in the making and little more advanced today than at the time of their origin, when dinosaurs still rumbled the earth. Based on the fossil record, they date from at least the Cretaceous Period—135 to 100 million years ago—and some experts believe they may be even older than that.

The genus *Magnolia* is one of only two genera in the magnolia family (Magnoliaceae). Two species of tulip poplar (*Liriodendron*)—one in North America, the other in China—round out the family. There are about 220 species of magnolias worldwide—not including the numerous selections, cultivars, and hybrids—nearly all of which have been successfully introduced into horticulture. About two-thirds are indigenous to Asia, ranging from India to China, Korea, and Japan. The remaining species are centered in the West Indies, Mexico, and the Americas.

Nine species are native to North America, one of which is found only in the cloud forests of Mexico. The other eight—two evergreen and six deciduous—range from New York to Florida and west to Texas, placing the eastern United States at the center of North American distribution. But the native species, particularly the evergreen ones, have proven quite adaptable outside their natural range and many adorn gardens from the Midwest to the West Coast and Pacific Northwest.

## EVERGREEN NATIVES

Two evergreen magnolias occur in the eastern United States, both of which are southern in distribution and restricted in nature mostly to the broad coastal plains that stretch away east and south from the Piedmont's rolling hills.

Sweetbay (*M. virginiana*, USDA Hardiness Zones 6–9, AHS Heat Zones 9–6), sometimes called swamp magnolia, is the smaller of the two. Its fragrant flowers are smaller than other native magnolias—usually measuring less than three inches wide when fully open—but they bloom in showy abundance in late spring and early summer. The two-toned leaves are pale

**Opposite: Rare in the wild, bigleaf magnolia is a striking tree with leaves up to three feet long and eight-inch-wide fragrant flowers.**

green above and silvery white beneath, causing well-exposed trees to shimmer between these colors in the slightest breeze.

Sweetbay is quite variable in nature, and two primary varieties have been identified. The northern one (variety *virginiana*) is typically a large multi-stemmed shrub that usually doesn't exceed 20 feet in height. It is slightly harder than its southern cousin, to USDA Zone 4 or 5, but may lose its leaves in winter in cooler zones. The southern form (variety *australis*) can reach heights of 50 feet or more in the garden (nearly 100 feet in the wild) with an open crown and attractive smooth grayish



Sweetbay magnolia, left, is prized for its silvery-green leaves—evergreen in warmer regions—which seem to shimmer in a breeze. It also bears deliciously fragrant early summer flowers, such as this one, above, from the cultivar 'Henry Hicks'.

trunk. It performs best in USDA Zones 7 to 10. Although both varieties are wetland plants in nature, they do not require wet soils in the garden and surprisingly will thrive in dry, sunny locations.

A few cultivars of sweetbay are available. Andrew Bunting, curator of the Scott Arboretum of Swarthmore College, says, "One of our favorites is *M. virginiana* var. *australis* 'Henry Hicks', which is a selection made here at the Scott Arboretum. In our climate it is semi-evergreen. We also grow 'Santa Rosa' which has large glossy, dark green leaves."

Nancy Buley, director of marketing and communications for J. Frank

Schmidt and Son tree nursery in Boring, Oregon, likes 'Jim Wilson', which is sold under the trademark name Moonglow. Named after a well-known garden writer, it has an upright habit, tends to be evergreen, and is hardy to USDA Zone 4 or 5, according to Buley.

The other native evergreen species is southern magnolia (*M. grandiflora*, Zones 7–9, 9–6), which is much larger than the sweetbay, with thick, leathery, dark green foliage. Its attractive form and popularity with gardeners and landscape designers have resulted in the selection of more than 125 cultivars.

Standard southern magnolias tend to get so large at maturity that they can grow out of scale with residential landscapes. This has driven breeders to seek out smaller selections with compact, columnar forms. Three of the more popular are 'Little Gem', 'D. D. Blanchard', and 'Bracken's Brown Beauty'. All have shorter leaves than the species—often less than six inches long—with a covering of attractive rusty or dark brown hairs on the undersides.

'D. D. Blanchard' is one of the most popular tree-sized selections, reaching 50 feet tall and 35 feet wide.

'Little Gem' is perhaps the best compact form, often growing as a large, dense-





Southern magnolias, like the one growing at the American Horticultural Society's headquarters in Virginia, above, make a grand statement in the landscape. Many selections are available, including 'Kay Parris', top right, which bears striking creamy white flowers from late spring to midsummer, and 'D.D. Blanchard', right, which features attractive foliage and a pyramidal shape.



ly foliated shrub, but sometimes forming a small tree. It is typically less than 30 feet tall, about half as wide, and is useful as a specimen or screening plant. 'Little Gem' is excellent for gardens in warmer climates and may suffer during severe winters farther north.

'Bracken's Brown Beauty' (Zones 6–9, 10–4), which usually tops out at 30 to 50 feet tall and 30 feet wide, is hardier than 'Little Gem' and has become popular in gardens as far north as New England. It may suffer leaf burn or even defoliate completely in severe winters, but is among the selections of choice for colder climates.

'Kay Parris' and 'Edith Bogue' (6–9, 9–6) are similar in size to 'Bracken's Brown Beauty' and should also be tried in north-

ern gardens. 'Kay Parris' features a prolonged flowering period, striking blossoms, and glossy green leaves that are nearly orange beneath. It may prove to be hardier than its USDA Zone 7 rating suggests, and its form may be even better than that of 'Little Gem'. A relatively new introduction named Alta® ('TMGH') is reported to grow to 40 or 50 feet with a columnar habit.

Regardless of attempts to breed cold hardiness into this species, *Magnolia grandiflora* is essentially a southern plant.

### DECIDUOUS NATIVES

While the evergreen species are by far the most popular of the native magnolias, the deciduous species should not be over-

looked—especially the big leaf forms. The Ashe, bigleaf, and umbrella magnolias are spectacular in the garden, featuring huge flowers and graceful forms. The flowers of Ashe and big leaf magnolias can be nearly two feet wide when fully open, with creamy white tepals that sport a large purple blotch at the base. The flowers of umbrella magnolia are all white and about half the size of its large-leaved relatives. The leaves of all three are exceptionally large, potentially to more than three feet long in the bigleaf and Ashe magnolias, and up to two feet in umbrella magnolia. The only other widely used deciduous natives include the smaller-leaved cucumber magnolia (*M. acuminata*) and its diminutive variety, yellow cucumber magnolia (*M.*





**Precocious ashe magnolias start blooming when they are only two or three years of age.**

*acuminata* var. *subcordata*).

Ashe magnolia (*M. ashei*, Zones 6–9, 9–6) is, at once, the rarest of the deciduous natives in the wild and one of the most popular with gardeners. Named for W. W. Ashe, an early 20th century botanist who first collected the plant in the Florida panhandle, its natural habitat is restricted to bluffs, ravine slopes, and a few upland

woods between Tallahassee and Pensacola. Yet, it has proven cold hardy in trials to USDA Zone 4 and is comfortably rated hardy to at least USDA Zone 6. In fact, the largest Ashe magnolia on record grows at the Henry Botanic Garden in Gladwyne, Pennsylvania, about 1,000 miles north of its current natural range.

Its popularity with gardeners is due to its manageable size in residential landscapes, coupled with its tendency for flowering at a young age. Garden plants average well under 30 feet in height and width at maturity, and may express themselves as gangly, single-trunked shrubs or small trees. The long, thick, often contorted branches are highly attractive in both winter and summer, and the large leaves add tropical flair to temperate gardens. Ashe magnolias produce their first flowers in as little as two years from seed. Ashe magnolia occurs in nature in the understory of shady woodlands, but it performs very well in sunny openings and is most enjoyed as a specimen tree to showcase its large leaves and oversized flowers.

Ashe magnolia is closely related to

bigleaf magnolia (*M. macrophylla*, Zones 6–9, 9–6); indeed, some experts consider it a variety of its slightly larger-leaved cousin. The two are well separated in natural range, but are very attractive when planted near one another in the garden. Bigleaf becomes much larger—to at least 50 feet tall—and is more tree-like at maturity. However, it takes much longer to reach flowering age. Reports of 10 to 15 years from seed to first flower are common. When grown in sun, it takes on a full form with a wide, attractive crown. Phil Normandy, plant curator at Brookside Gardens in Wheaton, Maryland, is particularly fond of a grouping of three bigleaf magnolias at a satellite garden of Brookside. “Originally these trees



**The bold, dramatic foliage on this bigleaf magnolia, growing at Daniel Stowe Botanical Garden in North Carolina, makes it a standout in the landscape.**

## Sources

**Broken Arrow Nursery**, Hamden, CT. (203) 288-1026. [www.brokenarrownursery.com](http://www.brokenarrownursery.com).

**Greer Gardens**, Eugene, OR. (541) 686-8266. [www.greergardens.com](http://www.greergardens.com).

**Mail Order Natives**, Lee, FL. (850) 973-4688. [www.mailordernatives.com](http://www.mailordernatives.com).

**Nearly Native Nursery**, Fayetteville, GA. (770) 460-6284. [www.nearlynativenursery.com](http://www.nearlynativenursery.com).

**Rare Find Nursery**, Jackson, NJ. (732) 833-0613. [www.rarefindnursery.com](http://www.rarefindnursery.com).

**Woodlanders, Inc.**, Aiken, SC. (803) 648-7522. [www.woodlanders.net](http://www.woodlanders.net).

## Resources

**Magnolias: A Gardener's Guide** by Jim Gardiner, Timber Press, Portland, Oregon, 2000.

**The Magnolia Society International**, [www.magnoliasociety.org](http://www.magnoliasociety.org).

**The World of Magnolias** by Dorothy J. Callaway, Timber Press, Portland, Oregon, 1994.



## FLOWERS, FRUIT, AND POLLINATORS

The magnolias' ancient affinities are most evident in the structure of their flowers and fruit. Unlike many perfect flowers, which feature clear division of sepals, stamens, and pistils, magnolia flowers consist of various parts that are often difficult to tell apart. Numerous stamens and pistils spiral around an erect central axis subtended by a whorl of creamy white petallike structures. In most species the petals and sepals are so similar that experts refer to them as "tepals," a botanical catchall term that serves where precise morphological language fails.

Magnolia flowers are protogynous, which means that the pistil of an individual flower becomes receptive (matures) before that flower's stamens release their pollen. Their primary pollinators are beetles, which apparently co-evolved with the genus in an intriguing pollination mechanism. In bud, magnolia flowers are covered by a fuzzy bract that encircles and protects the developing bloom. The stigmas become receptive just before the flower opens, requiring the beetles to squeeze or chew their way through

the thick fleshy tissue to get to the stigmas and stamens. In smaller-flowered species, the flowers open only partly during the first day, close during the evening, and reopen the second day to shed pollen and drop their stamens. The larger-flowered forms often remain at least partially open throughout pollination.



Southern magnolia's decorative red seeds

Magnolia fruits are often described as cones, which is not technically accurate. True cones, with unprotected ovaries and overlapping scales, are the purview of the conifers. The magnolia fruit, on the other hand, is a follicle—a capsulelike pod that derives from a single ovary and splits at maturity along a single seam. Since each magnolia flower has many ovaries, it produces multiple follicles that are clustered to form attractive conelike structures. At maturity the follicles open to expose showy red seeds that dangle on thin colorful threads reminiscent in function and structure to an umbilical cord. The colorful seed coat—technically an aril—encases and protects the developing embryo. —G.N.

were planted in partial shade, but now they are growing in more or less full sun," says Normandy. At more than 30 feet tall, they offer a very dramatic look."

Umbrella magnolia (*M. tripetala*, Zones 4–9, 9–5) also has large leaves—up to at least 20 inches long and 10 inches wide that taper to a point at the base, unlike the slightly lobed leaf base of bigleaf and Ashe magnolia. The flowers have six to 12 tepals and are about eight inches wide. Most umbrella trees top out at less than 50 feet tall and may form erect, single-trunked trees or very large multi-stemmed shrubs. The common name stems from the spreading leaves, which tend to radiate laterally from the branch tips, creating an umbrellalike canopy. Umbrella magnolia grows naturally from southeastern New York southward to the Florida panhandle (where only a few populations are known), and west to Arkansas. It is adaptable and easy to grow in the garden and flowers best in light shade to full sun in rich, moist soils. It is most at home in a naturalistic woodland garden, but single-trunked forms serve well as specimen trees in more open landscapes.

Mountain magnolia (*M. fraseri*, Zones 4–9, 9–6), an endemic species of mountain

coves and rich woods of the southern Appalachians, has moderately large leaves and elegant, fragrant white flowers. Its native range is from West Virginia into eastern Kentucky and Tennessee, and southward to northern Georgia. Reported to be more demanding to grow than other native de-

ciduous magnolias, it grows best in moist, acid soils and thrives alongside streams. The pyramid magnolia (*M. pyramidata*, Zones 7–9, 9–7), considered by some to be a variety of mountain magnolia, is a coastal plains counterpart ranging mostly east and south of the Piedmont.



The cone-shaped fruits of umbrella magnolia turn pinkish red in autumn.

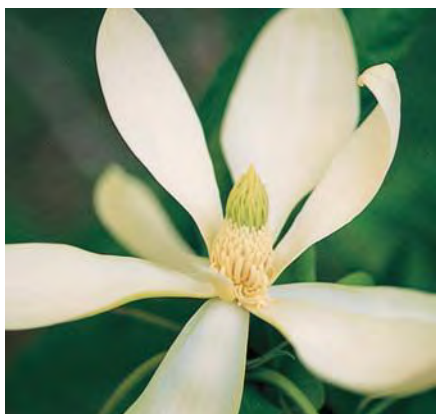




Yellow cucumber magnolia has been used by breeders to develop popular yellow-flowered magnolia hybrids such as ‘Gold Star’, left, and ‘Butterflies’, above.

Yellow flowers on trees are one of the “holy grails” of horticulture, so it’s not surprising that the cucumber magnolia (*M. acuminata*, Zones 4–9, 9–2), with its greenish yellow flowers, has been of particular interest to plant breeders. Named for the shape of its young fruiting “cones,” cucumber magnolia is the hardiest and most widespread of the American magnolias, ranging from a small population in the Florida panhandle north to the Canadian side of Lake Erie. It can grow to more than 100 feet high, making it one of the tallest deciduous native magnolias. Its leaves grow to eight inches long, tapering to a point.

The best yellows are produced by the smaller, less widespread, and less hardy yellow cucumber magnolia (*M. acuminata* subsp. *subcordata*, Zones 7–9, 9–7).



Mountain magnolia, native to the southern Appalachians, blooms in spring.

It fits well into residential landscapes as a small tree or large shrub that usually does not exceed about 30 feet tall. The best specimens have distinctly yellow tepals with flowers that appear in spring before the new leaves expand.

Cucumber magnolia has given rise to numerous cultivars, including the popular *M. × ‘Butterflies’*, a cross between *M. acuminata* and the Chinese *M. denudata* ‘Sawada’s Cream’. ‘Butterflies’ is the best and most widely grown of the yellow-flowered magnolias and extends the hardiness range for yellow-flowered forms northward to USDA Zone 4.

### CARING FOR NATIVE MAGNOLIAS

Most magnolias thrive in slightly acidic, well-drained soil with a pH of 5.5 to 6.5. Evergreen species usually grow best in full sun, while the deciduous species are better suited to part shade, especially in warmer regions.

Early fall is the best time to plant magnolias. Dig a hole about twice the width of the rootball but not much deeper. Gently agitate and spread the roots along the edges of the container ball; magnolias have tender roots but it helps to spread them a little before planting. Leave the top of the root ball about an inch above ground level and fill the remaining void with the rest of the excavated soil.

Magnolias have shallow root systems, so add a layer of mulch around the base of

the tree. They also have thin bark, so avoid mechanical weed trimming or other activities that might injure the bark, providing an entry point for pathogens.

Water newly planted trees regularly until they are well established, but aside from that, little supplemental irrigation should be needed except during droughts. Avoid overwatering because most magnolias are prone to root rot.

Magnolias generally need little pruning other than to remove crossed branches or for other cosmetic purposes. (For information on propagating native magnolias, click on a web special linked to this article on the AHS website at [www.ahs.org](http://www.ahs.org)).

### LONG-LASTING BEAUTY

Regardless of which species you choose, native magnolias add a distinctive charm to gardens through all four seasons and, in most cases, over a long lifespan. The leaves range from lush and tropical-looking on the deciduous species to glossy and two-toned on the evergreen magnolias. Their attractive forms and showy, fragrant flowers are, in my opinion, unsurpassed among America’s native trees. And in late summer and fall the sculptural fruits and bright red seeds add their own decorative touch. ☺

*Gil Nelson is an author, photographer, and botanist based in Georgia. His next book, a guide to native plants for southern gardens, is scheduled for release in 2010.*



## Amy Stewart: Maverick Garden Writer

by Linda McIntyre

**H**OW MANY GARDEN WRITERS can say they've written a critically acclaimed *New York Times* best-seller? Amy Stewart can, but she doesn't see herself as a garden writer. "I'm a writer who gardens," she says. Published last year, her most recent book, *Flower Confidential* (Algonquin Books), delves into the huge, complex, global cut-flower industry and was a hit with readers—gardeners and non-gardeners alike. She is currently finishing a British edition of the book to be released next spring, and there are plans to do a French edition.



"Garden writing is sometimes seen as a step-cousin to home decorating," says Stewart. What sets her garden writing apart from others is the use of a strong narrative style to present a multi-faceted, thoroughly researched look at a garden-related subject. Her first book, *From the Ground Up*, is about her experience creating her first garden in California, where she moved with her husband from their native Texas in 1992 after finishing graduate school. Her second book was *The Earth Moved: On the Remarkable Achievements of Earthworms*.

In addition to writing books, Stewart contributes articles to many publications, travels the lecture circuit, and maintains a blog on her own website, [www.amystewart.com](http://www.amystewart.com). She also blogs on [www.gardenrant.com](http://www.gardenrant.com), where she is one of four gardeners offering opinionated views about all aspects of gardening.

Freelance writer Linda McIntyre spoke with Stewart recently about some of her revelations on the inner workings of the floral industry and about her style of writing that explores gardening's connection to the larger human enterprise, a connection that reveals much about our history and character.

**Linda McIntyre:** You didn't start out as a writer. Tell us about your background.

**Amy Stewart:** I had always wanted to be a writer, but I wasn't sure how I would make a living at it, so instead of studying English, I ended up getting a Masters degree in city planning and working as a grant writer for a housing agency. In my 30s, I started writing part-time; in fact, my first two books were written as side projects to my day job.

**There are a lot of fiction-writing techniques in your books. Were you ever an aspiring novelist?**

It's interesting you notice that. When I read for pleasure, I read fiction exclusively. I think really good nonfiction should have all the elements of good fiction, such as



**Earthworms were the subject of Amy Stewart's compelling second book.**

good characters and plot development. For *Flower Confidential*, I interviewed over 100 people from all parts of the cut-flower industry, and I ended up choosing just a few—the most colorful or memorable

characters—to represent a particular segment of the much larger industry.

Just writing about plants can be dull. My subjects always come down to human interest, even, in the case of *The Earth Moved*, when the topic was worms! Charles Darwin and the scientists who study earthworms are fascinating people.

**How do you decide what to write about?**

I try to write the books that I want to read. I look around for something that interests me, and my agent, publisher, and I bounce ideas off each other to decide what would work for a book. A subject has to interest me enough to devote a few years to it. I spent four years researching, writing, and touring for *Flower Confidential*.



### What led you to write about the cut-flower industry?

The biggest grower of cut flowers in the country, Sun Valley Floral Farm, is near where I live in northern California. It has an open house every year, and one year I went, not knowing anything about the industry. Then I found out that Leslie Woodruff, the eccentric breeder of the 'Star

and I think it's because when people know more about something, they start becoming connoisseurs—they know how to look for the best.

The people in the flower industry, though, aren't in the habit of letting outsiders in to see how things work, so some of them were fearful the book would elicit a negative response. One natural foods gro-

Of the many memorable events, visiting the giant flower auction in Aalsmeer in Holland was the most astonishing. I was so fascinated by how large it was and the fact that about half the world's supply of cut flowers pass through there. It was like the Wall Street for flowers.

### You've been criticized for expressing strong views on the GardenRant blog, like the time you wrote about how fed up you were with people writing and talking virtuously about their eating-local-foods lifestyle. What do you make of these criticisms?

The world of garden writing tends to take itself too seriously. For me, gardening is about going outside and interacting with the plant kingdom. The garden is a place to have fun. We want to be opinionated and irreverent on GardenRant and get away from plant lists and "how-to" articles. We won't please everyone; sometimes we even write about plants we hate!


### What is your own garden like?

I grow more flowering perennials than anything else. I'm a huge salvia fan; I have at least 30 or 40 varieties. I used to grow more vegetables, but I travel so much now that it's too hard to keep up with them. I grow berries and artichokes, and before I got my four pet chickens, I grew lettuce. The chickens are great at scratching out weeds, but they're also good at getting to the seeds of everything I try to plant!

### Are you working on any new projects?

I have a new book coming out next spring called *Wicked Plants*. It will be about "bad" plants—poisonous plants, plants that have been outlawed. There are short sections for each of the plants, with human stories, of course—for example, one of the plants killed Abraham Lincoln's mother.

### Do you ever plan to write a non-gardening book?

Yes, definitely! In the publishing world, there is a tendency to pigeonhole a writer into just doing one type of work. I'm interested in so many things. 

---

*Linda McIntyre is a freelance writer living in Washington, D.C. Managing Editor and Art Director Mary Yee assisted with this article.*

**"For the first time, I would see flowers as the factory-produced merchandise they have become. This is business, big business. I could pretend that the flowers I buy to cheer myself up or congratulate a friend on her new baby are somehow unique, fragile, and connected to nature and gardens and plant life, but here there is no denying that each blossom is a unit of profit. What I do with it, what meanings I impose upon it, is my own business. But while it's in the greenhouse, it's a product, pure and simple."**

—from *Flower Confidential*



In this Dutch factory assembly line, flowers are being dyed different colors before going to market.

Gazer' lily, had lived here, too. Learning the story of how that flower came to be one of the most popular cut flowers was like reading a mystery novel. The records were right here at my county courthouse, and the story had never been told.

When I started, I was also thinking about the globalization of the industry; the flowers we buy can come from California, Ecuador, Kenya, and China. We think about buying local a lot these days when it comes to food, but not with the flowers we buy.

### What kind of response has *Flower Confidential* gotten from readers?

My readers—people who garden, plant lovers, and lovers of literature—have told me, "I buy more flowers now than ever,"

cery chain that also sells flowers, for example, turned me down flat when I called for an interview. There are sections of the book—such as when I write about how post-harvest roses are routinely dipped in fungicide—that upset people in the industry, but I tried to be even-handed in how I presented all the information.

### What was the most surprising thing you learned while researching *Flower Confidential*, and is there a most-memorable moment during all your travels for the book?

The most surprising thing was how durable cut flowers are. We think of them as delicate, but they're pretty tough—they travel all over the world, going without water for long stretches of time.



## Horticultural News and Research Important to American Gardeners

### FROST TOLERANCE IN A BOTTLE

As fall turns into winter, gardeners in colder regions begin the guessing game of when the first frost will occur. But what if there was a way to stave off that icy death blow and extend the season a few days or weeks longer? Now there just might be, thanks to a new spray-on formula called “Freeze-Pruf” developed by a group of researchers at Miami University in Ohio.

The water-based spray, a non-toxic mixture of five ingredients, enhances a



When exposed to temperatures between 26 and 27 degrees Fahrenheit, the treated banana plant on the left suffered minimal damage. The control plant on the right was killed after 30 minutes.

plant’s natural ability to survive cold temperatures. The researchers tested the product on a wide variety of plants such as palms, bananas, tropical foliage and flowering plants, tomatoes, and citrus. According to David Francko, one of the spray’s co-developers who is now a botany professor at the University of Alabama, they found a four to nine degree Fahrenheit improvement in “both the first temperature causing injury and the temperature causing mortality. Citrus was the only exception—there the benefits are only two to three degrees, but even that is significant for citrus growers at the margins of the range.”

Currently in the patent process, the product may be available by next winter for commercial and home garden use.

### PLANTS CAN RECOGNIZE KIN

Scientists have recently discovered that some plants can recognize their siblings, a behavior that was previously believed to only occur in the animal kingdom. As reported last year in the United Kingdom’s journal *Biology Letters*, researchers at McMaster University in Hamilton, Ontario, noted that root growth of searocket (*Cakile edentula*), an unassuming, fleshy-leaved plant that grows in beach habitats in many of North America’s coastal regions, differed when siblings were present as opposed to non-related plants. If strangers—other searockets with a different mother plant but from the same population—were detected, the plants produced a greater amount of root mass to compete aggressively for nutrients. However, when grown with siblings, root growth was more restrained.

How plants are able to recognize kin is not yet well understood, but further studies have revealed similar interactions in native wild *Impatiens*, common lambsquarters (*Chenopodium album*), and *Arabidopsis*, according to Susan A. Dudley, an evolutionary plant ecologist who conducted the studies with graduate student Amanda L. File. “These are all species with very local dispersal, and often found in single species stands,” Dudley explains, “so they are likely to interact with relatives.”



Studies show lambsquarters can recognize kin.

### NEW TECOMA CULTIVARS

Horticulturists with the USDA’s Agricultural Research Service in Florida have developed three new cultivars of *Tecoma guarume*, a semi-deciduous subtropical to tropical flowering shrub related to trumpet creeper. ‘Miami Sunrise,’ ‘Miami Sunset,’ and ‘Tangelo’ are reportedly hardy in USDA Zones 9 to 11, and possibly root hardy to Zone 8. These fast-growing plants, reaching about 10 feet in height, require full sun and well-drained soil.



*Tecoma guarume* ‘Tangelo’ is one of three new cultivars developed by USDA scientists.

‘Miami Sunrise’ features orange flowers that fade to yellow while ‘Miami Sunset’ has crimson-colored buds that open red to orange-red and fade to reddish-orange. ‘Tangelo’ produces orange flowers.

Currently produced in small numbers for evaluation purposes, these cultivars are expected to be released for retail sale in the next couple of years.

### NEW PLANT COLLECTIONS ONLINE DATABASE

In June, the Chicago Botanic Garden, in conjunction with 29 partnering organizations, launched *PlantCollections.org*, an online database of living plant collections at international botanic gardens and arboreta. Free and accessible by anyone, the database can be searched by selecting fields such as scientific name, common



name, genus, and family, then inputting keywords to find plants of interest, complete with images.

“The data for the project,” says Boyce Tankersley, PlantCollection’s project director and director of living plant documentation at the Chicago Botanic Garden, “come from leading botanic garden and arboretum plant record databases, herbaria, seed repositories, DNA banks, and image repositories from around the world.”

Still under development, the database will eventually provide access to the plant records of more than 50,000 taxa. In addition to being useful to gardeners, students, and educators, this new resource is designed to provide a tool for scientists to better understand the global genetic diversity of plants and to assist with plant conservation efforts.

Future developments will allow users to download data to a spreadsheet, locate experts on particular plant groups or techniques, create maps showing botanic gardens and arboreta that grow various species and cultivars, and locate commercial sources for plants.

## INDOOR GARDENS AT DUKE FARMS CLOSE

After being open to the public for nearly 50 years, the elaborate indoor gardens encased in one of America’s largest glass houses and created by the late tobacco



**The recently closed indoor gardens at Duke Farms are contained in one of America’s largest glass houses, above.**

heiress Doris Duke closed in June. Located on the 2,740-acre estate in Somerset County, New Jersey, known as Duke Farms, the gardens comprise 11 unique “rooms” that represent garden styles from England, France, Italy, China, Japan, and the Indo-Persia region.

The board of the Doris Duke Charitable Trust, which now manages the estate,

## Herbicide Overuse Poses Risk of Resistant Weeds

Growing crops, managing roadsides, and even creating backyard gardens have all been made easier with the use of synthetic herbicides. However, the overuse of one particular chemical is causing the development of resistant weeds, cautions the Weed Science Society of America (WSSA). In a recent report, the organization stated that glyphosate’s “widespread, repeated, and often sole use for weed management has selected weeds that have become glyphosate resistant and are thus not controlled by this herbicide.”

Glyphosate is the active ingredient in broad-spectrum herbicides such as Roundup® and Touchdown®. Since its introduction in 1974 by Monsanto, it “is used



**Overuse of glyphosate-based herbicides can result in resistant weeds.**

on more area of field crops and horticultural crops than any other active ingredient and has been very important in agricultural production,” says Stefan Seiter, an agricultural ecologist with the Linn-Benton Community College in Albany, Oregon. According to the Environmental Protection Agency, in recent years, between 13 and 20 million acres in the United States have been treated with 18.7 million pounds of glyphosate annually.

Indeed, weeds like Palmer amaranth (*Amaranthus palmeri*) and giant ragweed (*Ambrosia trifida*) have developed glyphosate resistance, according to Chris Boerboom, a University of Wisconsin Extension weed scientist and WSSA member. “Over the past several years, we have seen the list of glyphosate-resistant weeds grow to nine species, which are scattered across at least 20 states,” Boerner says.

While the presence of glyphosate-resistant weeds may not yet be a major issue for home gardeners, it is becoming a concern at botanic gardens. Scott Starr, operations director of the Botanical Garden of the Ozarks in Fayetteville, Arkansas, says that although glyphosate use is minimal at the garden, it has become necessary to apply increasingly stronger doses of the herbicide to control certain weeds.

To slow the prevalence of resistant weeds, the WSSA advises rotating between herbicides with different active ingredients and using non-chemical controls such as tilling and mowing. However, these alternatives may create other issues. “Many times, a number of changes are needed in how plants are grown if a grower switches from chemical to non-chemical control,” Seiter notes. If growers switch to herbicides with different active ingredients, “often these active ingredients are more damaging for the environment,” he says.

“Kochia and Russian thistle are resistant to many other herbicides as well,” says Paul Walvatne, roadside vegetation management unit supervisor for the Minnesota Department of Transportation. Economic factors can also affect weed management practices. “Our spraying acreage has gone up over the years due to less mowing because of energy costs and wildlife concerns,” says Walvatne. “But one spraying typically lasts much longer than one mowing because the perennial weeds and brush sprout back from mowing with a vengeance.”

Another concern is that “nothing will be done until the problems develop more widely,” says Micheal Owen, professor of Agronomy at Iowa State University in Ames. He cautions that, because weed seeds can remain dormant for long periods of time, a weed’s resistance may not be immediately recognized. While Owen acknowledges there may be no easy solution to the problem of herbicide-resistant weeds, he says, “anything that diversifies the system [of management practices]” will help.

For more information, visit [www.wssa.net](http://www.wssa.net).

—Kirsten Winters, Editorial Intern



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## PEOPLE and PLACES in the NEWS

### Brooklyn Botanic Garden's Elizabeth Scholtz Honored for Lifetime Achievements

Elizabeth Scholtz, director emeritus of Brooklyn Botanic Garden (BBG) in New York, received an Honorary Life Member Award from the American Public Gardens Association (APGA) in June. Awarded to only 15 recipients in the 68-year history



Elizabeth Scholtz, shown here with APGA Executive Director Dan Stark, center, and BBG President Scot Medbury, left, was honored in June for her lifetime commitment to public horticulture.

of the APGA, this honor recognizes those who have given long term meritorious service to the organization and have demonstrated exceptional dedication to the field of public horticulture.

"During a botanic garden career that has spanned nearly 50 years, Elizabeth Scholtz has been a peerless ambassador and advocate for gardens and garden education throughout the world," says Scot Medbury, president of BBG. "The world of public gardens has benefitted greatly from her role as mentor to several generations of North American public garden professionals."

Joining the BBG staff in 1960, Scholtz served as the garden's director from 1972 to 1980. She sat on the APGA board in the late 1970s and also has served on the committees for several botanic gardens.

Other accolades she has earned include the Scott Medal from the Scott Arboretum at Swarthmore in 1981 and the Liberty Hyde Bailey Award from the American Horticultural Society in 1984.

made the decision to close the indoor gardens as part of "a bold new vision" for Duke Farms to "become an environmental showcase and learning center." This move has not been popular with some of the gardens' longtime visitors and supporters, who argue that these gardens should be able to co-exist with the new plans. Supporters have presented petitions with thousands of names and encouraged letter-writing campaigns and other actions through the website [www.savedukegardens.org](http://www.savedukegardens.org), but this has not swayed the course chosen by the trust's board.

Plans include the renovation of a smaller conservatory on the property to achieve "gold" level certification from the Leadership in Energy and Environmental Design Green Building Rating System. This building will be used for a new indoor garden, which will incorporate some of the plants from the gardens Duke designed. The rest of the collection will be donated to other conservatories and gardens. The original conservatory and its five attached greenhouses, constructed in the early 1900s, will be converted into a production fa-

cility for native plants for the grounds.

For more information, visit [www.dukefarms.org](http://www.dukefarms.org) or call (908) 722-3700.

### SEQUENCING THE CACAO GENOME

Chocolate lovers can rest easy now that the U.S. Department of Agriculture (USDA) has begun a five-year project to sequence the genome of the cacao tree (*Theobroma cacao*), the source of cocoa. The resulting genetic data will allow scientists to target the plant's genes that provide better disease-resistance, yield, flavor, and other desirable traits.

Though almost no cacao is grown in the United States, the USDA has an interest in this research because many domestically produced crops such as nuts and raisins are used in chocolate products. Mars, Inc., the world's largest producer of chocolate-based candy, will fund the project with more than \$10 million, and IBM is contributing a supercomputer to analyze the more than 400 million parts of the genome.

Written by Associate Editor Viveka Neveln and Editorial Intern Kirsten Winters.

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## Backyard Bird Feeders

by Rita Pelczar

**B**IRD WATCHING and gardening go hand in hand. You can encourage a variety of birds to visit your yard by growing plants with seeds or fruit that birds favor and that provide cover and nesting sites. But when your plants are not serving up sufficient fodder—or if you want to boost the quantity and quality of your offerings—well-stocked bird feeders will fill the bill.



**Left:** This feeder features a roof designed to keep squirrels from getting the seeds. **Above:** Hummingbird feeders hold nectar.

Feeding backyard birds can provide a lot of entertainment since it allows you to get an up-close look at the fascinating antics of avian wildlife. If you really get hooked on watching your winged visitors, you may want to participate in Cornell Ornithology Lab's Project FeederWatch, a program that tracks the birds that visit feeders during winter (see "Resources," page 52).

To make the most of your bird feeding efforts, you will want to get a good sturdy feeder, locate it in a safe (for the birds) and handy (for you) location, and keep it well stocked with the right kinds of seed and other food.

### TYPES OF FEEDERS

Different types of feeders favor different birds. The **platform feeder**—simply a flat tray for holding birdseed—is suitable for

most seed-eating birds. Be sure the tray is equipped with drainage holes so that the seed doesn't soak in water and get moldy. Similarly, a **hopper feeder** features a tray but adds a box for the seed, which is dispensed as the seed in the tray is consumed. Hopper feeders generally can hold more seed, which means less frequent refilling, and they better protect the seed from wind and rain.

**Tube feeders** come in many sizes; they consist of a central tube that holds the seed and holes through which birds access it. The seed in the tube is usually well protected from moisture. Tube feeders may include perches. Short perches allow small birds such as finches to feed but will discourage larger birds such as jays and grackles. Some tube feeders are designed for tiny nyjer seed, a favorite of finches. Nyjer feeders have

smaller openings and often include perches above the opening.

**Hummingbird feeders** are designed to dispense nectar (a sugar-water solution) through small tubes or openings. The nectar is contained in a reservoir, either an inverted bottle style or a basin style. Hummingbird nectar can be purchased as a mix, but it's easy to make yourself. Simply boil water and stir in white sugar until it dissolves, using a ratio of four parts water to one part sugar. Allow the solution to cool before offering it to your birds. You can store extra nectar in the refrigerator for a week if need be. Since hummingbird feeders need to be cleaned regularly—every time you replace the nectar, or every three to five days—ease of disassembly and cleaning are important features to consider when selecting one.

**Suet feeders** are suspended wire mesh cages, bags, or ornamental metal supports that hold suet in place so birds can nibble on it. Most suet, a high-fat food mixture that is a good choice for insect-eaters such as nuthatches and woodpeckers, is made out of beef kidney fat, which is often available (and inexpensive) from your grocer's meat department. You can purchase processed suet cakes or balls that are ready to pop into your feeder or you can make your own (see recipe for Vegetable Shortening "Suet" Cakes, page 51).

Regardless of which type feeders you use, be sure to keep them clean. Bacteria and mold can develop, especially in damp weather, and diseases can be spread in bird droppings. Cornell's Project FeederWatch advises that you wash your feeders approximately every two weeks in mild,





A wire wreath for holding suet balls also serves as an outdoor decoration.

soapy water, then rinse them in a 10 percent bleach solution (one part bleach to nine parts water). Allow feeders to dry thoroughly before refilling them.

### CHOOSING THE RIGHT SEEDS

While there are lots of different kinds of bird seed on the market, Project Feeder-Watch has determined that black-oil sunflower seed is the best all-around seed for attracting a wide range of birds to feeders. It has lots of meat for its size, is high in fat, and the shell is thin so even small birds are able to crack it. Finches, chickadees,



Sunflower seeds attract a variety of birds.

titmice, cardinals, and sparrows are particularly fond of it.

Safflower looks like a white sunflower seed. It will attract many of the same birds as black-oil sunflower seeds, although given a choice, they'll usually go for the sunflower seeds first. Nyjer (sometimes called thistle, although it is not related to North American thistle) is favored by finches, so is a good choice if you want finches exclusively at a particular feeder.

### Vegetable Shortening "Suet" Cakes

This is a great project to do with kids, and birds love it as a winter treat! I have square wire suet cages to hang the cakes, so I use square, half-pint plastic containers for the molds, filled to about one inch. They fit just right.

- 1 cup solid vegetable shortening
- 1 cup peanut butter
- 2 1/2 cups yellow corn meal
- 1 1/2 cups whole wheat flour
- 1 cup cracked corn

Melt shortening, then remove from heat. Add peanut butter and blend well. Mix in the remaining ingredients. Spoon into plastic tubs or molds and chill. When firm, remove molds and hang the cakes outside immediately, or place in individual plastic bags to freeze for later. —R.P.

Ground-foraging birds such as juncos favor millet, a small round grain. Sprinkling millet beneath your feeders will add another dimension of feeding activity.

Whole corn is an inexpensive feed that wild turkeys and ducks enjoy, while cracked corn is a favorite of doves, quail, jays, and sparrows (for more about seed favored by birds, see "Seed and Food Preferences of Common Feeder Birds," page 52).

Be sure to store bird seed in a cool, dry place to prevent mold. Do not use seed if it becomes moldy.

### SITING YOUR FEEDERS

Placement of feeders is an important consideration. To be able to watch your birds as they feed, put the feeders where you are likely to enjoy them—a porch, deck, or in front of a window in the kitchen or family room, for example.

Locate your feeder in a somewhat sheltered spot near some natural cover, ideally some evergreen trees and shrubs, which provide your avian visitors a spot to wait their turn as well as some protection from predators and harsh weather. On the other hand, siting your feeder too close to trees and shrubs provides hiding places for hungry cats and competitive squirrels. A distance of about 10 feet from natural cover is generally considered a good compromise.

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11 XMAS TREES	17 HYDROSEEDING	22 FLOWERING PLANT COMPETITIONS
12 REFORESTATION	18 LANDSCAPING	23 INTERIORS CAPING
13 HYDROPONICS	19 PROPAGATION	24 CUT FLOWERS
14 FIELD CROPS	20 ANTI-EROSION	25 WEATHER DAMAGE
15 BONSAI	21 ENVIRONMENTAL IMPROVEMENT	26 WATER GARDENS

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## SEED AND FOOD PREFERENCES OF COMMON FEEDER BIRDS

	Chickadees	Nuthatches	Finches	Cardinals & Grosbeaks	Sparrows & Blackbirds	Jays	Woodpeckers	Titmice	Pigeons & Doves
Sunflower	X	X	X	X	X	X	X	X	
Safflower		X	X	X				X	
Corn					X	X			X
Millet					X				X
Milo						X			X
Nyjer (Thistle)			X						
Suet	X	X				X	X	X	

Chart adapted from Project FeederWatch of Cornell Lab of Ornithology ([www.feederwatch.org](http://www.feederwatch.org)), used with permission.

Many birds—perhaps millions each year—are killed when they mistake the reflection of a window as a pathway to another area of your yard. To prevent birds from flying into windows, keep feeders either within three feet of the window—so

they aren't likely to gain enough momentum to injure themselves—or more than 30 feet away from the window—where the reflection will be less inviting.

### BIRDS GET THIRSTY, TOO

In addition to feeders, be sure to supply birds with clean water throughout the year. Birdbaths can add ornamental interest to the garden as well as supply the water needs of your birds, but simple shallow bowls of water placed near feeders work well, too. Change the water and clean the bowls frequently, and if you live in an area with cold winters, consider a birdbath heater to prevent ice from forming.

### OUTFOXING SQUIRRELS

One of the most common bird feeding problems is squirrels that scare away birds, eat all the seeds, and destroy the feeders. Squirrels have demonstrated amazing skill at scaling poles, leaping from nearby structures, and suspending themselves from all sorts of wires or chains used to support bird feeders in their attempt to devour the contents. There are strategies that can help prevent or at least minimize squirrels' ravaging your feeders.

Baffles are fairly effective—at least until the squirrels figure out another way to the feeder. These dome-shaped or cylindrical devices suspended above hanging feeders or attached below feeders mounted on poles create a physical barrier for the squirrels.

Some tube feeders include a cage surrounding the tube that allows small birds to enter the feeding area while keeping squirrels outside of it. Be sure the cage has sufficiently small openings, otherwise squirrels will find their way inside.

Other bird feeders are weight activated: feeding ports remain open for lightweight birds, but close in response to the heft of a squirrel on the feeding platform. And some feeders employ a mild electric shock or can be mounted on a device that



This feeder is enclosed in a wire cage to prevent squirrels from getting to the seeds.

spins the whole feeder until the squirrel is dislodged.

A different strategy is to feed squirrels their own repast in a separate part of the yard. Squirrel feeders are usually built to hold peanuts or dried ears of corn—some of their favorite foods.

So as winter approaches and seeds and berries become more scarce, welcome bird life into your backyard with a well-stocked bird feeder, then sit back and enjoy the show.

*Rita Pelczar is a contributing editor for The American Gardener.*

## Resources

**Birds at Your Feeder** by Erica H. Dunn and Diane L. Tessaglia-Hymes. W.W. Norton Co., New York, 2001.

**The FeederWatcher's Guide to Bird Feeding** by Margaret Barker and Jack Griggs. Harper-Collins, New York, 2000.

**The Audubon Backyard Birdwatcher: Birdfeeders and Bird Gardens** by Robert Burton and Stephen Kress. Thunder Bay Press, Berkeley, California, 2002.

**Project FeederWatch, Cornell Ornithology Lab**, [www.birds.cornell.edu/pfw/](http://www.birds.cornell.edu/pfw/).

## Sources

**Backyard Bird Company**, [www.backyardbird.com](http://www.backyardbird.com).

**Droll Yankees**, [www.drolleyankees.com](http://www.drolleyankees.com).

**Duncraft**, [www.duncraft.com](http://www.duncraft.com).

**Gardener's Supply**, [www.gardeners.com](http://www.gardeners.com).

**Outdoor Birdfeeders, Inc.**, [www.outdoorbirdfeeders.com](http://www.outdoorbirdfeeders.com).

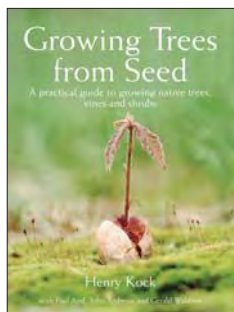


## Recommendations for Your Gardening Library

### Growing Trees from Seed

Henry Kock, et al. Firefly Books, Richmond Hill, Ontario, 2008. 280 pages. Publisher's price, hardcover: \$45.

I HAVE BEEN growing trees from seed since 1952, the year Canadian author Henry Kock was born. I wish this book had been available to me when I began, so that I could have avoided making all my own mistakes!



*Growing Trees from Seed* is organized into introductory material about trees and their place in the forest, how to find and collect their seeds, and how to germinate and grow them, followed by an entire chapter devoted to the conservation of our natural world. The body of the book profiles more than 200 species

of trees and other woody plants, giving ecological observations and details about seed collection and propagation.

Throughout the book, Kock shows an acute awareness of the virtues of native trees and an equally strong grasp of the potential problems associated with some exotics. That said, he still describes how to grow a variety of exotics, offering caveats where appropriate. He manages to convey a sense of which ones should be passed over because they have invasive tendencies and which ones should be attempted even if their cultural requirements are challenging.

The pages' wide margins are annotated, as an author might do while organizing his thoughts, with sketches and notes pertaining to the text. Some of this material is artistic, some is insightful, and a few pieces are cautionary and interestingly contradictory. For example, "The nine lives of a woody plant" is, in truth, a thought-provoking list of nine ways humans inadvertently kill plants.

The front matter (preface, introduction, etc.) of a book is often a window into the mind of its author. In this case, I came away with the impression that Kock was a true naturalist. *Growing Trees From Seed* is not merely a how-to reference; for that, see the substantial appendices. It gives the reader a context, philosophy, and background that I have not often seen elsewhere. Sadly, Kock died before completing this manuscript. Fortunately for us, his friends, also knowledgeable and passionate tree folks, took the initiative to finish his book so that we can all benefit from his knowledge and insightful views about trees.

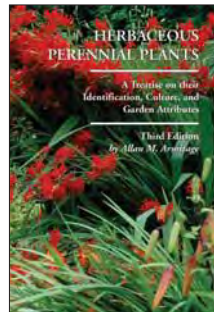
—Guy Sternberg

*Guy Sternberg is the founder of Starhill Forest Arboretum in Petersburg, Illinois. He is also the award-winning author and photographer of Native Trees for North American Landscapes and Landscaping with Native Trees.*

### Herbaceous Perennial Plants

Allan M. Armitage. Stipes Publishing, Champaign, Illinois, 2008. 1224 pages. Publisher's price, softcover: \$68.80.

ELEVEN YEARS after the previous edition, the much anticipated third edition of Allan Armitage's guide to herbaceous perennials is here at last. Updated and upsized, this new edition includes more than 1,000 pages of nomenclature, descriptions, culture, philosophy, opinions, new plants, line drawings, and illuminating stories.



Despite its dry title and drier subtitle, "A Treatise on their Identification, Culture and Garden Attributes," this is no austere textbook. It celebrates gardening's gifts of "therapy, creativity, and excitement." If you've heard the author speak, you'll recognize the passion and wit that make him one of the most sought-after speakers on the horticultural lecture circuit.

Armitage's most inspirational message is "try it!" Grudgingly calling U.S. Department of Agriculture hardiness zone ratings "the best we have...to evaluate limits," he gleefully notes, "plants don't read," so gardeners *should* try plants that shouldn't work.

A native Canadian transplanted to Georgia, where he is a horticulture professor, Armitage grasps the obvious differences and surprising similarities among various climate zones. The Athens Select plant evaluation program that he oversees at the University of Georgia gives him perspective on the horticulture industry's mercenary realities. Straddling disparate worlds, he is well placed to offer refreshing insights about the connections between academia, the nursery industry, and gardeners.

About the only things I could fault are the line drawings in the book. With nothing distracting the eye, good botanical art should communicate plant characteristics better than photographs. In my opinion, these don't. Also, quality seems hit and miss. For example, *Heuchera* and *Paeonia* are splendidly rendered while others, such as *Lysimachia*, are blotchy.

As compensation, the photographs, clustered in a discrete section, are excellent. They'd be even better larger, but then this reference might become dangerously close to coffee-table size. That wouldn't work for this book, which is designed to be used regularly—in classrooms, potting sheds, and Master Gardener offices throughout America—until it is dog-eared and tattered.

—John Friel

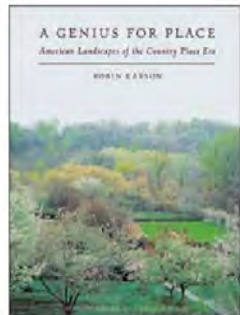
*John Friel is technical marketing manager for Yoder Perennials in Lancaster, Pennsylvania, and a board member of the Perennial Plant Association, based in Columbus, Ohio.*



## A Genius for Place

Robin Karson, with photographs by Carol Betsch. University of Massachusetts Press, Amherst, Massachusetts, 2007. 428 pages. Publisher's price, hardcover: \$65.

YET AGAIN Robin Karson has hit the ball out of the park. This is, after all, the American landscape historian who has received much critical acclaim for her previous books. Her latest opus is an edge-of-the-seat discourse on seven sublime American gardens, their extraordinary owners, and their exceptional designers.



*A Genius for Place* covers a period that begins in the late 19th century and ends as World War II threatens—a time of unprecedented expansion of wealth and seismic sociological changes. This coffee-table sized book explores a wide

range of design challenges and solutions, along with mesmerizing portraits of the patrons who paid handsomely for, and worked so closely with, the artists. As a result, Karson restores the luster of a romantic landscape style which, by the latter part of the 20th century, had fallen into disrepute as sleeker designs triumphed and the idea of “Nature as Guide” faded.

The book opens with an overview of the approach of such 19th-century giants as Frederick Law Olmsted and its influence on landscape gardeners of the day (the term landscape archi-

tect had yet to come into being). This is followed by three sections detailing the creation of seven estate gardens, spanning from Massachusetts to California. The chapters within each section provide fascinating details about both the garden owners and the designers.

The gardens include Gwinn and Stan Hywet Hall in Ohio, Dumbarton Oaks in Washington, D.C., Delaware's Winterthur, the Edsel Ford Grosse Pointe Shores estate in Michigan, Val Verde in California, and Naumkeag in Massachusetts. Their eight designers include five men—Warren H. Manning, Charles A. Platt, Jens Jensen, Lockwood de Forest Jr., and Fletcher Steele—and three women—Ellen Shipman, Beatrix Farrand, and Marian Cruger Coffin. The rising influence of women as landscape professionals is a fascinating subtext indeed.

The book is generously illustrated with historic photographs. These are complemented by the superb modern black and white pictures of Carol Betsch, which exquisitely capture the spirit of each site.

Too often, Americans prefer to focus on gardens on the other side of the pond, from England to Japan. In this book, as in her previous works, Karson redirects us towards our own homegrown antecedents. And we are that much richer for it.

—Linda Yang

*A former garden columnist for The New York Times, Linda Yang is the author of four books, including The City Gardener's Handbook (Storey Publishing, 2002).*

PHOTO BY ANNE C. ALLEN FROM 2008 GARDENER'S CALENDAR



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## Gardening for the Greater Good

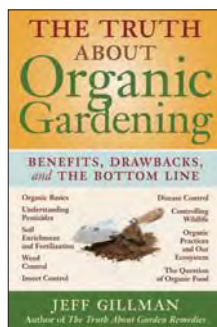
THE CURRENT movement toward more ecologically sound practices has created greater awareness about the effect our everyday actions have on the environment. Arguments over what it means to be sustainable, organic, and natural aside, gardeners have been applying practices meant to “green” their worlds for centuries. In my own quest to tend a healthier, more productive garden, I am always seeking out publications describing how to protect habitats, soil, and water resources. This handful of recently published books offers plenty of advice and inspiration for anyone who believes in gardening for the greater—and greener—good.

Often, having a basic understanding of the science behind recommended practices helps us make better gardening decisions. *The Informed Gardener* (University of Washington Press, 2008, \$18.95) by Linda Chalker-Scott explores the myths and realities of these practices and identifies whether they are scientifically tested and true. Based on a series of columns published since 2000, this well-written book covers topics such as plant physiology, soil amendments and additives, plant choices, and mulches, to name a few. “This book will help you develop a sense of how garden and landscape plants respond to their environments,” writes Chalker-Scott, so that you can become “part of a sustainable, natural system rather than its adversary.”

“As gardeners we have a tremendous opportunity to affect and improve the health of our environment at home and beyond,” writes Joe Lamp’l in *The Green Gardener’s Guide* (Cool Springs Press, 2007, \$16.95). To those ends, this book provides helpful tips and the most up-to-date, ecologically sound gardening techniques. Divided into one- to two-page sections, the book succinctly describes planet-preserving recommendations and activities, complete with numerous sidebars containing statistics, definitions, and fascinating facts. Chapters cover topics such as water conservation, reducing synthetic chemical use, recycling or composting waste, using less energy, and protecting the ecosystem. This accessible book includes plenty of checkpoints for measuring the impact of various gardening activities “to help you understand just what you can accomplish by taking a stand and acting.”

In *The Truth About Organic Gardening* (Timber Press, 2008, \$12.95), Jeff Gillman asserts that “simply assuming that

a practice is good or bad because it is organic or non-organic is a surefire way to get yourself into all kinds of trouble.” For example, he points out that natural options for pest control, such as rotenone, can sometimes be more toxic than synthetic ones. The book explores strategies for dealing with various garden pests such as weeds, insects, diseases, and wildlife, as well as soil enrichment and fertilization. For each,

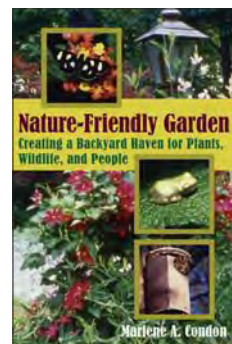
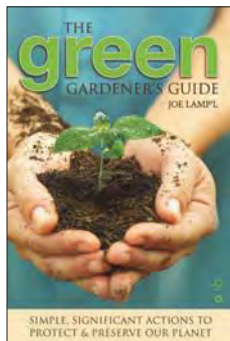
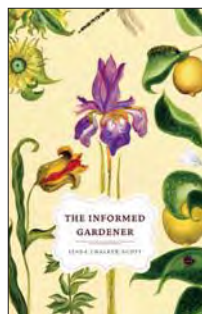


Gillman explains the benefits and drawbacks of both organic and synthetic options. At the end of each chapter he gives a summary of important considerations to keep in mind in order to make the best choices possible.

Composting is one activity that not only reduces landfill waste, but also helps to build healthy soil, the foundation of successful gardening. *The Complete Compost Gardening Guide* (Storey Publishing, 2008, \$19.95) by Barbara Pleasant and Deborah L. Martin offers new information for even the most experienced composter. Moving well beyond the familiar piling of yard debris and kitchen scraps in a heap or bin, the book also describes more unusual methods such as composting in trenches or holes, vermicomposting, and brewing compost tea. Sidebars with scientific tidbits, composting trivia, and neighborly advice from the authors, along with clear color photographs, supplement the easy-to-read, often entertaining text. A glossary and list of helpful resources for further exploration complete the guide.

“The most basic gardening rule is to always take your gardening cues from the natural world” is Marlene Condon’s advice in *Nature-Friendly Garden: Creating a Backyard Haven for Plants, Wildlife, and People* (Stackpole Books, 2006, \$19.95). That’s not to say one must turn the garden into an unkempt wilderness in order to co-exist with and enjoy nature. Rather, Condon explains techniques for achieving a balance that benefits both gardeners and wildlife. The author’s color photographs of creatures found in her garden enhance the text, which describes how to attract wildlife such as mammals, birds, and butterflies with plants and other garden elements.

—Kirsten Winters, Editorial Intern







## REGIONAL HAPPENINGS

# Horticultural Events from Around the Country

### NORTHEAST

CT, MA, ME, NH, NY, RI, VT

**RAP** SEPT. 27. **Chile Pepper Fiesta.** Brooklyn Botanic Garden. Brooklyn, New York. (718) 623-7200. [www.bbq.org](http://www.bbq.org).

SEPT. 28–OCT. 1. **Invasive and Exotic Plant Eradication and Plant Community Restoration.** Seminar. Humboldt Field Research Institute. Steuben, Maine. (207) 546-3042. [www.eaglehill.us](http://www.eaglehill.us).

OCT. 1. **Cherish Our Natural Heritage: Managing Invasives to Promote Native Diversity.** Symposium. Connecticut Invasive Plant Working Group. University of Connecticut. Storrs, Connecticut. (860) 871-4066. [www.hort.uconn.edu/cipwg](http://www.hort.uconn.edu/cipwg).

**RAP** OCT. 3–5. **Foliage Art & Craft Festival.** Hildene, The Lincoln Family Home. Manchester, Vermont. (800) 362-1788. [www.hildene.org](http://www.hildene.org).

**RAP** OCT. 4 & 18. **Shrub and Tree Pruning.** Workshop. Tower Hill Botanic Garden. Boylston, Maine. (508) 869-6111. [www.towerhillbg.org](http://www.towerhillbg.org).

**RAP** OCT. 7 & 14. **Hypertufa Trough Workshop.** Blithewold Mansion, Gardens, and Arboretum. Bristol, Rhode Island. (401) 253-2707. [www.blithewold.org](http://www.blithewold.org).

OCT. 11. **The Brine Design: Landscape and Garden Principles in Practice.** Workshop. Brine Garden. Pawling, New York. (845) 855-9023. [www.gardenlarge.com/duncan-brine/newfs](http://www.gardenlarge.com/duncan-brine/newfs).

**RAP** OCT. 18–NOV. 16. **Kiku Exhibition and Flower Show.** The New York Botanical Garden. Bronx, New York. (718) 817-8616. [www.nybg.org](http://www.nybg.org).

**RAP** OCT. 25. **Fall Workfest.** Volunteer cleanup day. Landis Arboretum. Esperance, New York. (518) 875-6935. [www.landisarboretum.org](http://www.landisarboretum.org).

### MID-ATLANTIC

PA, NJ, VA, MD, DE, WV, DC

SEPT. 18–21. **American Dahlia Society's National Show.** Longwood Gardens. Kennett Square, Pennsylvania. (610) 388-1000. [www.longwoodgardens.org](http://www.longwoodgardens.org).

Events sponsored by or including official participation by AHS or AHS staff members are identified with the **AHS** symbol.

Events hosted by botanical gardens and arboreta that participate in AHS's Reciprocal Admissions Program are identified with the **RAP** symbol. Current AHS members showing a valid membership card are eligible for free or discounted admission to the garden or other benefits. Special events may not be included; contact the host site for details or visit [www.ahs.org/events/reciprocal\\_events.htm](http://www.ahs.org/events/reciprocal_events.htm).

**RAP** SEPT. 19. **On Bringing Nature Home.** Lecture. Brookside Gardens. Wheaton, Maryland. (301) 962-1400. [www.brooksidegardens.org](http://www.brooksidegardens.org).

**RAP** SEPT. 19 & 20. **Fall Plant Sale.** Lewis Ginter Botanical Gardens. Richmond, Virginia. (804) 262-9887. [www.lewisginter.org](http://www.lewisginter.org).

SEPT. 20. **Seed Saving Workshop.** Garden Shop. Monticello. Charlottesville, Virginia. (434) 984-9822. [www.monticello.org](http://www.monticello.org).

SEPT. 25. **Fall Flurry in a Country Garden.** Lecture. The Cross Estate Gardens. Bernardsville, New Jersey. (973) 376-0348. [www.crossestategardens.org](http://www.crossestategardens.org).

SEPT. 26. **Maryland Regional Conservation Landscaping Field Day and Tour.** Chesapeake Conservation Landscaping Council. Annapolis, Maryland. (410) 531-5973. [www.chesapeakelandscape.org](http://www.chesapeakelandscape.org).

**RAP** SEPT. 26–28. **GardenFair at Winterthur.** Garden festival. Winterthur, Delaware. (302) 888-6400. [www.winterthur.org](http://www.winterthur.org).

OCT. 3–7. **Green Infrastructure: Linking Landscapes and Communities.** Annual meeting and expo. American Society of Landscape Architects. Philadelphia, Pennsylvania. (202) 898-2444. [www.asla.org](http://www.asla.org).

OCT. 4. **National Capital Dahlia Society Bloom Sale.** Trial Garden. Derwood, Maryland. (703) 241-0442. [www.nationalcapitaldahlia.org](http://www.nationalcapitaldahlia.org).

**RAP** OCT. 5. **Fall Festival.** Morris Arboretum. Philadelphia, Pennsylvania. (215) 247-5777. [www.morrisarboretum.org](http://www.morrisarboretum.org).

OCT. 17. **Perennial Plant Conference.** Scott Arboretum of Swarthmore College. Swarthmore, Pennsylvania. (610) 388-1000 ext. 507. [www.perennialplantconference.org](http://www.perennialplantconference.org).

OCT. 17–19. **Maryland Home & Garden Show.** Maryland State Fairgrounds. Timonium, Maryland. (410) 863-1180. [www.mdhomeandgarden.com](http://www.mdhomeandgarden.com).

OCT. 18. **Eco-gardens with Native Plants.** Class. Maymont Nature Center. Richmond, Virginia. (804) 358-7166 ext. 310. [www.maymont.org](http://www.maymont.org).

**RAP** OCT. 31. **Mutations and Freaks: Plants with Skeletons in the Closet.** Walk and lecture. Brookside Gardens. Wheaton, Maryland. (301) 962-1427. [www.brooksidegardens.org](http://www.brooksidegardens.org).

### Looking ahead

NOV. 8. **Lawn Alternatives for the Real World.** Lecture. Scott Arboretum of Swarthmore College. Swarthmore, Pennsylvania. (610) 328-8024. [www.scottarboretum.org](http://www.scottarboretum.org).

### SOUTHEAST

AL, FL, GA, KY, NC, SC, TN

**RAP** SEPT. 20 & 21. **Fall Open House and Plant Sale.** Reflection Riding Arboretum and Botanical Garden. Chattanooga, Tennessee. (423) 821-9582. [www.reflectionriding.org](http://www.reflectionriding.org).

**RAP** SEPT. 26–28. **Surround Yourself with Shady Characters.** Symposium. JC Raulston Arboretum. Raleigh, North Carolina. (919) 513-7005. [www.ncsu.edu/jcraulstonarboretum](http://www.ncsu.edu/jcraulstonarboretum).

SEPT. 26–28. **Kentucky Orchid Society Show.** Executive Inn. Louisville, Kentucky. (561) 404-2000. [www.kyorchidsociety.org](http://www.kyorchidsociety.org).

**RAP** SEPT. 30. **Florida Top Ten Garden Guide.** Class. Harry P. Leu Gardens. Orlando, Florida. (407) 246-2620. [www.leugardens.org](http://www.leugardens.org).

**RAP** OCT. 1. **Seed Workshop.** Yew Dell Gardens. Crestwood, Kentucky. (502) 241-4788. [www.yewdellgardens.org](http://www.yewdellgardens.org).



## Central South Native Plant Conference

"TOUGH NATIVE HABITATS" is the theme for the Central South Native Plant Conference to be held October 17 and 18 at the Birmingham Botanical Gardens in Alabama. The conference offers something for everyone, including lectures, tours, and book and plant sales.

Participants can choose from an array of concurrent sessions on topics such as drought tolerant native species, the impact of invasives, river restoration, waterwise gardening, and rare plants. Sessions feature specialists with extensive experience. For example, Jim Lacefield, speaking on "The Geologic Basis for Alabama's Mosaic of Landscapes and Life," is a retired professor who writes about geology, geologic history, and other aspects of Alabama's natural environment. Sara Bright, photographer and butterfly chaser, will join with Paulette Haywood Ogard to discuss their research on the life cycles of more than 100 species of butterflies and these insects' relationships to native plants.



Birmingham Botanical Gardens is hosting a fall Native Plant Conference.

Field trips include a visit to the Kathy Stiles Freeland Bibb County Glades Preserve where nine new plant species endemic to these unique dolomite glades have been discovered and named by naturalist Jim Allison, who will be on hand to answer questions. Participants will also have the opportunity to tour Hind's Rock, Homewood Forest Preserve, Moss Rock Preserve, Ruffner Mountain Nature Center, Talledega National Forest, Shoal Creek District, and Turkey Creek Preserve. For more information, visit [www.bbgardens.org/central-south.php](http://www.bbgardens.org/central-south.php) or call (205) 414-3900.

—Kirsten Winters, Editorial Intern

OCT. 3 & 4. **Trade Show 2008.** Middle Tennessee Nursery Association. McMinnville, Tennessee. (931) 668-7322. [www.mtna.com](http://www.mtna.com).

OCT. 6–8. **2008 State Master Gardener Conference.** Sea Trail Resort and Conference Center. Sunset, North Carolina. (910) 754-4148. [www.ncmastergardeners.org](http://www.ncmastergardeners.org).

OCT. 7–10. **Eastern Native Grass Symposium.** Radisson Hotel and Conference Center. Columbia, South Carolina. (864) 656-3527. [www.clemson.edu/~bstrngr/E\\_Native\\_Grass](http://www.clemson.edu/~bstrngr/E_Native_Grass).

OCT. 14–17. **Tuning Into a Changing Climate and Biological Invasion.** Conference. Natural Areas Association. Nashville, Tennessee. (541) 317-0199. [www.naturalarea.org](http://www.naturalarea.org).

**RAP** OCT. 15. **Medicinal Plant Symposium.** The State Botanical Garden of Georgia. Athens, Georgia. (706) 542-6156. [www.uga.edu/botgarden](http://www.uga.edu/botgarden).

**RAP** OCT. 16–19. **Plantasia!** Fall plant sale. Mobile Botanical Gardens. Mobile, Alabama. (251) 342-0555. [www.mobilebotanicalgardens.org](http://www.mobilebotanicalgardens.org).

OCT. 17–19. **Charleston Garden Festival at Middleton Place.** Charleston, South Carolina. (843) 556-6020. [www.charlestongardenfestival.org](http://www.charlestongardenfestival.org).

### Looking ahead

NOV. 1. **Fall Family Festival Fun Day.** Bellingrath Gardens. Theodore, Alabama. (800) 247-8420. [www.bellingrath.org](http://www.bellingrath.org).

NOV. 8. **The World of Soils with Tony Avent.** Class. Plant Delights Nursery, Inc. Raleigh, North Carolina. (919) 772-4794. [www.plantdelights.com](http://www.plantdelights.com).

### NORTH CENTRAL

IA, IL, IN, MI, MN, ND, NE, OH, SD, WI

**RAP** SEPT. 20. **Tour of Toledo Botanical Gardens.** The Gardeners of America/Men's Garden Club of America. Fort Wayne, Indiana. (260) 854-2988. [www.tgoa-mgca.org](http://www.tgoa-mgca.org).

SEPT. 27. **Second Biennial Native Plant Symposium.** Purdue University. Hammond, Indiana. (219) 844-3188. [www.for-wild.com/chapters/Conf/](http://www.for-wild.com/chapters/Conf/).

**RAP** SEPT. 27 & 28. **Auxiliary Harvest Sale and Quilt Raffle.** Minnesota Landscape Ar-

boretum. Chaska, Minnesota. (952) 443-1400. [www.arboretum.umn.edu](http://www.arboretum.umn.edu).

**AHS** OCT. 2–4. **America in Bloom Symposium and Awards Program.** Columbus, Ohio. (614) 487-1117. [www.americainbloom.org](http://www.americainbloom.org).

**RAP** OCT. 4. **Fall Foliage Festival.** Hidden Lake Gardens. Tipton, Michigan. (517) 431-2060. [hiddenlakegardens.msu.edu](http://hiddenlakegardens.msu.edu).

**RAP** OCT. 7. **The Art & Business of Garden Design.** Symposium. Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. [www.chicagobotanic.org](http://www.chicagobotanic.org).

**RAP** OCT. 7 & 14. **Hypertufa Trough Workshop.** Blithewold Mansion, Gardens, and Arboretum. Bristol, Rhode Island. (401) 253-2707. [www.blithewold.org](http://www.blithewold.org).

**RAP** OCT. 11. **Earth Tones: Gardening in Tune with Nature.** Symposium. Boerner Botanical Gardens. Hales, Wisconsin. (414) 525-5675. [www.boernerbotanicalgardens.org](http://www.boernerbotanicalgardens.org).

**RAP** OCT. 11 & 12. **African Violet Show and Sale.** Olbrich Botanical Gardens. Madison, Wisconsin. (608) 833-4583. [www.olbrich.org](http://www.olbrich.org).

OCT. 18. **Natural Landscaping with Native Plants Symposium.** Cardinal Stritch University. Milwaukee, Wisconsin. (414) 299-9888. [www.for-wild.com/chapters/Conf](http://www.for-wild.com/chapters/Conf).

**RAP** OCT. 21. **Gourmet Soil.** Class. School of the Chicago Botanic Garden. Glencoe, Illinois. (847) 835-8261. [www.chicagobotanic.org/school](http://www.chicagobotanic.org/school).

### SOUTH CENTRAL

AR, KS, LA, MO, MS, OK, TX

SEPT. 17–20. **Texas Plant Conservation Conference.** Texas A&M University. Corpus Christi, Texas. (512) 292-4200. [www.wildflower.org](http://www.wildflower.org).

**RAP** SEPT. 20–NOV. 2. **The Great Pumpkin Festival.** Dallas Arboretum and Botanical Garden. Dallas, Texas. (214) 515-6500. [www.dallasarboretum.org](http://www.dallasarboretum.org).

**RAP** OCT. 2–4. **Orchids in October.** Plant sale. Myriad Botanical Gardens. Oklahoma City, Oklahoma. (405) 297-3995. [myriadbotanicalgardens.org](http://myriadbotanicalgardens.org).

**RAP** OCT. 18 & 19. **Mid-American Regional Lily Society Sale.** Missouri Botanical Garden. St. Louis, Missouri. (314) 577-5100. [www.mobot.org](http://www.mobot.org).

**RAP** OCT. 21. **Birding at Botanica.** Hike and class. Botanica, The Wichita Gardens. Wichita, Kansas. (316) 264-0448. [www.botanica.org](http://www.botanica.org).



# American Horticultural Therapy Association's Annual Convention in Kentucky

PROMOTING THE GARDEN as a healing place, the American Horticultural Therapy Association (AHTA) will hold its annual convention, with the theme "Connecting People with Nature," from October 30 to November 1 in Lexington, Kentucky. According to Gaye Horton, AHTA Association Director, "Our conference is the premier event to learn about the latest developments in the field of horticulture therapy. We have two days of conference sessions for attendees from around the country and abroad."



**Nilda Cosco will be a keynote speaker.**

Keynote speaker Nilda Cosco, researcher, author, and co-founder of the Natural Learning Initiative in the College of Design at North Carolina State University in Raleigh, will discuss the practical application of research in connecting young children to nature. Other presentations will address a wide range of topics including supported employment for individuals with developmental disabilities; the impact of flowers on wellness; horticultural therapy services in acute care pediatric

facilities; and therapeutic garden design.

Included in the convention will be tours of Shaker Village of Pleasant Hill and Ashland-The Henry Clay Estate. To learn more about the event or to register, visit [www.ahta.org](http://www.ahta.org) or call (859) 514-9177.

—Kirsten Winters, Editorial Intern

**RAP** OCT. 21. **Heirloom Plants in the Garden.** Lecture. The Biedenharn Museum & Gardens. Monroe, Louisiana. (318) 387-5281. [www.bmuseum.org](http://www.bmuseum.org).

## SOUTHWEST

AZ, NM, CO, UT

**RAP** SEPT. 20. **Fall Plant and Bulb Sale.** Denver Botanic Gardens. Denver, Colorado. (720) 865-3500. [www.botanicgardens.org](http://www.botanicgardens.org).

SEPT. 26-28. **Home & Landscape Show.** Arizona State Fairgrounds. Phoenix, Arizona. (602) 485-1691. [www.maricopacountyhomeshows.com](http://www.maricopacountyhomeshows.com).

**RAP** SEPT. 27. **Wildflower Walk.** The Arboretum at Flagstaff. Flagstaff, Arizona. (928) 774-1442. [www.thearb.org](http://www.thearb.org).

**RAP** SEPT. 28. **Central Arizona Cactus and Succulent Society Meeting.** Desert Botanical Garden. Phoenix, Arizona. (480) 941-1225. [www.dbg.org](http://www.dbg.org).

OCT. 4. **Fall Plant Sale.** Tucson Botanical Gardens. Tucson, Arizona. (520) 326-9686. [www.tucsonbotanical.org](http://www.tucsonbotanical.org).

**RAP** OCT. 17-19. **Fall Plant Sale Festival.** Desert Botanical Garden. Phoenix, Arizona. (480) 941-1225. [www.dbg.org](http://www.dbg.org).

**RAP** OCT. 23. **Plant-Driven Design.** Lecture. Denver Botanic Gardens. Denver, Colorado. (720) 865-3500. [www.botanicgardens.org](http://www.botanicgardens.org).

## WEST COAST

CA, NV, HI

SEPT. 27. **Annual Poison Oak Show.** Columbia, California. (209) 532-6604. [www.columbiagazette.com/poison.html](http://www.columbiagazette.com/poison.html).

OCT. 2 & 3. **The Garden Classroom.** Educator workshop. Life Lab Garden Classroom at UCSC Center for Agroecology and Sustainable Food Systems. Santa Cruz, California. (831) 459-5476. [www.lifelab.org](http://www.lifelab.org).

**RAP** OCT. 4. **Fall Plant Sale.** Palos Verdes Peninsula, California. (310) 544-6815. [www.southcoastbotanicgarden.org](http://www.southcoastbotanicgarden.org).

**RAP** OCT. 7 & 14. **Starting From Seeds.** Class. Descanso Gardens. La Cañada Flintridge, California. (818) 985-4200. [www.descansogardens.org](http://www.descansogardens.org).

**RAP** OCT. 11 & 12. **California Native and Fall Plant Sale.** Fullerton Arboretum. Fullerton, California. (714) 278-3407. [www.arboretum.fullerton.edu](http://www.arboretum.fullerton.edu).

OCT. 13. **Bamboo, The Earth and Us.** Lecture. San Diego Horticultural Society. Del Mar, California. (760) 295-7089. [www.sdhort.soc.org](http://www.sdhort.soc.org).

**RAP** OCT. 18. **Los Angeles Flower District Tour.** Descanso Gardens. La Cañada Flintridge, California. (818) 985-4200. [www.descansogardens.org](http://www.descansogardens.org).

**RAP** OCT. 18. **Research and Building Programs at the Santa Barbara Botanic**

**Garden.** California Botanical Society Lecture. Santa Barbara Botanic Garden. Santa Barbara, California. (510) 643-7008. [www.calbotsoc.org](http://www.calbotsoc.org).

## Looking ahead

NOV. 13. **Native Plant Horticulture: Myths and Legends.** Lecture. Southern California Horticultural Society. Los Angeles, California. [www.socalhort.org](http://www.socalhort.org).

## NORTHWEST

AK, ID, MT, OR, WA, WY

**RAP** SEPT. 20. **Plastic Pot Recycling Day.** Alaska Botanical Garden. Anchorage, Alaska. (928) 770-3692. [www.alaskabg.org](http://www.alaskabg.org).

SEPT. 27. **Fall Plant Sale.** Berry Botanic Garden. Portland, Oregon. (503) 636-4112. [www.berrybot.org](http://www.berrybot.org).

SEPT. 28. **Scarecrow Festival.** Tizer Gardens. Jefferson City, Montana. (866) 933-8789. [www.tizergardens.com](http://www.tizergardens.com).

**RAP** SEPT. 28. **Touch the Earth.** Benefit concert. Idaho Botanical Garden. Boise, Idaho. (208) 343-8649. [www.idahobotanicalgarden.org](http://www.idahobotanicalgarden.org).

SEPT. 29. **Fall Plant Identification and International Birds in Flight.** Walk. Glacier Park. Montana Native Plant Society. Glacier National Park, Montana. (406) 837-0783. [www.umt.edu/mnps](http://www.umt.edu/mnps).

OCT. 2-5. **Portland Fall Home and Garden Show.** Portland Expo Center. Portland, Oregon. (503) 246-8291. [www.otshows.com](http://www.otshows.com).

**RAP** OCT. 5. **Fall Bulb & Plant Sale.** Washington Park Arboretum. Seattle, Washington. (206) 325-4510. [www.arboretumfoundation.org](http://www.arboretumfoundation.org).

OCT. 25 & 26. **Fall Festival.** Oregon Gardens. Silverton, Oregon. (503) 874-8100. [www.oregongarden.org](http://www.oregongarden.org).

## CANADA

SEPT. 27. **Compost & Bulb Sale.** Van Dusen Botanical Garden. Vancouver, British Columbia. (604) 257-8666. [www.vandusen.com](http://www.vandusen.com).

OCT. 10. **Tree Identification.** Workshop. The Arboretum at the University of Guelph. Guelph, Ontario. (519) 824-4120 ext. 52113. [www.uoguelph.ca/arboretum](http://www.uoguelph.ca/arboretum).

OCT. 21 & 22. **Garden & Florist Expo.** Toronto, Ontario. [www.gardenexpo.ca](http://www.gardenexpo.ca).

**RAP** OCT. 25. **Sunscaping.** Workshop. Glendale Gardens & Woodland. Victoria, British Columbia. (250) 479-6162. [www.hcp.bc.ca](http://www.hcp.bc.ca).



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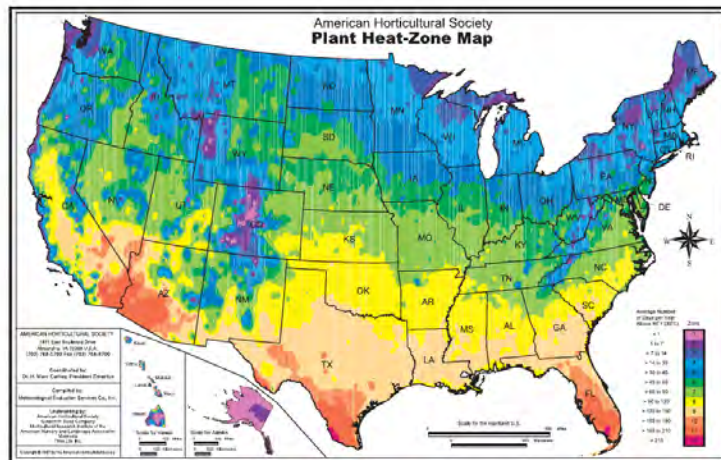


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# PRONUNCIATIONS AND PLANTING ZONES



Most of the cultivated plants described in this issue are listed here with their pronunciations, USDA Plant Hardiness Zones, and AHS Plant Heat Zones. These zones suggest a range of locations where temperatures are appropriate—both in winter and summer—for growing each plant.

While the zones are a good place to start in determining plant adaptability in your region, factors such as exposure, moisture, snow cover, and humidity also play an important role in plant survival. The codes tend to be conservative; plants may grow outside the ranges indicated. A USDA zone rating of 0–0 means that the plant is a true annual and completes its life cycle in a year or less.

To purchase a two-by-three-foot glossy AHS Plant Heat Zone Map for \$9.95, call (800) 777-7931 or visit [www.ahs.org](http://www.ahs.org).

## A–E

- Aloysia triphylla*** uh-LOY-zee-uh try-FIL-luh (USDA Zones 8–11, AHS Zones 12–8)  
***Bletilla striata*** bleh-TIL-luh stry-AY-tuh (5–8, 8–5)  
***Bouteloua gracilis*** boo-teh-LOO-uh GRASS-ih-liss (5–9, 9–5)  
***Butiagrus nabonnandii*** byew-tee-AG-rus nah-bo-NAN-dee-eye (8–11, 12–8)  
***Calanthe seiboldii*** kah-LAN-thee see-BOL-dee-eye (7–9, 9–7)  
***Calopogon tuberosus*** kal-o-PO-gon too-buh-RO-sus (3–10, 9–2)  
***Costus speciosus*** KOSS-tus spee-see-O-sus (8–11, 12–8)  
***Cymbopogon citratus*** sim-bo-PO-gon sih-TRAY-tuss (9–11, 12–1)  
***Cyrtopodium acaule*** sip-rih-PEE-dee-um uh-KAWL-ee (3–7, 7–1)  
***C. xandrewsii*** C. an-DREW-zee-eye (3–6, 6–2)  
***C. guttatum*** C. gyew-TAY-tum (2–4, 4–2)  
***C. kentuckiense*** C. ken-tuh-kee-EN-see (6–10, 10–6)  
***C. macranthos* var. *ventricosum*** C. muh-CRAN-thos var. ven-trih-KO-sum (3–7, 7–1)  
***C. parviflorum* var. *parviflorum*** C. par-vih-FLOR-um var. par-vih-FLOR-um (2–9, 9–2)  
***C. parviflorum* var. *pubescens*** C. par-vih-FLOR-um var. pyew-BESS-enz (2–9, 9–1)  
***C. reginae*** C. reh-JEE-nee (2–7, 7–1)  
***Epipactis gigantea*** eh-pih-PAK-tiss jy-GAN-tee-uh (3–6, 6–2)

## F–L

- Fallugia paradoxa*** fah-LEW-gee-uh pair-uh-DOK-suh (7–11, 12–7)  
***Foeniculum vulgare*** fee-NICK-yew-lum vul-GAY-ree (4–9, 9–1)  
***Gaillardia aristata*** gay-LARD-ee-uh ahr-iss-TAY-tuh (3–8, 8–1)  
***Gazania linearis*** guh-ZAY-nee-uh lin-ee-YAR-iss (8–10, 10–8)  
***Goodyera pubescens*** good-YAIR-uh pyew-BESS-enz (6–9, 9–6)  
***Gutierrezia sarothrae*** gyew-tee-air-REZ-ee-uh suh-RO-three (5–11, 12–5)  
***Liatris punctata*** ly-AY-triss punk-TAY-tuh (4–9, 9–1)

## M–R

- Magnolia acuminata*** mag-NOLE-yuh ak-yew-min-AY-tuh (4–9, 9–2)  
***M. ashei*** M. ASH-ee-eye (6–9, 9–6)  
***M. denudata*** M. deh-new-DAY-tuh (4–9, 9–6)  
***M. fraseri*** M. FRAYZ-yer-eye (4–9, 9–6)  
***M. grandiflora*** M. gran-dih-FLOR-uh (7–9, 9–6)  
***M. macrophylla*** M. mak-ro-FIL-luh (6–9, 9–6)  
***M. pyramidata*** M. pih-ruh-mih-DAY-tuh (7–9, 9–7)  
***M. tripetala*** M. try-PET-uh-luh (4–9, 9–5)  
***M. virginiana*** M. vir-jin-ee-AN-uh (6–9, 9–6)  
***Penstemon pinifolius*** PEN-steh-mon pin-ih-FO-lee-us (4–10, 10–1)  
***Phlox bifida*** FLOKS BIF-ih-duh (4–8, 8–1)  
***Pinus edulis*** PIE-nus ed-YEW-liss (5–8, 8–5)  
***Pogonia ophioglossoides*** po-GO-nee-uh o-fee-o-gloss-OY-deez (3–8, 8–2)  
***Pulsatilla vulgaris*** pull-suh-TIL-uh vul-GAIR-iss (5–7, 7–5)

## S–Z

- Spiranthes cernua* var. *odorata*** spy-RAN-theez SAIR-new-uh var. o-doh-RAY-tuh (4–8, 8–4)  
***Stachys byzantina*** STAY-kiss bih-zan-TY-nuh (4–8, 8–1)  
***Syagrus romanzoffiana*** sy-AY-grus rom-an-zof-ee-AN-uh (8–11, 12–8)  
***Thymus pseudolanuginosus*** TY-muss soo-doh-lan-oo-jih-NO-sus (5–9, 9–5)  
***Tulipa acuminata*** TOO-lip-uh ak-yew-min-AY-tuh (4–8, 8–4)  
***T. bakeri*** T. BAY-ker-eye (4–8, 8–4)  
***T. clusiana*** T. kloo-see-AN-uh (4–8, 8–4)  
***T. humilis*** T. HEW-mih-lys (4–8, 8–4)  
***T. kaufmanniana*** T. kawf-man-ee-AN-uh (4–8, 8–4)  
***T. linifolia*** T. lih-nih-FO-lee-uh (4–7, 7–4)  
***T. pulchella*** T. pul-KEL-uh (5–8, 8–5)  
***T. sylvestris*** T. sil-VES-triss (4–8, 8–4)  
***T. tarda*** T. TAR-duh (4–8, 8–4)  
***T. turkestanica*** T. tur-keh-STAN-ih-kuh (5–8, 8–5)  
***T. vvedenskyi*** T. veh-den-SKEE-eye (5–8, 8–5)  
***Veronica pectinata*** ver-ON-ih-kuh pek-tih-NAY-tuh (2–7, 7–1)  
***Viburnum nudum*** vy-BUR-num NEW-dum (5–9, 9–5)



# GARDEN MARKET

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## *Viburnum nudum* 'Pink Beauty'

by Michael A. Dirr

**I**N THE HIERARCHY of *Viburnum* species, smooth witherod (*V. nudum*) usually ranks in the top tier. Native from Florida and Louisiana north to coastal New York and Connecticut, it is adaptable to wet sites and moderate drought. Its form is plumpest in full sun, more open in shade (where I have

typically seen it in the wild). The emerging spring foliage is bronzy, turning bright green and glossy in summer, and—in most cases—a potent red to red-purple in fall. The musky or malodorous white flowers bloom prolifically in flat clusters in mid-summer. In autumn, the raisinlike fruits ripen to pink and blue but are usually devoured by birds.

As with many species, there is great variability among plants in the wild. In my travels, I have observed open, lanky, and scraggly specimens of *V. nudum* that even a die-hard viburnophile would be hard pressed to love.

Fortunately for gardeners, there are lots of sharp-eyed horticulturists out there looking for superior selections. In the case of *V. nudum*, there are several highly touted clones to choose from, including Brandywine™ ('Bulk'), 'Count Pulaski', 'Earth Shade', 'Moonshine', 'Pink Beauty', and 'Winterthur'. Originally, 'Winterthur' surfaced as the best with its shiny foliage, superb red-purple fall color, and magnificent pink to blue fruits. However, with increasing frequency, I observe large, open, sprawling plants of this selection.

A transformational moment for me came in 1999 at the Sir Harold Hillier Arboretum in England, when I first encountered *V. nudum* 'Pink Beauty'. The love affair was instantaneous: Mirror-reflective foliage, relatively compact habit, fruits persistent in early April even as the new bronzy leaves were pushing forth. There



The fruits of *Viburnum nudum* 'Pink Beauty' turn from green to pink, then blue.

were no clear records documenting the origin of the plant or its name, but Mike Biffin, then curator at Hillier, allowed me to root cuttings. I brought the plants to Georgia and, based on continued testing since then, now rate 'Pink Beauty' the best of the *V. nudum* cultivars. The immature fruits are green, transitioning pink, then robin's-egg blue in September to October, and finally becoming darker, almost waxy Concord grape-blue, in winter.

In 2003, I planted a 'Pink Beauty' in my daughter Susy's garden in Chapel Hill, North Carolina. On February 11, this year, I walked in her garden and noted that the plant measured four feet high and wide without any pruning. Brilliant blue fruits still persisted. Many viburnums require a different seedling or clone to facilitate fruit

set, but, based on my observations, 'Pink Beauty' appears to be self-fertile. As a precaution, a wild *V. nudum* seedling had been added to Susy's garden. On that February day, 'Pink Beauty' was dripping with fruit but the seedling had none.

'Pink Beauty' has proven quite adaptable in USDA Zones 5 to 9. The heat and drought of 2007 in the Chapel Hill-Durham-Raleigh triangle was one of the worst on record, yet I was impressed with the resiliency of this cultivar during that period. Every garden needs a viburnum and 'Pink Beauty' is a great first choice. 🍷

### Source

Wilkerson Mill Gardens,  
Palmetto, GA. (770) 463-2400.  
[www.hydrangea.com](http://www.hydrangea.com).

The author of *Manual of Woody Landscape Plants*, among other books, Michael A. Dirr is a former horticulture professor at the University of Georgia in Athens.





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