

The background of the cover is a close-up photograph of several vibrant pink Colchicum flowers. The flowers have multiple layers of long, pointed petals, some of which are covered in small water droplets. The flowers are set against a backdrop of dark green, lobed leaves and some fallen, yellowish-brown autumn leaves. The overall lighting is soft, highlighting the delicate texture of the petals.

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The Magazine of the American Horticultural Society September / October 2007

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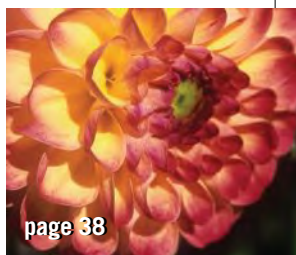
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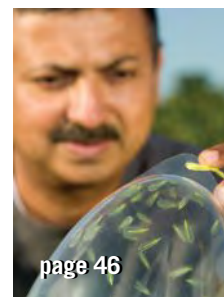
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*The American Gardener* (ISSN 1087-9978) is published bimonthly (January/February, March/April, May/June, July/August, September/October, November/December) by the American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308-1300, (703) 768-5700. Membership in the Society includes a subscription to *The American Gardener*. Annual dues are \$35; two years, \$60. International dues are \$50. \$10 of annual dues goes toward magazine subscription. Periodicals postage paid at Alexandria, Virginia, and at additional mailing offices. Postmaster: Please send Form 3579 to *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308-1300.

Botanical nomenclature is based on *The American Horticultural Society A-Z Encyclopedia of Garden Plants*, on *A Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland* and on the *Royal Horticultural Society Index of Garden Plants*. Opinions expressed in the articles are those of the authors and are not necessarily those of the Society. Manuscripts, artwork, and photographs sent for possible publication will be returned if accompanied by a self-addressed, stamped envelope. We cannot guarantee the safe return of unsolicited material. Back issues are available at \$8 per copy.

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Printed in the U.S.A. on recycled paper.

## NOTES FROM RIVER FARM

**B**Y THE TIME you sit down to read this issue of *The American Gardener*, I trust that we will all be enjoying more moderate temperatures. It has been unusually hot and humid here in the mid-Atlantic this summer, as it has been in many other parts of the country. All of us—our horticulture staff, in particular—are ready for a break.

In this issue, you will find something for every gardener. Feature articles include a profile of the fall-blooming bulbs in the genus *Colchicum*, an article about nurseries that specialize in heirloom plants, advice on creating espaliers with fruiting and ornamental trees, and an in-depth discussion of saxifrages for the woodland or shade garden. There's also an article on the Coastal Maine Botanical Gardens. We have a vested interest in this new garden because Maureen Heffernan, an American Horticultural Society alumna, is the executive director. On the recommendation of AHS board member Margaret Kulp, I visited the garden last year, before it officially opened. This summer, while I was in Maine to attend a friend's wedding, I went back and the transformation was astounding.

My summer travels also took me to the Minneapolis–St. Paul area in late July for the National Children & Youth Garden Symposium. The AHS's education department team, led by Stephanie Jutila, put together another truly extraordinary event this year, which is highlighted in an article on page 14. If you have not participated in this program before, I strongly encourage you to consider attending next year's symposium, which will be based in the Philadelphia area. All of us, whether we are directly involved with children and youth gardening programs or not, can benefit from exposure to the passion and creativity of the incredibly talented people who are leading the way in this important field.

In addition to the symposium, I am happy to report on a number of other successful projects and events that have transpired since I wrote my last column. As the summer started, the AHS was proud to partner with a number of local institutions to host the annual conference of the American Public Gardens Association in Washington, D.C. What a great occasion it was to welcome more than 600 of our professional colleagues to the nation's capital and introduce them to all the horticultural treasures the region has to offer. The summer also brought with it several new interns to River Farm and the requisite field trips, plant identification walks, and projects. And, most recently, our staff, along with members of our board have been hard at work finalizing the plans for some critical infrastructure upgrades at our River Farm headquarters. These upgrades are certainly not glamorous, but they represent a major step forward that will ultimately improve the visitor experience and set the stage for development of new facilities on this beautiful site.

As always, I would like to thank you for your continued support of the AHS. I know we ask a lot of our members and friends, but as a 501-C-3 non-profit, we must reach out to you for support so that we can continue to expand the outreach programs, publications, and member benefits that you, our members, want and deserve.

With all good wishes for a great fall,



—Deane H. Hundley, *President & CEO*



KASSIE BAKER



## MEMBERS' FORUM

### INVASIVE VS. AGGRESSIVE DEBATE

In the article about rudbeckias by Pam Baggett (May/June 2007), the author twice refers to rudbeckias that are, or might be, invasive. On page 30, first, in describing a photo of *Rudbeckia laciniata* 'Golden Glow' and further down in the actual article again she states that some gardeners—apparently meaning ones in certain locales—find 'Herbstsonne' invasive. Does she mean "aggressive" in one's own garden or "invasive"—meaning that it escapes garden places to invade natural habitats?

I thought the two words had finally been given their correct description in the gardening world: "Aggressive" being either self-sowing to the point of being a pest and/or roots or stolons escaping their allotted space and crowding out other flowerbed partners, and "invasive" being used only to describe a plant that escapes into the wild, often at the detriment of the natural plant and animal ecosystem.

I would hope that your editorial staff would be very careful in the use of these two completely different words so that you give readers the crucial knowledge to plan and plant responsibly.

On an unrelated note, what are the beautiful green-and-white foliated plants growing on either side of the variegated grass pictured on pages 34 and 35 of the same issue?

Marian Bostwick  
Sparks, Nevada

**Editor's response:** We were indeed lax in our characterization of the wandering tendencies of certain black-eyed Susans, which should have been described as "aggressive." But while we generally go along with your basic definition of the difference between aggressive and invasive plants, we are not sure it is universally accepted as "correct" in the gardening world. There are so many complicating factors—especially regionality here in North America—that any such black-and-white definition is problematic.

Many states have their own lists for invasive or noxious plants, and the lists vary considerably from state to state.

The plant you ask about is snow-on-the-mountain or snow in summer (*Euphorbia marginata*, USDA Hardiness Zone 11, AHS Heat Zones 12–1). These prairie natives are usually grown as annuals, self-sowing reliably in most cases.

### SNEEZEWEED IDENTIFICATION

In reading the July/August issue of the magazine, I came across your problem concerning the *Helenium* mistakenly identified as 'Moerheim Beauty'. I suspect it is 'Sahin's Early Flowerer', which



*Helenium* 'Sahin's Early Flowerer'

I just planted this year. As you can see from the photograph, it looks very similar to the one you published.

Nancy Garms  
Mequon, Wisconsin

### KUDOS FOR MAGAZINE

I'm amazed at how much *The American Gardener* magazine has broadened my horizons by publishing articles about plants that I never would have known about were I not a member and avid reader. Since I often purchase plants through catalogs and the Internet, I'm awash in tons of sameness, but the plants that stop visitors in their tracks are usually the ones I've read about in *The American Gardener*.

One example is the article in May/June 2006 "High Impact Foliage"; after reading that, my garden now boasts three different *Ligularia*, a *Rodgersia*, and *Veratrum nigrum*. I love dramatic plants!

Then the July/August 2007 magazine solved a thorny (pun intended) problem with my driveway, which just invades my yard without any transition between gravel and gardens. I didn't want to plant shrubs that would block my view when I come home after dark, because I need to see that it's safe to hop out of the car. "Designing with See-Through Plants" offered a solution. By choosing plants with an open, airy habit, I can soften the edges of the driveway without sacrificing safety.

Carol Anderson  
Harmony, Pennsylvania

### SCENTED PETUNIA SOURCE

I enjoyed reading Jesse Bell's question to Allan Armitage in the July/August issue ("News from AHS", page 12) regarding sources for fragrant petunias.

Select Seeds in Union, Connecticut, has climbing petunias and the white 'Rainmaster'. They used to sell seeds for these, but now just offer plants. I've saved my seeds of 'Rainmaster' for my own white garden and I just love them. Select Seeds offers a wide variety of antique seeds, plants, and bulbs, and has a whole section on scented flowers listed in their catalog, which can be found on their website ([www.selectseeds.com](http://www.selectseeds.com)).

Leisa Perrotta  
Whitman, Massachusetts

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**PLEASE WRITE US!** Address letters to Editor, *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308. Send e-mails to [editor@ahs.org](mailto:editor@ahs.org) (note Letter to Editor in subject line). Letters we print may be edited for length and clarity.





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## Dr. Cathey Day Lecture at River Farm

ON TUESDAY October 23, the AHS will celebrate Dr. H. Marc Cathey Day at its River Farm headquarters with “Color in the Garden,” a lecture by research geneticist **Robert Griesbach** of the U.S. National Arboretum in Washington, D.C. Using several familiar garden plants as examples, Griesbach will discuss the scientific basis for color in plants, including how different pigments influence the color of flowers and foliage. There will be a reception with light refreshments at 6:30 p.m. followed by the lecture at 7 p.m.



**Robert Griesbach**

A plant breeder with the Arboretum’s Floral and Nursery Plants Research Unit, Griesbach has a special interest in the genes that control color in plants. He and a colleague, **John Stommel**, have been developing a new line of peppers that have both ornamental and culinary qualities. One introduction, *Capsicum annuum* ‘Black Pearl’, was a 2006 All-America Selections winner.

“Anyone who has met Dr. Cathey knows that he is passionate about color,” says AHS Education Programs Manager **Stephanie Jutila**. “To celebrate Dr. Cathey Day this year, we thought it would be fitting to have Dr. Griesbach, one of his former colleagues, address the science of plant colors.”

Dr. H. Marc Cathey Day was established in 2005 as a way to honor the former AHS president and USDA research scientist each year on his birthday.

Space is limited, so pre-registration is recommended. For more information or to register, visit the AHS website ([www.ahs.org](http://www.ahs.org)) or call (703) 768-5700 ext. 137.

## AHS Garden School in October

JOIN PLANT LOVERS, garden designers, and horticulturists on October 4 and 5 for the AHS’s latest Garden School, “The Amazing World of Plants: New Trends and Their Influence on Garden Design.” Hosted at Yew Dell Gardens in Crestwood, Kentucky, this in-depth workshop will explore the latest trends



**The Castle at Yew Dell Gardens**

in plant breeding and techniques to integrate plants into the landscape.

“The Amazing World of Plants offers an exceptional line-up of presenters who will discuss noteworthy annuals, perennials, woody plants, and vines for the garden, along with design essentials for incorporating these plants into the landscape.”

says **Stephanie Jutila**, AHS education programs manager.

Award-winning garden writer **Graham Rice** will serve as guest horticulturist for the event. Additional speakers are native plant expert **Natalia Hamill**, fourth-generation nurseryman and plant breeder **Roy Klehm**, author **Sue Amatangelo** from the Ball Horticultural Company, and garden designer and instructor **Elin Haaga**. In addition to touring Yew Dell, par-

ticipants will visit notable gardens and landscapes in the Louisville area, such as the historic Cave Hill Cemetery.

For more information and to register, visit [www.ahs.org](http://www.ahs.org) or call (703) 768-5700 ext. 137.

## Music in the Garden Exhibit

THROUGHOUT THE month of September, visitors to River Farm can experience the harmony between music and horticulture during “Music in the Garden.”



**Julie Moir Messervy**

This first-ever garden exhibit features four vignettes created by garden designers throughout the metropolitan Washington, D.C. area. Along with the AHS, **LaPierre Studio**, **Merrifield Garden Center**, and **English Country Gardens** will be featuring displays. Each vignette—designed exclusively for this event—melds music with gardens, either literally or figuratively, resulting in a creative collection of interpretive garden exhibits. Exhibit hours are 9 a.m. to 5 p.m. Monday

through Friday, and 9 a.m. to 1 p.m. on Saturdays.

Music in the Garden will culminate with the AHS’s annual gala, “America’s Garden Celebration—Music in the Garden,” on September 29. The honorary chair for this year’s gala is **Julie Moir Messervy**, designer of the acclaimed Toronto Music Garden. For more information about the exhibit or the gala, please contact AHS Events Manager **Trish Gibson** at (703) 768-5700 ext. 114.

TOP LEFT: COURTESY OF ROBERT GRIESBACH; BOTTOM LEFT: COURTESY OF YEW DELL GARDENS; RIGHT: RICHARD HOWARD / COURTESY OF JULIE MOIR MESSERVY.

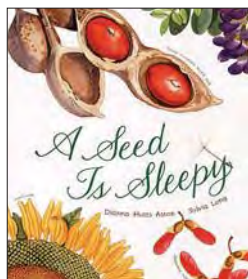


## Growing Good Kids Book Awards

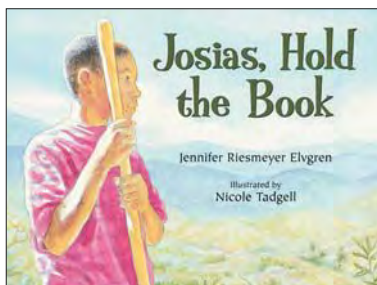
THREE CHILDREN'S BOOKS received the 2007 "Growing Good Kids—Excellence in Children's Literature Award" on July 21, 2007 at the American Horticultural Society's National Children & Youth Garden Symposium held at the Minnesota Landscape Arboretum in Chaska, Minnesota. This award honors engaging and inspiring plant-, garden- and ecology-themed children's literature.

This year's winners, selected from books published in 2006, are: *A Seed is Sleepy* by Dianna Hutts Aston and illustrated by Sylvia Long; *Josias, Hold the Book* by Jennifer Riesmeyer Elvgren and illustrated by Nicole Tadgell; and *Once Around the Sun* by Bobbi Katz and illustrated by LeUyen Pham.

"These three award winners represent the best of children's gardening and nature books published last year and will help connect kids to plants and the natural world by inspiring curiosity and wonder," says **Randy Seagraves**, national curriculum coordinator for the Junior Master Gardener (JMG) program of Texas Cooperative Extension, part of the Texas A & M University system. "One winner is full of illustrations that



committee members described as "breathtakingly beautiful," another promotes literacy while teaching about the Haitian culture,



and the third tells stories of the seasons through poems about a child's world. There are great diversity strengths in this year's award winners," says Seagraves.

The JMG and the AHS jointly developed the "Growing Good



Kids" book award program, which debuted in 2005 with a list of 40 "Classic" children's gardening and nature books published in the 20th century. Along with youth gardening specialists from the AHS and JMG, teachers, designers, and children make up the awards selection committee.

For more information about the "Growing Good Kids" book award program, including the complete list of "Classic" books and the 2006 winners, visit [www.ahs.org](http://www.ahs.org) and click on "Awards."

An exclusive  
AHS GARDEN SCHOOL

## THE AMAZING WORLD OF PLANTS

*New trends in plant selection and their influence on garden design*

October 4 & 5, 2007  
Yew Dell Gardens, Crestwood, Kentucky



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Join noted plant breeders and garden designers at Yew Dell Gardens, the former estate of the late plantsman, Theodore Klein, for a behind-the-scenes exploration of the latest trends in plant breeding and selection. Learn from the pros how new plant introductions, along with time-tested classics, can be integrated into landscapes of all styles.

For more information on how you can be part of this exciting event, visit [www.ahs.org](http://www.ahs.org) or call (703) 768-5700 ext. 137.



**Featuring guest horticulturist Graham Rice,** editor-in-chief of the *American Horticultural Society's Encyclopedia of Perennials* and author of numerous books including *The All-in-One Garden* and *The Ultimate Book of Small Gardens*.



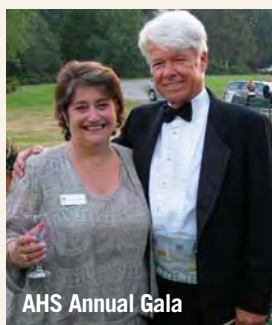


## AHS NATIONAL EVENTS AND PROGRAMS

# 2007 CALENDAR

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

- SEPT. 1–29. **“Music in the Garden.”** Exhibit of gardens designed around musical themes. George Washington’s River Farm. Alexandria, Virginia.
- SEPT. 23. **Fall Plant Sale and Antiques RiverShow.** George Washington’s River Farm. Alexandria, Virginia.
- SEPT. 25. **“Bulbs that Work.”** AHS online seminar hosted by Allan Armitage.
- SEPT. 27–29. **America in Bloom Symposium & Awards Banquet.** Rockford, Illinois.
- SEPT. 29. **AHS Annual Gala, “America’s Garden Celebration: Music in the Garden.”** George Washington’s River Farm. Alexandria, Virginia.
- OCT. 4 & 5. **“The Amazing World of Plants.”** AHS Garden School. Yew Dell Gardens, Crestwood, Kentucky.
- OCT. 23. **Dr. H. Marc Cathey Day: “Color in the Garden.”** Lecture and reception. George Washington’s River Farm. Alexandria, Virginia.
- DEC. 3–21. **Holiday Trees Display.** George Washington’s River Farm. Alexandria, Virginia.
- DEC. 13. **Annual Friends of River Farm (FORF) Holiday Reception.** George Washington’s River Farm. Alexandria, Virginia.



ley. “Expanding our educational programs for young people is one of our top priorities.”

With the help of the grant, the AHS will be able to retain an architecture firm to design the facility and produce accompanying drawings and specifications for the Workshop Classroom and Teaching Greenhouse.

The Fidelity Charitable Gift Fund is an independent public charity that oversees multiple funding programs. The Trustees’ Philanthropy Fund supports “nonprofit development efforts, with a focus on capacity-building.”

## Meadow Continues to Grow

APPROXIMATELY 25 volunteers and AHS staff members helped make the fourth planting phase of the André Bluemel Meadow at River Farm a great success, according to AHS Horticulturist **Peggy Bowers**. During a span of three days in early June, more than 18,000 plugs were planted in 15,000 square feet. A variety of grasses and wildflowers were planted in this phase, including black-eyed Susans (*Rudbeckia* spp.), tickseeds



**AHS staff members and volunteers helped plant thousands of plugs in the fourth of five sections of River Farm’s meadow in early summer.**

(*Coreopsis* spp.), blazing stars (*Liatris* spp.), and switch grass (*Panicum virgatum*). “It’s amazing the breadth of wildlife we’ve seen,” says Bowers. “The meadow is at this point the most species-diverse garden area at River Farm, and it’s alive with pollinators of all kinds, as well as birds, reptiles, and mammals.”

**Kurt Bluemel**, an AHS Board Member and owner of Kurt Bluemel, Inc., a wholesale nursery in Baldwin, Maryland, has donated all of the more than 100,000 plants so far planted in the meadow, which is named in memory of his son. The first section of the meadow was completed in 2004, and an additional planting has been installed each year since. The final planting phase is scheduled for spring 2008.

Once completed, the meadow will encompass more than four acres of gently sloping ground overlooking the Potomac River, providing a colorful habitat for a variety of wildlife.

## AHS Receives Grant to Design New Children’s Classroom

THE AMERICAN HORTICULTURAL SOCIETY has recently been awarded a \$52,000 grant from the **Trustees’ Philanthropy Fund of the Fidelity Charitable Gift Fund** to help defray costs of a design for a planned new Workshop Classroom and Teaching Greenhouse at River Farm.

As part of a larger initiative to transform the AHS headquarters into a National Center for American Horticulture, the classroom and greenhouse will be a state-of-the-art growing facility for educational projects and production of specialty crops. It is intended to serve as the primary facility in which hands-on demonstrations and instruction will take place. “This generous grant will allow us to initiate a critical phase of our overall Master Plan,” says AHS President and CEO **Deane H. Hund-**



## Seed Exchange Donation Form

LOOKING FOR AN inexpensive and easy way to increase diversity in your garden? Consider participating in the AHS Annual Seed Exchange exclusively for members. Those who send in seeds by November 1 will have first priority for seed selection. A detachable seed donation form and further instructions can be found between pages 8 and 9 of this issue.

As part of an upgrade to the Seed Exchange program this year, members will be able to view the 2008 seed list on the AHS website as well as submit seed orders electronically. Members who don't have convenient access to the Internet can still participate in the seed exchange by requesting the seed list be mailed to them. Visit [www.ahs.org](http://www.ahs.org) or call (703) 768-5700 for more information about this exclusive opportunity.

## Garden Club Bench Dedication

IN JUNE, members of the District II National Capital Area Garden Clubs, Inc., (NCAGC) generously donated a garden bench to the American Horticultural Society. According to District II Director **Evalee Ciuca**, the District II Patriotic Bench is intended to "honor those who serve to keep us safe: firefighters, policemen, emergency medical technicians, and military and civilian patriotic people."

Last year, River Farm also benefited from District II's donation of a white ash (*Fraxinus americanus*) propagated from a tree growing at nearby historic George Washington's Mount Vernon Estate and Gardens. The donations came about as a result of funding the organization received

**AHS Chief Operating Officer Tom Underwood, left, accepts the Patriotic Bench from, left to right, District II representatives Babs McClendon, Evalee Ciuca, and Rilla Crane.**



from winning the NCAGC's "Branch Out and Blossom" membership contest for two consecutive years.

The National Garden Clubs, Inc., is a non-profit organization, dedicated to providing "education, resources, and national networking opportunities for its members to promote the love of gardening, floral design, and civic and environmental responsibility." For additional information, visit [www.gardencentral.org/ncafgc](http://www.gardencentral.org/ncafgc).

## 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, 2007.*

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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 Sue Galvin, (703) 768-5700 ext. 111 or [sgalvin@ahs.org](mailto:sgalvin@ahs.org).



## Final AHS Online Seminar Scheduled for September

JUST IN TIME for fall planting, discover some top performing bulbs for your garden during the AHS's third and final online seminar—or webinar—of the year, “Bulbs That Work” on September 25. Horticulture professor and garden author **Allan Armitage** will discuss his favorite bulbous plants, with a primary focus on spring blooming varieties. The webinar will last approximately one hour, including time for questions from the audience. All AHS members are welcome to participate in this free educational opportunity. Visit [www.ahs.org](http://www.ahs.org) to enroll.

## AHS Board Member Honored at University Gardens

AHS BOARD MEMBER and Emeritus Professor of Landscape Horticulture at Ohio State University, **Steve Still**, was honored August 8 at the university's Chadwick Arboretum & Learning Gardens. In recognition of Still's 25 years of teaching at Ohio State, a 5,400-square-foot mixed garden at the entrance of the Learning Gardens was dedicated in his name. The garden was designed by English plantsman Adrian Bloom. A Steven M. Still Herbaceous Garden Endowment has also been created to help support student internships at the university gardens, and to maintain the new garden and the Arboretum's herbaceous plant collections.



Steve Still at the garden dedication

For more information, visit the Ohio State University Chadwick Arboretum & Learning Gardens' website at [www.chadwickarboretum.osu.edu](http://www.chadwickarboretum.osu.edu).

## River Farm Produce Donated to Local Food Bank

IN ADDITION TO tomatoes, zucchini, melons, and other familiar crops, *The Growing Connection* (TGC) Demonstration Garden at River Farm also features a few unusual but globally important plants such as sesame, amaranth, and peanuts this year. The garden's copious produce harvest has been going to the Capital Area Food Bank, which serves metropolitan Washington, D.C. More than 300 pounds of vegetables and fruits have been donated this year, according to AHS Education Programs Coordinator **Jessica Rozmus**, who estimates that by the end of the season another 200 pounds will be donated.

## River Farm Landmark Lost

Frequent visitors to River Farm will notice the loss of a grand tulip poplar that has graced the façade of River Farm's Estate House for some 75 years. Arborists with **The Care of Trees**, an AHS Corporate Partner and the exclusive tree care company for River Farm, recommended the tree



be removed because its trunk had become so hollow it was hazardous. The arborists believe the damage to the trunk is a result of a lighting strike decades ago.

“From looking at old photographs, we know this tree has been a distinctive feature of this property since the 1920s,” says **Tom Underwood**, AHS chief operating officer. “But our arboricultural experts ruled it was no longer stable and the safety of our visitors and staff members is our primary concern.” Underwood says that experts and AHS Board members will be consulted to determine an appropriate replacement for the tree.

Initiated in 2003 through a partnership between the AHS and the Food and Agriculture Organization (FAO) of the United Nations, *The Growing Connection* is an international program that teaches middle-school students to make proactive choices about food and nutrition. Participating schools and organizations around the world conduct experiments with vegetables and other food plants they grow in EarthBox™ containers and then share their discoveries with other participants.

“While TGC gives kids a global understanding of where food comes from,” says Rozmus, “it also exposes them to gardening by getting them involved.”

For a virtual tour of River Farm's TGC garden, visit <http://thegrowingconnection.org/ahs>.

*News written by Editorial Intern Courtney Capstack.*



## Homestead Gardens: A Garden Center that Gives Back

by Courtney Capstack

**I**F YOU GO TO Homestead Gardens in Davidsonville, Maryland, expecting another ordinary garden center, you're going to be pleasantly surprised.



Don Riddle, Jr.

“We are a destination garden center and have created a true shopping experience,” says Homestead’s founder and owner **Don Riddle, Jr.** Homestead offers elaborate plant displays, children’s activities, educational seminars, a snack bar, and even a herd of friendly llamas. And as one of the mid-Atlantic region’s largest nurseries, it also has one of the region’s largest plant selections.

### LOOKING TO THE FUTURE

Originating as a family business in 1973, Homestead Gardens, located near Annapolis, now has some 350 employees, a retail garden center located on 50 acres, and two 100-acre farms.

Living by the company motto: “It’s not where we are today that counts. It is where we are going to be tomorrow,” the staff at Homestead keeps an eye on the ever-evolving plant industry. “You might reach a certain level of success today, but that’s fleeting unless you adapt with the times,” says Riddle. “We’re constantly working to be a better company in all aspects.”

Homestead’s commitment to excellence has paid off, garnering the company numerous awards, including being the

For more information about Homestead Gardens, visit [www.homesteadgardens.com](http://www.homesteadgardens.com). To find out more about AHS’s corporate partnerships, e-mail Sue Galvin at [sgalvin@ahs.org](mailto:sgalvin@ahs.org).

first recipient of the Garden Center of the Year Award, sponsored by the Garden Centers of America (GCA). The nursery is consistently listed as one of the Top 100 Revolutionary Garden Centers in America by *Today’s Garden Center* magazine.

### A COMMITMENT TO THE COMMUNITY

Another factor contributing to Homestead’s success is its longstanding commitment to giving back to the community and the green industry.

Over the years, Homestead has served as a host site of many black tie and char-



Homestead Gardens includes two 100-acre farms with greenhouses for plant production.

itable events for non-profit organizations. Homestead also participates directly in many other charitable ventures, including Habitat for Humanity.

On a personal level, Riddle has a strong commitment to the green industry and has stepped forward in a leadership role on a national level. In addition to being the first vice chairman on the American Horticultural Society (AHS) Board of Directors, Riddle is currently president of the GCA, and has served on the board of America in Bloom.

For the last three years, Homestead has been one of the host sites for plant breeders and growers from around the world during Fashion in Bloom, a fall event that gives industry leaders the opportunity to showcase new plant introductions. Riddle played a major role in conceptualizing and developing the event, which is coordinated by the GCA.

Some of Riddle’s proudest achievements, however, relate to the role Homestead plays providing and maintaining plants in the greater-Annapolis area. “We have had a significant impact on the community to make it more horticulture friendly,” says Riddle. For example, Homestead supplies plants for Camden Yards—home stadium of the Baltimore Orioles baseball team—which is now well known for its floral displays.

Another significant contribution is through Homestead’s corporate partnership with the AHS. As part of the relationship, Homestead supplies the AHS with plants for the grounds at the Society’s headquarters at River Farm and poinsettias for its indoor holiday display. “Homestead Gardens has been an invaluable partner, helping to make River Farm a showplace for the best of American horticulture,” says **Tom Underwood**, director of member programs and COO for the AHS. “We are fortunate to benefit from Don Riddle’s strong commitment to excellence in horticulture.”

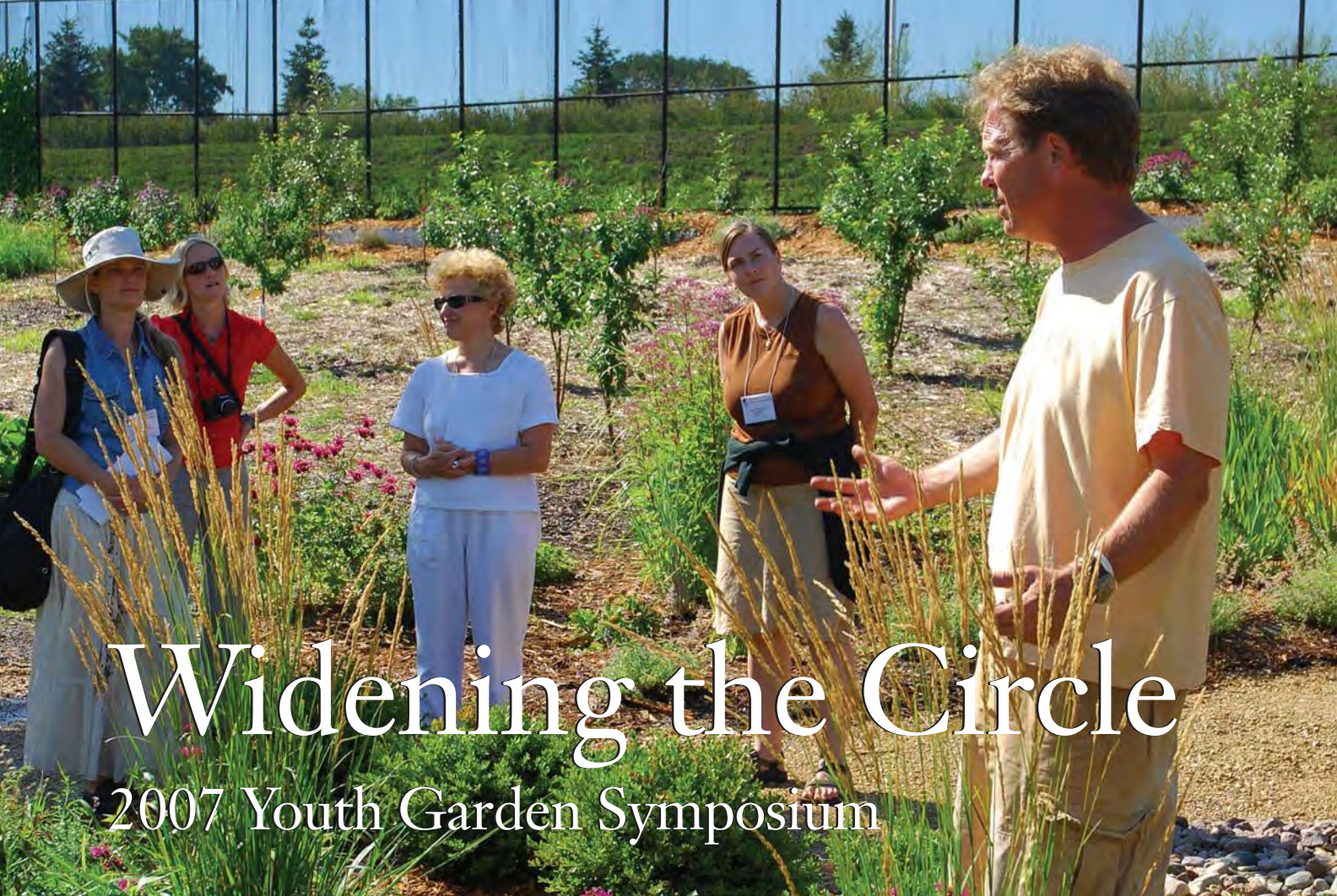
“I support the AHS and the mission that it stands for,” says Riddle. “I am a firm believer that we get back many times what we give.”

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*Courtney Capstack is an editorial intern for The American Gardener.*





# Widening the Circle

## 2007 Youth Garden Symposium



**Top:** Mark-Peter Lindquist chats with participants during a field trip to the Urban Venture Community Garden in Minneapolis. **Above:** Symposium attendees listen as AHS Education Programs Manager Stephanie Jutila introduces a speaker.

Inspiration flourished as youth gardening advocates gathered in Minnesota for the 15th AHS National Children & Youth Garden Symposium in July.

BY COURTNEY CAPSTACK

**S**HARING THE importance of children's and youth gardening programs with a wider audience was the mantra of the 15th anniversary edition of the National Children & Youth Garden Symposium (NCYGS), held in Chaska, Minnesota, in July.

More than 200 educators, gardeners, civic leaders, parents, and other participants gathered at the symposium's host site, the Minnesota Landscape Arboretum, representing 31 states, plus Washington, D.C., and a Canadian province. "The varied educational backgrounds and regional diversity of the attendees resulted in an electric event, filled with three days of collaboration and interaction that, in my experience, is unique to this symposium," says **Deane Hundley**,

American Horticultural Society president and CEO.

### A LIVELY LINEUP

Through inspiring keynote speakers, in-depth workshops, and interactive field trips, attendees were exposed to a wide-ranging arsenal of tools and techniques to apply to their own children and youth gardening programs.

As the first keynote speaker, **Eric Jolly**, president of the Science Museum of Minnesota and a noted author, challenged participants to move outside the world they know to reach children through new avenues. "The questions you ask structure the answers you're going to get," says Jolly. "Without a moment of reflection, 90 percent of people come up with the same an-

THIS PAGE: TOP: DEBBI BRUDE; BOTTOM: COURTNEY CAPSTACK. OPPOSITE PAGE: TOP: COURTESY OF ERIC JOLLY; BOTTOM LEFT: COURTNEY CAPSTACK; BOTTOM RIGHT: MICHAEL DESMIT



swers. There is a need in our culture to celebrate diversity and reach those who don't have the same answers." Jolly also encouraged the practice of storytelling, as he explained, "stories are like seeds, planted by one generation to be harvested by another."



**Eric Jolly**

Professional storyteller **Sherry Norfolk** expanded upon this idea in her keynote address, "Planting Stories in a Child's Imagination."

Norfolk explained that there are many different types of intelligence, for example linguistic, mathematic, musical, kinesthetic, interpersonal, existential, and naturalistic. "We need to widen our circle to reach all types [of intelligence]," says Norfolk. "Stories are the way our brains learn best and they address all avenues of intelligence."

**Albe Zakes**, director of public relations for TerraCycle, Inc., concluded the symposium with a dynamic presentation profiling how the six-year-old company is empowering young people through its "Bottle Brigade" recycling program. In this program, individual children and organizations collect used plastic bottles and send them to TerraCycle to reuse as containers for its fertilizer made from worm castings. The company donates five cents per bottle to the charity of the sender's choice.

## Philadelphia 2008

Mark July 24 to 26, 2008, on your calendars for next year's National Children & Youth Garden Symposium, which will be based in the greater Philadelphia area. Hosted by the **Camden Children's Garden, Longwood Gardens, Pennsylvania Horticultural Society,** and **Winterthur Museum & Country Estate**, the 2008 symposium promises to be an enriching experience. The AHS is accepting proposals for educational sessions and poster displays. For more information, visit [www.ahs.org](http://www.ahs.org).

### WORKSHOPS AND POSTERS

Expanding on the keynote speakers were a variety of educational workshops. Like the attendees, workshop instructors hailed from diverse geographical and educational backgrounds. Instructors ranged from a horticultural leader from Fairbanks, Alaska, to children's gardening advocates from Fairchild Tropical Botanic Garden in Coral Gables, Florida.

New to the NCYGS this year was a poster session profiling nine children's programs across the country. Visitors discovered how to create a self-guided activity backpack through **Lisa Davis'** poster from Denver Botanic Gardens. **Casey Sharber**, a recent graduate from the Longwood Graduate Program, depicted how public gardens can connect with high school students through FFA chapters. "The poster

session provided attendees and the public an opportunity to explore a diversity of children and youth gardening programs from across the country," says **Stephanie Jutila**, AHS Education Programs Manager. "The response has been tremendous and we look forward to expanding the poster session for future symposia."

### INSPIRATION THROUGH INTERACTION

At the NCYGS, learning doesn't stop in the classroom. Attendees gained a broad exposure to successful children's programs through tours across the Twin Cities metropolitan area. Participants chose from a visit to the University of Minnesota's Cornercopia Student Organic Farm, GardenWorks Community Gardens, the Marion Andrus Learning Center and Children's Garden at the Minnesota Landscape Arboretum, the Science Museum of Minnesota, and a behind the scenes look at the Marjorie McNeely Conservatory at Como Park. In addition to these concurrent tours, attendees visited and dined at Gale Woods Farm, a 410-acre educational farm that encourages environmental responsibility through agriculture, food production, and land stewardship.

Attendees also had opportunities to explore the beautiful host facilities and gardens of the Minnesota Landscape Arboretum. Located on more than 1,000 acres of gardens, woodlands, wetlands, and prairie, the Arboretum is the only landscape arboretum in the United States. The numerous garden exhibits established



**Above: Attendees Grace Chapman, left, and Casey Sharber compare notes. Left: Gardens like this one at the Minnesota Landscape Arboretum offered daily inspiration.**



## CELEBRATING 15 YEARS OF THE NATIONAL CHILDREN & YOUTH GARDEN SYMPOSIUM

Recognizing a national deficit in children's connections with their natural environment, the first symposium was created to inspire leaders to create activities that engage youth in the outdoors. "We also wanted these gardens and programs to plant the seed in children to become environmental stewards when they grew up," says **Maureen Heffernan**, the AHS's former education coordinator who organized the inaugural symposium. "From all the feedback I've received, the symposium continues to accomplish these goals and has significantly raised awareness about the many benefits of children's gardening programs," adds Heffernan, who is now executive director of the Coastal Maine Botanical Gardens. More than 2,500 attendees have participated in the NCYGS over the years, many of whom have gone on to develop and support children and youth gardening programs in schools, botanic gardens, and communities around the country.

throughout the arboretum demonstrated different ways home gardeners can successfully design and plant their landscapes.

Additionally, the arboretum's extensive children's programs serve as an ideal example of a public garden successfully engaging young people with gardening. The arboretum's youth education program, begun in 1983, has since grown to include about 50,000 children and families.

### YOUTH PROGRAM CENTER STAGE

One of the arboretum's most exemplary youth programs, CityFresh, made a very positive impression on attendees. Approximately 17 teenagers involved with the youth entrepreneurial program helped at the symposium, taking on duties ranging from welcoming participants and photographing the event, to arranging flowers for the symposium's tables and even leading one of the educational sessions. For many of the teens, the NCYGS was their first opportunity to attend such a major national symposium.



Top: Acres of vegetable gardens amazed attendees at Gale Woods Farm. Above and left: CityFresh staff members talk to attendees at Kaleidoscope, an urban garden organized by the Minnesota Landscape Arboretum.

During the educational session, "In Their Own Words: Urban Gardeners Tell Their Story," a panel of five teens related their experiences with the CityFresh program, giving attendees insight into the benefits of empowering teenagers in an urban garden setting. As one teenager explained, "CityFresh showed me how to get along with supervisors, how to balance work with fun, and that I actually enjoy working with kids. I was surprised at what I liked doing."

CityFresh is a prime example of the kind of creative youth programs that are

shared during the symposium. "It was an inspiration," noted **Renata Brown**, a symposium participant from Cleveland Botanical Garden. "I plan on keeping in touch with colleagues as great resources of information." **Megan Driscoll**, a staffer at the Enid A. Haupt Glass Garden in Brooklyn, New York, pledged to widen the circle among her own colleagues. "I'll be back next year, hopefully with more of my co-workers," she exclaimed.

*Courtney Capstack is an editorial intern for The American Gardener.*



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**C**OLCHICUMS (*Colchicum* spp.) enchant me. Perhaps it's because they awaken from dormancy in late summer or fall when most of the garden is winding down. Certainly part of their attraction is their botanical weirdness of blooming leafless with a tube of petal-like tissue passing for a stem, while their leaves and seedpods are a spring-only event. And I never tire of locating new varieties to grow in my garden.

My fascination with colchicums began years ago when, as a novice gardener, I mistook the four-inch-wide, foot-tall foliage emerging in my new spring garden for tulips planted by the previous owner. I waited for them to bloom so I could figure out what kind they were. It wasn't until autumn, when the dainty, crocuslike blossoms appeared, that I realized they

As summer fades and trees turn red and gold, colchicum flowers emerge to grace the garden at ground level.

BY KATHY PURDY

were *Colchicum byzantinum*. Since they had been growing in a garden that had been neglected for close to 10 years, in unamended clay, in retrospect this species was a good one to cut my colchicum teeth on. It's virtually indestructible.

Charmed, I began seeking out other selections with flowers in different shades and forms, with an eye to varied blooming

times. Now every September I eagerly anticipate the first colchicum flowers of the season. And because I've added many species and hybrids to my gardens over the years, the flower display extends for weeks.

#### WHAT'S IN A NAME?

The genus *Colchicum* is named after the ancient kingdom of Colchis, which is now part of the Republic of Georgia. The approximately 50 species of *Colchicum* are native to the temperate parts of Europe and Asia east to Turkey, Iran, and the Caucasus. A few species hail from western China and India.

Many gardeners, hearing them called by their common names, autumn crocus or meadow saffron, may not realize that despite a superficial resemblance, colchicums belong not only to a different genus than

**Producing as many as five fully double flowers per corm, *Colchicum* 'Waterlily' benefits from the support of surrounding foliage.**



crocus, but a different family as well (see “Colchicum Botany,” page 20). Other more old-fashioned names for this genus are a lot more fun: naked ladies, naked boys, and son-before-the-father—all alluding to the emergence of the leafless or naked flower stems in fall.

### OUTSTANDING SPECIES

There are so many attractive *Colchicum* species and hybrids that choosing among them can be the biggest challenge. Most flowers grow from two to 12 inches tall, and their tepals—the undifferentiated perianth segments that include both petals and sepals—are typically shades of pink, lavender, or purple; there are a few stunning white selections as well. The flowers of some species are tessellated—tepals display an interesting checkered pattern.

The following are some of my favorites. The bloom times may vary a bit, depending on where you garden. Unless otherwise indicated, these selections are rated for USDA Hardiness Zones 5 to 9 (many will tolerate Zone 4 with protection), AHS Heat Zones 9 to 1.

Among commonly available colchicums, tessellation is most distinct in *C. ×agrippinum*. John Bryan, author of *Bulbs* (Timber Press, 2002), suggests that this interspecific hybrid is likely the result of a cross between *C. autumnale* and *C. variegatum*. An early fall bloomer, its narrow lilac-pink tepals, checkered with dark purple, open almost flat. It grows three to four inches tall.

Commonly called meadow saffron, *C. autumnale* bears up to six pink flowers per corm; each grows four to six inches tall. If you're looking for a big show without having to buy many bulbs, this vigorous species, which multiplies rapidly, is a good choice. As you would expect, flowers are white in the cultivar 'Album'. The cultivar 'Nancy Lindsay' is a rich lavender-pink from the tips of the segments down through the perianth tube. It blooms the third week of September for me. Two elegant double-flowering cultivars worth growing are 'Pleniflorum', which bears rounded, pink blooms, and 'Alboplenum', a showstopper with an abundance of narrow white tepals. I enjoy the latter paired with *Aster* 'Purple Mound,' with a purple-leafed bugleweed (*Ajuga* spp.) covering the ground between them.



**Top:** The heavily tessellated flowers of *Colchicum* ×*agrippinum* grow three to four inches tall. **Above:** Although small, the delicate blooms of *C. autumnale* 'Album' are borne in abundance.

The tessellated, purplish-pink blooms of *C. bivonae* are goblet shaped and grow six inches tall. According to garden designer and horticultural consultant Russell Stafford at Odyssey Bulbs in South Lancaster, Massachusetts, gardeners in warmer

climates should check out *C. bivonae*, which is hardy only to Zone 6, as well as hybrids with tessellation that indicate *C. bivonae* parentage.

Although individually the lavender-pink flowers of *C. byzantinum* are only the size of



a large crocus and grow to a height of five inches, each corm produces a dozen or more in early fall. A prominent white line runs down the center of each tepal. The corms multiply quickly and are a good choice for naturalizing in grass. The cultivar ‘Innocence’, sometimes listed as *C. byzantinum* ‘Album’, is a lovely white-flowered selection with the same general floriferous character as its lavender counterpart.

The blossoms of *C. speciosum* are large enough to be mistaken for small tulips. They vary in color from pale pinkish-purple to deep purple, often with a white throat, and grow to 12 inches tall. There are several notable cultivars: ‘Ordu’ is less tulip-shaped than most forms of the species, also hardier (to Zone 4) and earlier to bloom. Its flowers are a soft violet with white centers. Both tepals and stem



The tulip-shaped flowers of *Colchicum speciosum* range from pale to deep pink. This species has given rise to a number of outstanding hybrids.

of ‘Atrorubens’ are a deep wine-purple. ‘Album’ bears white blooms. The corms multiply quickly.

### SPECTACULAR HYBRIDS

The first time ‘Lilac Wonder’ bloomed for me, I wondered if perhaps I didn’t plant it deep enough, it flopped so. It turns out ‘Lilac Wonder’ has a reputation for floppiness. I eventually planted some where the flowers could swoon over the edge of a rock wall. It blooms generously in mid-to late fall. The amethyst-violet flowers grow about eight inches tall.

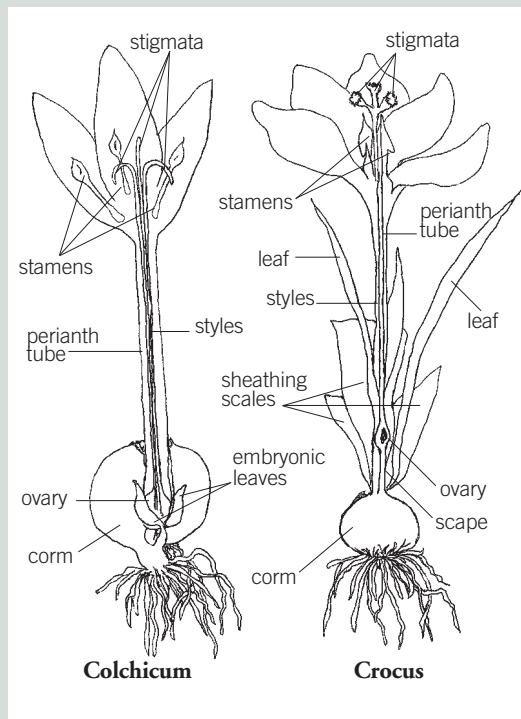
## COLCHICUM BOTANY

First, let’s get this straight: they are not crocuses. They are not even close cousins. Crocuses are in the iris family (Iridaceae), colchicums in the colchicum family (Colchicaceae). Superficially, they do look alike, and what’s more, there are a few crocuses that bloom in autumn, as well as a few uncommon colchicums that bloom in the spring. So how do you tell them apart? You’ll just have to count stamens, the male part of the flower that consists of anthers and filaments. Colchicums have six stamens; crocuses only have three.

Colchicum flowers emerge from a corm, which is a modified stem. The ovary, or seed producing part of the plant, is at the base of the corm, nestled between embryo leaves that won’t emerge until the following spring. In the fall, when a colchicum is blooming, everything you see above ground, and some of what is below ground, is part of the flower, or perianth. The corm is all the stem a colchicum has, so what

looks like a flower stem is actually a perianth tube, made of the same tissue as the perianth segments (also called tepals). The styles (female reproductive part) of the colchicum go all the way down that tube, below soil level, to the ovary at the bottom of the tube.

Starting shortly before flowers emerge, and all through the winter, colchicums are actively growing; the leaves emerge anytime from late fall to very early spring, attaining their full height about the same time as daffodils are at peak bloom. If the previous year’s flowers were fertilized and produced seed, you might see a seedpod at this time, nestled in the inner whorl of foliage. In more than a decade of growing colchicums, I’ve only seen this happen twice. The seeds, if you manage to harvest any, can take up to three years to germinate. —K.P.



I really like colchicums with purple tubes such as ‘Poseidon’, which has a robust nature and multiplies rapidly. Its large lavender-purple flowers grow six to eight inches tall, and it blooms in my garden from mid-September through early October.

With its pointed, twisted, purple-blotched white petals, ‘Harlequin’ doesn’t resemble any other member of the genus. Some gardeners have described the flowers, which appear in mid-September, as ugly, but I think they are cute.

As its name implies, the lilac-mauve goblet-shaped flowers of ‘The Giant’ are

very large. Eight inches tall and lightly tessellated, they appear in a succession of up to five per corm in September and October.

‘Violet Queen’ bears its five- to seven-inch-tall royal purple, fragrant flowers early in fall. Tepals are pointed and strongly tessellated and are marked with a white stripe down the center of each.

‘Waterlily’ is a large, double-flowered hybrid that grows five to eight inches tall. Emerging late September through mid-October, each lavender-pink flower opens wide and may have as many as 20 tepals. It’s a favorite of Becky Heath, co-owner of





The tepals of the colchicum hybrid 'Harlequin' curve inward, sometimes with an irregular twist, giving the purple-and-white flowers an unusual shape.

Brent & Becky's Bulbs in Gloucester, Virginia. "It's later blooming, double, and large, so this one really makes a statement," says Heath, "and because it's sterile, its flowers seem to last longer."

The dark secret of colchicum commerce is that when you order a certain colchicum, what you may get instead is a misidentified hybrid. Because the leaves and the flowers appear at different times for most colchicums, botanists have a difficult time identifying them in the field,

and one plant ends up with several names. Furthermore, many parts of the colchicum flower change color as it matures; the bud may emerge white and gradually take on color, the styles may change color, and tessellation may grow fainter or become more distinct. I have even observed different blossoms from the same corm blooming in deeper shades because they were subjected to a hard frost while in bud. It becomes more understandable how the corms become

misidentified after you've seen colchicums pull these tricks for yourself.

## COLCHICUM CULTURE

Although often found growing on stony slopes or subalpine meadows in the wild, most of the readily available colchicums will grow in any good, well-drained garden soil. In my garden, they thrive in both full sun and half-day sun. Where summers are hot and dry, plant them where they will have some shade during the heat of the day.

Based on my experience, any colchicum listed as hardy to USDA Zone 5 is worth trying in Zone 4, provided you have excellent drainage, which is especially critical when the snow is melting and the ground is just beginning to thaw. That is when the corms are most likely to rot.

## A DRUG AND A POISON

Colchicums are the source of colchicine, a potent and highly poisonous alkaloid compound that has been used to treat gout and some other ailments. Colchicine is also used to induce polyploidy—multiple sets of chromosomes—in breeding plants such as daylilies and Siberian iris.

Colchicine is probably what keeps deer and rodents from eating colchicums. They're poisonous to humans, too, but apparently not to slugs, which sometimes cause moderate damage to colchicum blossoms.

Conversely, in warmer areas with plentiful rainfall, corms can rot in the summer if they lack the requisite drainage. Heath notes that colchicums are not bothered by the heat and humidity typical of the mid-Atlantic growing seasons. "What may bother them is having too much water when they are dormant," she says. Generally, soil that drains well enough for dianthus or lavender will make colchicums happy as well.

If you order bulbs through the mail, the catalog will usually specify a deadline earlier than that for its other offerings, because the corms will often bloom without soil if shipped with traditional fall bulbs. If this happens, the corms can still be planted. Be sure to cut back the old bloom first. The leaves will come up in spring, and it will



Above left: The best time to plant colchicum corms is when they are dormant in midsummer. Above right: The wide, straplike foliage of colchicum emerges in spring. Seed pods from the previous autumn's flowers have formed in the center of this whorl of leaves.





flower the following fall. To avoid having to delay your gratification for a season, order early and plant promptly.

Plant the corms as soon as they arrive, setting them so that the broadest part of the corm is about three inches below the soil level. In most species and hybrids, flowers emerge from the corm between late August and November, although a few species bloom in winter or spring.

In early spring, new leaves will emerge. Depending on the species, these can last well into summer. Once they wither, the corm enters dormancy and water should be withheld. This is the best time to divide the corms. Many colchicums will multiply rapidly, especially when divided regularly.

## COLCHICUMS IN THE GARDEN

The most difficult part of growing colchicums is deciding where to put them. *Colchicum* foliage emerges in very early spring—as early as crocuses and even earlier in warmer climates. Depending on the variety, leaves can be up to six inches wide and a foot long. Although some people like the spring foliage, it definitely looks ragged as the plants move towards dormancy. And then they disappear altogether, but you still have to leave room for the flowers that will emerge in fall.

In *Essays on Gardening in a Cold Climate* (Whitfield Press, 1998), Brian Bixley describes interplanting colchicums with *Geranium himalayense* and *G. endressii*. The ground-covering geraniums provide bloom and foliage generous enough to hide the dying colchicum leaves. Bixley suggests mowing the geranium foliage in



**Top:** The soft-purple flowers of *Colchicum byzantinum* are particularly attractive interplanted, as they are here in the author's garden, among purple-leaved groundcovers such as bugleweed. **Above:** Colchicums are also attractive when naturalized in lawns.

late summer so that the display of colchicum blossoms is unobstructed. The geranium foliage grows back as the colchicum flowers die off.

Ellen Hornig of Seneca Hill Perennials Nursery in Oswego, New York, planted her colchicums against “a drift of my fanciest silver-centered, blue-leaved *Arisaema sanguineum*.” This pairing has multi-season benefits. “When the colchicums bloom, their color goes well with the blue arisaemas; before they bloom, the arisaemas will draw the eye up and away from the absent colchicums; and in spring, before the arisaemas emerge—they come up in July—the colchicum foliage will distract from the absence of the arisaemas.”

I've achieved a similar effect by positioning colchicum corms diagonally in front of daylilies. The foliage of both

## Resources

**Autumn Bulbs** by Rod Leeds. Batsford Publishing, London, 2005.

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

**A Handbook of Crocus and Colchicum for Gardeners** by E.A. Bowles. Van Nostrand, New York, 1952.

**The Pacific Bulb Society (PBS).**  
[www.pacificbulbsociety.org](http://www.pacificbulbsociety.org)

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**Brent and Becky's Bulbs**, Gloucester, VA. (877) 661-2852.  
[www.brentandbeckysbulbs.com](http://www.brentandbeckysbulbs.com).  
Online and print catalog free.

**Fraser's Thimble Farms**, Salt Spring Island, BC, Canada. (250) 537-5788. [www.thimblefarms.com](http://www.thimblefarms.com).  
Catalog online.

**McClure & Zimmerman**, Friesland, WI. (800) 883-6998. [www.mzbulb.com](http://www.mzbulb.com).  
Online and print catalog free.

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

plants emerges early, but the colchicum leaves grow faster. By the time the daylily leaves are fully extended, the colchicum leaves are dying back. In fall, when the colchicums bloom, I cut down the daylily foliage, which is usually looking ratty by then.

I might never have started growing colchicums if there hadn't already been some here when we moved in, but now I love walking around each autumn and discovering them all over again. At a time when the rest of the garden has a “been there, done that” look about it, colchicums make their appearance, boldly naked and confidently marching to their own natural rhythm.

*Garden writer Kathy Purdy lives in Chenango Forks, New York.*





# *a Gem of a Garden* BY PAM BAXTER



A new botanical garden on the southern coast of Maine integrates innovative designs, plantings, and artwork in a stunning natural setting.

**S**OME VISITORS to the Pine Tree State never get past the crowded beaches and romantic rocky outcrops along the southernmost shores. But for those whose spirit of adventure lures them a little farther up the deeply notched coastline, an inspired jewel awaits: the Coastal Maine Botanical Gardens (CMBG).

The gardens provide visitors with a complete immersion in the Maine landscape, with trails through acres of pristine woods along the tidal shoreline, and a central Great Lawn distinguished by a dramatic outcropping of the underlying schist bedrock.

**Above:** Titled 'Helios', this illuminated glass sculpture by Eric Hopkins is doubly striking reflected on the surface of a pond. **Top:** The rose and perennial garden in full summer bloom.



## Getting There

The Coastal Maine Botanical Gardens is located on Barter's Island Road, in Boothbay, Maine. For more information and directions, visit [www.mainegardens.org](http://www.mainegardens.org) or call (207) 633-4333.

The garden is a participant in the AHS's Reciprocal Admissions Program (RAP), so AHS members receive free admission and a 10 percent discount in the gift shop.

This brand new garden in picturesque Boothbay, which officially opened in June 2007, brings a world-class garden to a region that previously had no major horticultural destinations north of Boston. The 248-acre landscape is one of only a few botanical gardens in the continental United States that embraces a coastline.

### THE VISIONARIES

In 1991, the garden was just a dream shared by a small group of Maine residents who imagined what educational, economic, and cultural benefits would result from creating a botanical garden in coastal Maine.

Five years later, this grassroots group, who are now referred to as the Founders, pooled their resources—a few used their homes as collateral for a loan—and purchased a 128-acre parcel of land in Boothbay. The property included wonderful topography and ecological features such as vernal ponds, rock ledges, and the tidal shoreline. An archaeological survey indicated the site had never been farmed or even inhabited. “It contained the best of Maine and was a very exciting palette to work from,” says Maureen Heffernan, the garden's executive director.

In 2005, the Gardens received a donation from the Pine Tree Conservation Society of an additional 120 acres of undeveloped adjacent land. The acreage included another quarter-mile of shoreline, bringing the total to nearly one mile.

To get the garden off the ground in 2004, the founders recruited Heffernan, who was most recently director of education and public programs at the Cleveland Botanical Gardens (CBG), where she was responsible for coordinating the design and construction of CBG's Hershey Children's Garden. Prior to that she was education coordinator for the American Horticultural Society from 1990 to 1995.

In addition to Heffernan, the creative vision for the garden represents a collaboration of international and local talent.

veloping the planting plans for all the gardens. Terrence DeWan & Associates, from Yarmouth, Maine, helped refine the designs and coordinate the project's landscape construction.

Heffernan points out that the designers have been careful to maintain as much of the natural feel as possible, placing paths around rock ledges, drilling lights into boulders and leaving all the roads unpaved. Environmentally responsible construction methods were used throughout the gardens. Even the visi-



Left: CMBG Executive Director Maureen Heffernan inspects the large reflecting basin carved by David Holmes for the Vayo Meditation Garden, above.



tor's center incorporates “green” building features, including bamboo flooring and natural lighting.

### EXPERIENCING MAINE

The Maine experience begins the moment guests step out of their cars. In the parking area, visitors find themselves in a surprisingly intimate space—a cluster of graveled parking “pods” that are tucked discreetly into the surrounding woodland. “You have a garden experience just walking up to the visitor's center,” says Heffernan.

Visitors emerging from the elegant shingle-style visitor's center immediately encounter the Great Lawn and a variety of themed ornamental gardens, includ-

Landscape architect Herb Schaal, of the San Francisco-based international design firm EDAW, Inc., created the master plan for CMBG's main campus. Bruce Riddell, a landscape architect from Bar Harbor, Maine, designed the Haney Hillside Garden and the Vayo Meditation Garden and was responsible for de-





For visitors, the garden experience begins in the parking lot, where naturalistic plantings blend in with the native pine trees on the walk up toward the visitor's center. Above: Irises flourish at the edge of Slater Forest Pond. Right: The 9,350-square-foot visitor center contains meeting, classroom, office, and research space, a café, and gift shop.



ing a rose and perennial garden with hardy ornamentals that survive and even thrive in the harsh winters and short growing season. Adjoining this is Slater Forest Pond, a tranquil water feature home to waterlilies, irises, and other moisture-loving plants. Nearby is the newly installed Burpee Kitchen Garden, where geometric beds showcase a medley

of vegetables, herbs, fruits, and flowers.

Leaving the formal area, guests can take a meandering path to various garden destinations along the shoreline, starting with the wooded Haney Hillside Garden. Here the rockiness of the Maine landscape is evoked with stone benches, terraces, and a scenic waterfall. Tucked in among the stonework is a colorful, richly-textured

blend of native and non-native plants.

Sheltered below the canopy of weeping Norway spruce (*Picea abies*), weeping Serbian spruce (*Picea omorika*), pines, dogwoods, viburnums, and rhododendrons are herbaceous plants such as ghost fern (*Athyrium 'Ghost'*), Siberian bugloss (*Brunnera macrophylla*), and bunchberry (*Cornus canadensis*).





**Top:** Slater Forest Pond provides visitors a place for quiet reflection. **Above:** Marking the head of a fern-flanked woodland trail, this enigmatic stone face is one of eight at CMBG created by stone artisan William Jacobs.

A step or two further down the gently sloping trail is the Vayo Meditation Garden, a tranquil setting that melds the coastal elements of stone, sea, and sky.

At the end of the Shoreland Trail is the one-acre Rhododendron Garden. Walkers can then loop back to the visitor's center via the Birch Alleé. Along the way, digressions include the fern walk and access back down to the Shoreland Trail. "The way it's been designed provides the best of both worlds," says Heffernan. "You can enjoy formal ornamental gardens as well as trails through pristine woodlands lush with moss and knee-high ferns."

In addition to highlighting native plants, Heffernan plans to showcase unusual or rare species from around the world. When the gardens are completed, they will contain one of the largest hardy Kousa dogwood (*Cornus kousa*) collections in the country. [See sidebar, page 27.]

### ENCOURAGING ART TO FLOWER

"My vision for this place is not just as a garden, but a center for culture as well," says Heffernan. With this in mind, she commissioned artists to create sculptures

for placing throughout the grounds.

Some of the pieces deliberately reflect Maine's botanical and historic identity. For instance, an enormous metal pine cone greets visitors a short distance from the entrance gate. (The white pine, *Pinus strobus*, is Maine's state tree.)

A glass column, titled "Lighthouse," is mounted on a pile of stones in the Kitchen Garden. Its facets hold and reflect light in a way that brings the image of a lighthouse on a rocky shore into the interior landscape.

In the center of the Meditation Garden, an enormous polished granite basin holds water that reflects the color of sea and sky and provides a perfect focal point for contemplation.

Not all the sculptures at CMBG were commissioned. One morning, while the gardens were still under construction, workers discovered carved stone faces that had been scattered throughout the trails. Crafted on a whim by Maine stoneworker William Jacobs, who also created many of the garden's walls and paved areas, these haunting faces seem to acknowledge the presence of spirits of trees, earth, and rock.



They were immediately embraced by Heffernan and allowed to stay.

In addition to the permanent sculptures, Heffernan plans to bring music and theater to the center, and to host outdoor sculpture shows.

## PRESERVATION AND RESEARCH

From CMBG's inception, preservation and stewardship of the natural landscape have been a high priority. The result is that out of the entire 248-acre tract, a total of only about 10 acres will be developed.

Part of CMBG's mission is to serve as an educational resource. The Center houses a horticultural lending and research library containing more than 2,000 botanical and horticultural texts. Future plans include equipping the library with information technology that will allow access to horticultural libraries worldwide.

An internship program is currently in place, which enables horticulture students to gain hands-on experience in garden and grounds management and public garden educational programming. From CMBG's inception there have been on-site programs for children, and lectures, classes, workshops, and field trips for adults, all designed to help participants acquire practical skills for gardening in Maine.

The Education Center also provides space for ongoing research, including the continuation of a 10-year study of the native pink lady-slipper orchids (*Cypripedium acaule*) and hardy ferns that grow on the property.

## LOOKING FORWARD

The first phase of the design and implementation came with a price tag of \$8.5 million. After successfully completing that fundraising campaign, CMBG has launched a new \$7.5 million campaign to raise funds to build new gardens and to begin an endowment fund.

Over the next several years, plans are for two major gardens to be added to the main campus. People of all physical abilities will be able to access and enjoy the Garden of the Five Senses, and the Children's Garden will highlight well-known Maine authors of classic children's books including E. B. White (*Charlotte's Web*), Robert McCloskey (*Blueberries for Sal*), and Margaret Wise Brown (*Goodnight Moon*).

## BUILDING A FIRST-CLASS DOGWOOD COLLECTION

One of the CMBG's hallmarks is its small but growing collection of Kousa dogwoods (*Cornus kousa*). Executive Director Maureen Heffernan is quick to point out that "collection" is a loose term because the trees are not clustered in a specific area of the gardens, but rather are scattered throughout the site where they do best: in the light shade at the edges of the existing woodlands.

Running like a thread throughout the Gardens, the trees, native to Japan, Korea, and eastern China, provide four-season interest. The blooming season is long

—from June through early August—and the reddish-orange fruit and brightly colored foliage provide a striking display in October and November. The vase-like shape of the trees and the jigsaw pattern of the bark add visual and textural interest in winter.

In addition to their long bloom period, which coincides with peak visiting season in summer, the Kousas have another advantage: they are highly resistant to dogwood anthracnose, a fungal disease that plagues their North American relative, flowering dogwood (*Cornus florida*).

"We wanted to find something that would be unique to us," says Heffernan. "And from what we understand, there isn't a major public garden in


the Northeast that has an extensive Kousa collection." The idea started with the donation of several Kousas from former CMBG Board member Merlin Smith, a long-time Kousa enthusiast. "Merlin has access to many cultivars that are hard to find," says Heffernan. "Over the years, he has given us a number of Kousas, and I soon learned to appreciate their beauty and value in the landscape."

At present, the collection includes 11 cultivars: 'Wolf Eyes', 'Temple Jewel', 'Square Dance', 'Madison', 'Lustgarten Weeping', 'Milky Way', 'Satomi', 'Gold Cup', 'Beni Fuji', 'Summer Games', and 'Blue Shadow'. "Eventually we'd like to put together one of the larger collections in the country," says Heffernan. —P.B.



Kousa dogwoods, like this one in summer bloom in the Rose and Perennial Garden, grow throughout the CMBG.

Heffernan's goal has always been to make the CMBG a world-class horticultural center, and the gardens appear to be well on their way. "The garden is a treasure," says Katy Moss Warner, AHS's president emeritus. "The plantings complement the natural landscape and provide insight into the plants and

plant combinations that are suited to this rugged northern climate. It's a must-see garden that promises to be even more compelling as the additional garden areas are created." 

Garden writer Pamela Baxter lives in West Chester, Pennsylvania.



With patience and proper training, an espalier can become a stunning feature in the landscape.

# *the art and science of* Espalier

BY LEE REICH



I'LL ADMIT it upfront—I'm an espalier purist, a condition I blame on having seen too many nearly perfect espaliered apple and pear trees in northern Europe. But even a purist like me will allow that espaliers needn't be restricted to apples and pears.

Espalier (pronounced es-PAL-yay) is the training of any plant, but very often a fruit plant, to an orderly, usually geometric and usually two-dimensional, form. The word is derived from the Old

French *aspau*—meaning “a prop”—and most espaliers must, in fact, be propped up with stakes or wires.

Espalier had its formal beginnings in Europe in the 16th century, when fruit trees were propped near walls to take advantage of the extra warmth there. Espalier is still a nice way to dress up a wall or even to create a living wall. If your garden gravitates to the fanciful, you may want to consider gracing it with a three-dimensional espalier.

Creating and maintaining an espalier is not a low-maintenance proposition. Despite the frequent attention demanded by an espalier, caring for one is no great hardship. The trees rarely grow large, so can be cared for with your feet planted squarely on terra firma. And while pruning must be frequent, the cuts are small and quickly done, in many cases requiring nothing more than your thumbnail. Maintenance of a purely ornamental espalier, especially when such



a plant does not bear flowers or fruit, entails nothing more than repeated clipping of wayward stems.

Espalier is for gardeners who find great pleasure in the process rather than just the end result of gardening. For me, espalier is also where art melds with science to create a plant that pleases the eyes and, if a fruit plant, also the palate. When all goes well, every stem on a well-grown, fruiting espalier remains prominent and in order year 'round, and during the growing season is furnished throughout its length with flowers and then fruits. Such fruits, bathed in abundant sunlight and air, are luscious, large, and full-colored.

And that's where I'm a purist: Too many fruiting espaliers that I see are attractive in

pruned and bent. The physiology behind plants' responses to these manipulations has been elucidated only to some degree. Pruning response depends on time of year, growth stage of stem, degree of cutting, species, and, in some cases, even the particular variety of plant.

Generally, shortening a shoot in winter or spring awakens some of the remaining buds along that stem to grow out into new shoots. Shortening a shoot in summer, on the other hand, elicits either no response, a response delayed until the following season, or the development of fruit buds along the remaining portion of the shoot. But the climate, perhaps the latitude, and the vagaries of the local weather also can influence plant response.



**Above:** Pears espaliered to a wooden support at Colonial Williamsburg in Virginia occupy minimal space compared to standard pear trees. **Opposite page:** Pruned for form but not fruit, this apple tree benefits from the warmth of a wall.

winter, their branches bent to comely forms. Once the growing season gets underway, however, that form is obscured by a plethora of new shoots adorned by only occasional flowers and fruits.

### PREDICTING PLANT BEHAVIOR

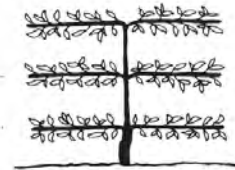
Caring for flowering and fruiting espaliers requires more know-how than caring for espaliers grown merely for their stems and leaves. This is because flowers and fruits develop in response to how branches are

In all plants, stems that are most vertical tend to be most vigorous, particularly at their highest points; they develop fewer flowers or fruits compared to the more fruitful and weaker growing horizontal stems. Your job as an espalierist is to create a pretty plant and find a happy medium between growth and fruiting by playing around with the orientation of the branches. You can make a stem more vigorous by merely staking it upright, or more fruitful by bending it downward.

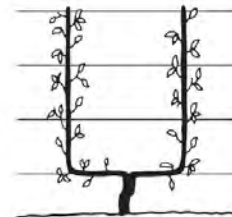
## Espalier Shapes



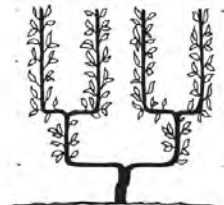
Vertical cordon



Horizontal palmette



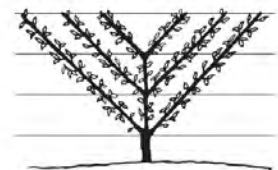
U-palmette



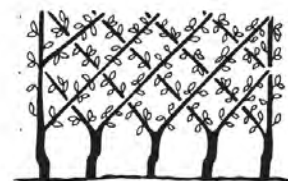
Double U-palmette



Fan



Oblique palmette



Belgian fence



Furthermore—and important in “building” your espalier—vertically oriented branches tend to grow fewer, but longer, side shoots while horizontally oriented branches tend to grow more, but shorter, side shoots. And pinching out the tips or various degrees of shortening a shoot can slow or direct new growth.

### SOME SHAPES

An espalier consists of main stems, called **leaders**, sometimes with subordinate arms or ribs, and branches, which arise directly from the leaders or from the ribs or arms. Branches are temporary, and the trick in growing an espalier is to minimize branch growth, so as not to detract visually from the leader (or, if present, arms or ribs), while maximizing fruiting.

The simplest form for an espalier is a single stem, also called a **cordon**. Vertical cordons can be set a mere 18 inches apart in a row, so are useful for growing many varieties of a fruit in a small space. Or, a cordon can be trained horizontally to border a path or edge of a garden.

The cordon is best suited to plants that bear fruit on **spurs**—stubby, long-lived stems that elongate only a fraction of an inch per year—so that the cordon looks like a cordon, rather than a porcupine. Among common fruits, apples and pears, and, to a lesser extent, plums, make good cordons. To counteract the tendency towards top-heavy growth due to apical dominance of a vertical stem, single cordons are commonly planted and grown at an angle. This encourages uniform budbreak and growth along the length of the cordon.

Now suppose you were to terminate that single stem of a vertical cordon near ground level and split it into two leaders, which turn away from each other before growing vertically again. You now have a “**U palmette**.” Split those two vertical leaders of the U again and you have a “**double-U palmette**,” increasing the spread and yield from a single plant—and also changing the design, of course.

There exist many variations on this theme. The central stem could have two of its side branches grow out into a wide U, then continue upwards to have another two side branches grow out into a less wide U, and so on, with increasing height. Or, the central stem could grow up to the top

## MAKING AN EASY RED CURRANT ESPALIER



Despite some climatic challenges, there’s no need to toss in the espalier towel here in the United States. Beautiful and functional forms can be created easily where flowering and fruiting are not also the goals. And even where fruit is desired, some plants do espalier more reliably (and more easily) than apples and pears.

Red currants (*Ribes rubrum*)—or white or pink currants (*R. petraeum* and *R. sativum*)—are my recommended fruiting candidates (for more plants that can be espaliered, see “Ornamental Espalier Options,” page 32). Because currants (*Ribes* spp.) are the alternate host of white pine blister rust, a serious fungal disease of five-needled pines, some states have restrictions on growing them. Check with your local Cooperative Extension service for details.

My red currants grow as T-shaped espaliers along the fence of my vegetable garden. Training to this form is straightforward and once development of the basic form nears completion, which takes a couple of years, only twice yearly maintenance pruning is needed. Summer pruning the mature plant entails nothing more than cutting all shoots growing off leaders back to five inches in late June which, in my garden in the Northeast, is when the very first fruits show a hint of color. The second pruning takes place in late winter, when I further shorten each of those branches to an inch.

Red currants bear fruit laterally on one-year-old stems and on spurs on older wood, so it is easy to see why the above pruning can keep a red currant espalier neat and fruitful at the same time. On the other hand, why don’t the shortened shoots resprout following summer pruning? What would be the effect of earlier pruning, which would keep the plant even neater between spring and early summer? Such questions are among those that make experimenting with any espalier interesting, even as the plant provides gustatory and aesthetic pleasure.

—L.R.

PHOTOGRAPHS ON THIS AND OPPOSITE PAGE BY LEE REICH





The author provides early espalier training for a red currant by shortening or heading back the leader and removing unwanted lateral stems.



For a Y- or U-shaped espalier, select a pair of leaders on opposite sides but ideally close together on the main stem.



Young leaders are trained horizontally by tying them to bamboo canes that, in turn, will be tied to a wooden or wire framework.



Training apples in the oblique cordon style affords a close spacing, with as little as 18 inches between plants, so many varieties can be grown in a limited space.

of the plant, along the way sending out tiers of horizontal leaders growing off to the left and to the right. (This latter form is often called a “horizontal palmette” or, if the side arms angle upwards, an “oblique palmette.”) Or the central stem could split into a broad U with horizontal tiers of leaders growing outwardly from each upright of the U.

Other shapes of espalier have been devised to overcome the potential hazard of apical dominance. One popular form is the “fan,” in which the central stem terminates low in the plant, dividing into two leaders that angle upwards and outward. Off each of these leaders, above and below, grow permanent ribs, with fruiting spurs or temporary fruiting branches growing from them. The number of ribs, and just how vertically they are allowed to grow, depend on the inherent vigor of the plant. Building up the lower and outside parts of the fan first keeps the potentially most vigorous part—that which is highest and in the center—from overtaking the rest.

Mention should also be made of espaliers that create an effect en masse, from plants lined up and overlapping in a row. Among the most popular of such designs is the **Belgian fence**, a living latticework of branches. With some designs, adjacent branches actually graft together so that the espalier eventually becomes self-supporting.

## PLANT TRAINING

Training an espalier is just like training any other plant. Shortening a stem—called a “heading cut”—stimulates branching as remaining buds grow into new shoots. Total removal of a stem—a so-called “thinning cut”—gets rid of unwanted growth without localized response.

No matter what the design, allow about 12 inches between leaders. Wherever one leader is to divide into a Y or a U, the ideal is to select two leaders that are growing on opposite sides yet near each other along the stem. A plant might already have some suitably positioned shoots, or they can be induced with heading cuts just above where bifurcations are wanted.

As a young espalier develops, shorten its leader or leaders each winter. Reducing a leader’s length by about a quarter of the previous year’s growth—even more on weak shoots, to channel energy into fewer buds—keeps buds along the stem active. When a leader reaches the desired length, cut it back each year to within an inch or so of the previous season’s growth.

Your thumbnail is a useful “tool” during training. Pinching can hold back a shoot trying to outgrow others. Pinching back the tips of developing leaders when they reach about a foot, and again each time they produce about a foot of new growth, also keeps buds lower on the shoot active, avoiding “blind” wood and



## ORNAMENTAL ESPALIER OPTIONS

The following are just a few of the many ornamental plants that can be effectively trained as espalier.



*Poncirus trifoliata*

- Camellias (*Camellia japonica*, *C. sasanqua*)
- Cornelian cherry (*Cornus mas*)
- Cotoneasters (*Cotoneaster* spp.)
- Crabapples (*Malus* spp.)
- Flowering cherries (*Prunus* spp.)
- Flowering pear (*Pyrus calleryana* cultivars)
- Flowering quince (*Chaenomeles* spp.)
- Ginkgo (*Ginkgo biloba*)
- Hardy orange (*Poncirus trifoliata*)
- Japanese holly (*Ilex crenata*)
- Japanese maple (*Acer palmatum*)
- Kousa dogwood (*Cornus kousa*)
- Lindens (*Tilia cordata* and *T. americana*)
- London plane tree (*Platanus ×acerifolia*)
- Magnolias (*Magnolia grandiflora*, *M. stellata*, *M. ×soulangeana*)
- Pyracanthas (*Pyracantha* spp.)
- Viburnums (*Viburnum plicatum* var. *tomentosum*, *V. prunifolium*)
- Winter jasmine (*Jasminum nudiflorum*)
- Witch hazels (*Hamamelis* spp.)
- Wisterias (*Wisteria* spp.)
- Yews (*Taxus* spp.)

reducing or even eliminating the need for dormant heading of the leader(s).

Typically, leading shoots of an espalier are tied to bamboo canes that, in turn, are tied to the wooden or wire framework that supports the plant. By tying a shoot to the cane rather than directly to the framework, the shoot can be kept ramrod straight and the cane to which it is lashed can be fixed at any desired angle to regulate its vigor. For example, if an espalier is to have two horizontal arms, you would initially hold these arms at an upward angle to keep growth moving along—the more upward-pointing, the faster the growth. As the arms approach full length, gradually lower the canes to slow growth and increase the development of side branches and fruit buds. All that needs to be done is to untie the cane from the framework, and then, with the arm still firmly lashed to it, retie it at the desired angle.

Another way to balance vigor on a growing shoot is to lash all but its end to its horizontal support. The free ends of the shoots then do what they are naturally inclined to do—turn upward—and that upward orientation keeps the growing tips vigorous. As the shoot elongates, tie older portions down to the support.

### MAINTAINING AN ESPALIER

It's important to maintain the older parts of an espalier even as the younger parts are in training. On those older parts, branch growth needs to be controlled so that the tracery of the leaders remains visually prominent and neat without sacrificing numbers or quality of flowers or fruits. Just how to do this depends on the particular plant's growth habit. Peach trees, for example, fruit only on one-year-old wood, so an ample supply is needed each year for the following year's flowers and fruits. Apple trees, in contrast, flower and fruit on spurs, so they need little invigoration.

No matter what the plant, pinch back or cut away any shoots growing perpen-

dicular to the plane of an espalier. Also cut away overcrowded branches. If everything works well and your fruiting espalier is thoroughly clothed with flowers, you may have to thin the fruits that follow, depending on the kind of fruit.

The specifics of maintaining an espalier vary with kind of fruit plant, the variety, possibly even geographical region. It is especially the vagaries of climate that, in my opinion, are responsible for so many apple or pear espaliers falling short of expectations—*my* expectations, at least. The stems look perfect throughout winter, but come spring and summer, they are insufficiently



**A heading cut shortens the stem and stimulates the development of new shoots.**

clothed in flowers and fruits, and overdressed in sprouts that obscure the form.

### THE APPLE ESPALIER

Apples and pears are the most common plants chosen to espalier—and the ones for which response is most variable. When all goes well, their growth habit of bearing flowers and fruits on short spurs makes them ideal for showing off flowers, then fruits, along with the tracery of their stems. Many different espalier pruning strategies have been devised for these fruits.

Among the most elegant systems is one devised at the end of the 19th century by Louis Lorette, curator and professor of the Practical School of Agriculture at Waggonville, France. The Lorette system, which





Trained against a wall as a horizontal palmette espalier, this apple produces an abundance of fruit at a height that is easy to reach for harvesting.

produces spectacular results in terms of beauty and fecundity, involves pruning branches as they become pencil-thick, about a foot long, and woody at their bases back to the whorl of leaves at their bases. These whorls—in northern France, at least—become fruiting spurs.

Sad to say, over much of the United States, pruning with the Lorette method

often results in either rampant regrowth that gets winter injury, or in nothing more than dead stubs.

Other systems of creating apple and pear espalier exist. The British devised their own system, the three-bud system of pruning apple espaliers, the essence of which is to cut back young branches, in winter, to three buds (hence the name).

A modification of the Lorette system in which the tips of branches are pinched when they are half woody and about a foot long, then shortened to about an inch two weeks later, has successfully quelled growth and set up fruit buds in New Zealand.

In the northeastern United States, a similar result has been achieved by shortening any branches longer than a foot back to a quarter of an inch in the middle of August. This latter pruning is supplemented by winter pruning, when regrowth and all vertical sprouts are cut back. Of course, an espalier that spends the bulk of summer clothed in spiky branches is not particularly neat, designwise.

In Minnesota, floriferous, compact espalier apple trees have been created using dwarfing Bud 9 rootstocks and pruning—on June 1st, July 1st, and August 1st—any branches longer than eight inches back to five leaves, and any sub-branches longer than eight inches back to



The form of an elegant Lorette winged pyramid espalier is displayed to advantage with a dusting of snow.

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■ Espalier consulting services and wholesale fruit tree nursery.

**Katherine Joy Aby**, Edina, MN. [www.espalierservices.com](http://www.espalierservices.com).

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two leaves (counting the whorl of leaves at the base of a shoot as a single leaf).

The point is that there are many ways to espalier an apple tree. To my mind, none of the techniques that I have observed over much of the continental United States are wholly satisfactory—at least compared with what I've seen in northern Europe during my travels and through the old photographs of Louis Lorette's work.

Yet with more research and networking among espalier practitioners in different regions, I believe there is an opportunity not only to keep this venerable artform alive, but to develop improved techniques that are better suited to 21st century American gardens and gardeners.

*Lee Reich is a garden writer, photographer, lecturer, and consultant based in New Paltz, New York. His most recent book is Uncommon Fruits for Every Garden (Timber Press, 2004).*



# Woodland Saxifrages

These charming plants are an elegant addition to the woodland or shade garden.

BY C. COLSTON BURRELL

IN HIS CLASSIC *Rock Gardening*, H. Lincoln Foster wrote that “no rock garden, raised bed or alpine house would be complete without representatives of [the] worldwide genus [*Saxifraga*].” Indeed, saxifrages are inextricably tied to rock gardens, even by virtue of their botanical name, which means rock breaker, from the Latin roots *saxum*—“rock”—and *frangere*—“to break.” I would add that no woodland garden or shaded rockery is complete without at least one of the charming species that thrive in woody soil and shade.

The genus *Saxifraga* contains 450 species worldwide, dispersed across the continents of Asia, Europe, North America, and Andean South America, primarily in alpine areas. China alone has 216 species of which 139 are endemic. Flowers are five-petaled and of two primary shapes, either radially symmetrical and starlike, or irregularly shaped with three short erect and two long declined petals. They are carried in compound panicles or cymes. Most have rounded to spatulate (spoon-shaped) leaves with pronounced teeth, though a few are scalloped. The foliage is somewhat succulent and often deciduous, though a few species are evergreen.

Traditionally, it is the alpine species that cause rock gardeners to wax poetic about saxifrages, but our native early saxifrage (*S. virginiana*) moved garden writer Bebe Miles to declare in *Wildflower Perennials for Your Garden* that “[saxifrages] from European sources and those native to the western mountains are the delight and the despair of the advanced rock gardener, for many are not easy to make at home outside their alpine homes. This easterner is the exception.” Her enthusiasm for these delicate forest dwellers is shared by gardeners who favor plants of easy culture and who appreciate subtle beauty. While many of the woodland sax-



Spring-blooming *Saxifraga stolonifera* forms an evergreen groundcover in shady gardens.

ifrages flourish in the wild on mossy rock ledges and along streams, most perform equally well if offered suitable garden sites.

## NORTH AMERICAN NATIVES

Yellow mountain saxifrage (*Saxifraga aizoides*, USDA Hardiness Zones 2–7, AHS Heat Zones 7–1) spreads dense mats of somewhat succulent linear foliage over moist to wet rocky ground in northern North America as well as across Eurasia. This boreal species is prized for its swarm of yellow, red-spotted flowers on three- to four-inch stems, but is difficult to grow except where nights are cool and the soil remains evenly moist.

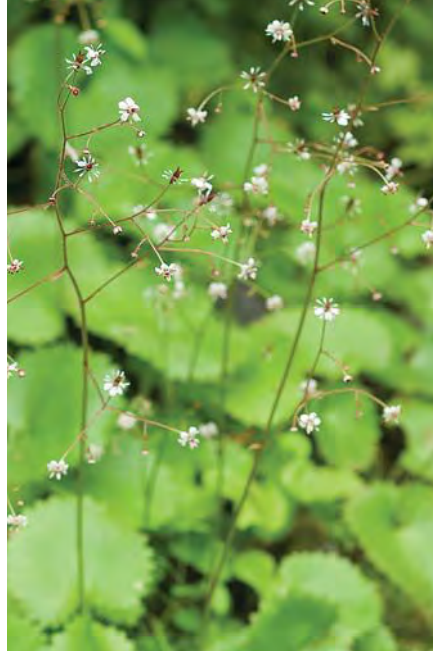
Golden eye or Carey’s saxifrage (*S. careyana*, Zones 5–8, 8–5) and Carolina saxifrage (*S. caroliniana*, Zones 5–8, 8–4) are superficially similar, with coarsely

toothed, broadly spatulate leaves arrayed in basal rosettes beneath airy sprays of small white flowers that bloom in late spring. Both are rare in the wild within their overlapping ranges in the southern Appalachians. Growing six inches to a foot tall, they thrive on wet, mossy rock outcroppings in full shade to full sun.

Michaux’s saxifrage (*S. michauxii*, Zones 4–8, 8–4), named for the French botanist and explorer, is a denizen of moist to wet rock outcroppings of the southern mountains. The bronzy-green, often garnet-tinted, foliage is narrowly spatulate and coarsely toothed, giving rise to an alternate common name of claw saxifrage. Flowers hover over the foliage in open sprays in late spring and early summer.

Brook saxifrage (*S. odontoloma*, syn. *S. arguta*, Zones 6–9, 9–1) spreads open





From left to right: *Saxifraga aizoides*, *S. odontoloma*, and *S. virginiensis* are three saxifrage species native to North America.

rosettes of pinked, silver-dollar-sized rounded leaves along mossy stream banks and in seeps. Upright panicles of white flowers open in late spring. Found from the Rockies west to Alaska and south to Mexico, this plant demands a moist, cool situation in the garden.

Though native to seeps and mossy ground along streams from the Pacific Northwest, south through California and Nevada, Oregon saxifrage (*S. oregana*, Zones 5–8, 8–1) adapts easily to cultivation. In rich, evenly moist soil, the compound panicles of starry white flowers rise above

showy clumps of tongue-shaped leaves.

Swamp saxifrage (*S. pennsylvanica*, Zones 3–7, 7–1) and lettuceleaf saxifrage (*S. micranthidifolia*, Zones 4–8, 8–4) are somewhat similar in appearance. They also share a need for constantly wet soil in their overlapping natural ranges in eastern North America. In the wild, they grow along streams and in seeps and wet meadows with their crowns just above the water and their roots constantly bathed in fresh water. Their crisp-green upright foliage is adorned with elongated sprays of creamy to greenish flowers that open in late spring,

Early saxifrage (*S. virginiensis*, Zones 4–8, 8–4) is familiar to easterners who have a love of woodland flora. In early spring, flower stalks rise six to 12 inches from basal rosettes of scalloped triangular to heart-shaped leaves. Though damp, rocky outcrops are its preferred substrate, in the garden plants adapt well to moist loamy soil free from competition from more aggressive neighbors.

### NON-NATIVE SPECIES

Of easier culture in the open garden than our native species, Asian saxifrages such as the Japanese *S. cortusifolia* (Zones 6–9, 9–6) provide late-season color in shade. Flowers are irregular in outline, with the three erect petals each bearing a yellow spot, while those of the similar *S. fortunei* (sometimes listed as a variety of *S. cortusifolia*) are unspotted. Leaves are kidney-shaped to round with palmate veins and cleft margins. ‘Ruby Wedding’ has rounded, toothed leaves with palmate veins accented in silver from the center of the leaf to the tip.

Native to Japan, China, and Korea, Fortune’s saxifrage (*S. fortunei*, Zones 6–8, 8–6) takes a great deal of sun, and is suitable for a variety of situations from light to full shade. This species has regained favor among woodland gardeners, due mostly to the introduction, through tissue culture, of several cultivars with superior leaf forms.

The tiny, star-shaped flowers of *S. michauxii* are borne in panicles that range from four to 20 inches tall.







Pronounced venation and cleft margins typify the foliage of both *Saxifraga cortusifolia*, left, and *S. fortunei* 'Silver Velvet', above, two Asian species that bloom in summer.

Asymmetrical summer and early autumn flowers rise above rounded, deeply cut leaves with prominent veins. In summer, the maroon and silver-striped selections add a dash of color under the canopy of trees or in a shaded nook.

Among these is 'Beni Fuji', which has foliage emerging light green with purplish tinged margins acquiring ruby highlights, topped by deep pink autumn flowers. 'Black Ruby' has small, ruby-red leaves.

'Go-nishiki' (Five Color) has red-tinted leaves streaked with white, yellow, and pink. 'Silver Velvet', an introduction from Terra Nova Nurseries in Tigard, Oregon, boasts rounded maroon leaves with ragged margins, streaked with wide bands of silver along the veins.

Another exceptional Japanese native is *S. nipponica* (Zones 5–8, 8–5), a rhizomatous plant that has evergreen kidney-shaped, toothed, deep green leaves and showy white to pink petals in dense, upright clusters. Although rare in the wild, this spring bloomer is easily culti-

vated in temperate gardens. 'Pink Pagoda', a cultivar with some *S. nipponica* heritage, has large medium pink flowers with wide petals.

Mother of thousands (*S. stolonifera*, Zones 7–9, 9–5) has rounded evergreen leaves evenly netted with silvery-white. One of the easiest saxifrages to grow, it spreads rapidly by filamentous runners to form large colonies, hence the many common names, including strawberry begonia and strawberry geranium. Elongated panicles of irregular white flowers are produced in early to midsummer.



Many selections of *S. stolonifera* boast colorful foliage, such as the variegated 'Tricolor', above. Pyrenean saxifrage, right, grows best in part or dappled shade and is not tolerant of heat or humidity.





Unlike most other saxifrages, this species can spread rapidly if a site is to its liking, so avoid pairing it with more delicate woodlanders.

'Harvest Moon' has golden foliage with red highlights. The foliage of 'Kinki Purple' is glowing violet netted with silver. 'Maroon Beauty' has deep claret leaves mottled in silver. 'Tricolor' is edged in white, with a red rim.

Pyrenean saxifrage (*S. umbrosa*, Zones 5–8, 5–1) is a European native undeservedly scarce in American gardens. Scalloped spatulate to round leaves form dense rosettes topped with one-inch panicles of open sprays of small pink or red-spotted white flowers in early summer. This beauty thrives in light to full shade but is intolerant of extreme heat and high humidity and thus is not for southern gardens. 'Clarence Elliott' is compact with dense clusters of small pink flowers on ruby stems. The leaves of 'Variegata' are splashed in lemon yellow below white flowers.

Sometimes confused with Pyrenean saxifrage is London pride (*S. xurbium*), a vigorous hybrid of garden origin with pale pink flowers. Try growing it at the front of a sunny to partly shaded border.

## SAXIFRAGES IN THE GARDEN

Most saxifrages thrive in light to full shade, in evenly moist, humus-rich, neutral to acidic soil. Though species vary in their requirements for a rocky substrate, all except *S. stolonifera* demand a spot free from competition. Be careful not to crowd the rosettes with foliage or mulch, or the plants will quickly disappear.

Asian and European species such as Pyrenean saxifrage and Fortune's saxifrage adapt best to shaded garden beds, and form tidy, exciting groundcovers of unique beauty. Combine them with lungwort (*Pulmonaria* spp.), brunneras, and hardy fuchsias. Accent them with vertical plants

such as Solomon's seals (*Polygonatum* spp.) and bold-foliaged mayapples (*Podophyllum peltatum*) or clumping ferns such as *Dryopteris* and *Polystichum* that will not overwhelm the delicate clumps.

Most of the American species grow best in a moist rockery or slope. And although *S. caroliniana*, *S. careyana*, and *S.*



Japanese painted fern (*Athyrium niponicum* 'Pictum') and *Saxifraga stolonifera* pair up well in this shady garden site.

*michauxii* grow best in moist to wet humus over rocks, they perform admirably in sun or shade in moist organic soil. Good companions include corydalis, Blue Ridge St. Johnswort (*Hypericum buckleyi*), asphodel (*Tofieldia*), bluets (*Houstonia* spp.), maidenhair ferns (*Adiantum* spp.), and sedges (*Carex* spp.).

A very few saxifrages—swamp and lettuce-leaf saxifrages, for instance—require a consistently moist site. These are best planted in a shaded bog garden, at the edge of a pond, or potted up in the shallow section of a pool. Combine them with other shade-tolerant moisture-lovers such as Jack

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**The Saxifrage Society**, [www.saxifraga.org](http://www.saxifraga.org).

in the pulpits (*Arisaema* spp.), Siberian irises (*Iris siberica*), turtleheads (*Chelone* spp.), ligularias, and sedges (*Carex* spp.).

The decorative foliage and showy autumn flowers of the Asian woodland saxifrages will gratify any gardener with an appreciation for understated beauty. The American species have more exacting cultural requirements but will reward gardeners who enjoy the challenge of identifying a garden site that approximates their natural habitat with clouds of spring or summer flowers.

*C. Colston Burrell's most recent book, Hellebores: A Comprehensive Guide (Timber Press, 2006), coauthored with Judith Knott Tyler, received the 2007 American Horticultural Society Book Award.*





# Havens *for* Heirlooms

For a few special nurseries and seed companies, preserving the history and beauty of heirloom annuals, perennials, and bulbs is a labor of love. BY STEVE DRYDEN

FOR MANY years, Scott Kunst led walking tours of historic landscapes during which he told stories about the plants that filled those treasured places. Within a few hours' drive of East Michigan University, where he taught, were impressive properties such as the Belle Isle park designed by Frederick Law Olmsted, and the Henry Ford home in Dearborn, landscaped by the legendary Jens Jensen.

"People would say, 'I didn't know plants had a history!'" Kunst recalls. He also learned that landscape experts tend to be more conversant with the theory and practice of design than they are with the historical background of the plants that are the essence of a beautiful setting.

Intrigued by old things in the earth ever since he searched for fossils as a child, Kunst became alarmed in the early 1990s when he noticed that gardening catalogs

were dropping some classic bulb cultivars, such as the 150-year-old 'Prince of Austria', a super-fragrant red tulip.

Feeling a responsibility akin to "saving the last two giant pandas," Kunst started his business, Old House Gardens, with a six-page catalog. Today, the Ann Arbor-based mailorder and retail nursery offers about 250 bulb varieties, including 'Maximus' daffodils, which date to the 16th century, and the 13th-

**The restored Blue Garden at the Henry Ford Estate in Dearborn, Michigan, features heirloom Siberian and bearded irises dating to the 1920s.**



century English bluebell (*Hyacinthoides non-scripta*).

Dahlias are another of Kunst's favorite heirlooms. Originally found in Mexico and Central America, dahlias became the rage in Europe around 1800. Then, purveyors of live dahlia tubers so penetrated the American market that farmers in Indiana had the flowers blooming in the 1840s. "They were, along with tulips, one of the most popular American plants of the 19th century," says Kunst.



'Kaiser Wilhelm' dahlia, above left, and 'Prince of Austria' tulip, above, are two popular heirloom varieties at Old House Gardens, a retail and mailorder nursery in Ann Arbor, Michigan. Its owner, Scott Kunst, left, tends heirloom 'Black Beauty' lilies.

The names given to many of the dahlias testify to their European sojourn: the yellow and burgundy 'Kaiser Wilhelm', the red and white 'Union Jack', and the golden-orange 'Prinses Beatrix'.

When he started his business, Kunst thought he'd be selling his heirloom va-

rieties mostly to people living in elaborately restored 19th-century or earlier homes. But he quickly discovered the interest in heirlooms is much more widespread. "Many people are looking for something different, like tulips with a wonderful scent," he says.

Also, "through living plants, there's a chance for a connection to the past," Kunst observes. "Customers say, 'I'm so glad you have that, because my grandmother grew it', or, 'My mom and dad had that flower on the altar when they were married.'"

Kunst is by no means the only entrepreneur passionate about saving these treasured antiques. In the hurly-burly world of 21st-century commercial horticulture, where new introductions get the lion's share of publicity, a number of American nurseries still see the value of seeking out heirlooms.

### PRESERVING OUR HISTORY

In fact, there seems to be a "back to the future" trend in the ornamental gardening world. "There has definitely been an up-

swing of interest in heirlooms over the last decade," says Denise Adams, author of *Restoring American Gardens: An Encyclopedia of Heirloom Ornamental Plants, 1640–1940* (see "Resources," page 41). "When I attend plant conferences, my talk on heirloom ornamentals typically generates as much interest as presentations on new cultivars."

Adams believes the interest has been sparked by a combination of nostalgia, an increase in use of heirlooms at historic sites, and perhaps some momentum from

the revival in heirloom vegetables. She also points to the importance of preserving heirloom plants to ensure the diversity of the ornamental gene pool. "Who knows what these historic plants could contribute to future plant breeding programs," she says.

But Adams concedes that most people purchasing heirloom plants are not thinking about the gene pool. "The plants are important because they connect us to an experience a forebear may have had—a parent, grandparent, or aunt."

Adams vividly remembers an occasion when she asked

attendees at one of her lectures to describe any plants that had a connection with their families. "One woman burst into tears before she even started talking; she associated a particular plant with her grandmother, and it was a very emotional connection," she recalls.

### HEIRLOOMS, CALIFORNIA STYLE

Annie Hayes, founder of Annie's Annuals, has a strong focus on heirlooms and cottage garden plants at her San Francisco Bay-area nursery. "Even in a Starbucked-world, where everything is the same, everything is grown from plugs, people still respond to plants nurtured the old-fashioned way," she says. Among Hayes' diverse offerings of annuals, biennials, tender perennials, vines, and shrubs are more than 200 California and West Coast natives.

Hayes got her start in horticulture at the locally famed Berkeley Horticultural Nursery, which has been selling native



plants and rare exotics for more than 80 years. There she learned about the joys of growing plants in the USDA's Zone 10 on the California coast—a temperate climate that never freezes or scorches—and to love the tall old cottage garden classics that blow in the wind and self-sow readily.

“We like to plant a lot of annuals for color and cutting, and we encourage wildlife by planting host plants for butterflies and hummingbirds,” says Tamma Nugent, an Annie’s customer who lives in La Mesa, outside San Diego.

Of course, living in the Mediterranean climate of southern California means that cottage-garden enthusiasts must adapt their choices of flowers to a distinctly un-

## VICTORIAN NEW ENGLAND

While Hayes concentrates on annuals and perennials that can thrive in moderate or warmer growing zones, Rachel Kane of Perennial Pleasures Nursery, located in the northeast corner of Vermont, is at the other end of the thermometer, defying subzero temperatures to cultivate her selection of plants from the American past.

You can find plants popular in all phases of American history at Perennial Pleasures, but the mood of the place is decidedly Victorian. There’s a gift shop with antique women’s country hats, and clothing that could costume actresses in a film adaptation of a Thomas Hardy novel. Tea and scones with cream are served at a-

house with little more than a few seed packets and a digging fork.”

Today, having grown with her mother’s assistance more than 900 varieties of flowers and herbs, she presides over an acre of outdoor “rooms” designed for strolling and viewing plants for sale.

Kane’s favorite plant is the swaying, brightly-colored tall garden phlox (*Phlox paniculata*), a native American wildflower that in the 19th and early 20th century was one of the most popular perennials in American gardens. As late as the 1940s, more than 200 named varieties were available, she has found, but many have been lost in the intervening years. Through painstaking detective



Cottage garden enthusiast Annie Hayes, left, of Annie’s Annuals in the San Francisco Bay area, often uses American native plants to recreate the English-garden look. One of the most useful is baby blue-eyes, above, a low-growing, drought-tolerant annual indigenous to California and Oregon.

English climate. “Annie’s carries a lot of California natives and drought-tolerant heirloom plants from other regions that do very well in our area,” Nugent says.

One of Hayes’ “must-have” cottage garden plants is baby blue-eyes (*Nemophila menziesii*) an annual native to California and Oregon that has white-centered sky-blue flowers that bloom for six to eight weeks in spring.

Hayes also admires the colorful spring flowers of farewell to spring (*Clarkia* spp.), a genus of annuals that includes many California natives. Among the selections she offers is elegant clarkia (*Clarkia unguiculata*), introduced in 1832.

bles on a grassy plot in back of the shop.

The English accents reflect the heritage of the nursery’s founder, Rachel Kane. Her mother, Judith, who helps run the business, was raised in England. Judith married Thomas Kane, an American landscape architect who developed master plans for historic houses across the United States.

Rachel Kane got the idea for the nursery after hearing from her father and his friends about how difficult it was to obtain plants popular in other eras. “When I started out it was hard to find much beyond gladioli, marigolds, and tea roses in the catalogs,” Kane says, recalling the early 1980s. “I went to work in the pasture behind our

work, Kane has tracked down more than 70 heirloom varieties, all of which are on display during a phlox festival held at the nursery each August.

## HEIRLOOMS FROM DIXIE

Another important benefit of heirloom plants, according to Jason Powell of Petals from the Past nursery, is that they are often well adapted to the vagaries of climate and soil in the regions in which they were developed. “These are plants that have been around for generations—surviving years of drought, years of floods,” say Powell.

Jason and his wife, Shelley, opened Petals from the Past in Jemison, Alabama,





**Perennial Pleasures Nursery in Hardwick, Vermont, above, has a distinctly English atmosphere that reflects the background of its owner, Rachel Kane, left. Heirloom phloxes are among the nursery's specialties.**

As Powell started doing some research, he came to the conclusion that breeding programs can be a mixed blessing. As an example, he cites wild sweet William (*Phlox maculata*), a native of eastern North America. "One of the things that was a huge shame for gardening in the South is what happened with wild sweet William—the traditional species is tall, with purplish, fragrant flowers that hummingbirds love," he says. Plant breeders took the wild species in hand and developed lower-growing types that featured a greater range of flower colors, but, Powell



**Tall garden phlox are successful heirlooms in the Deep South. Jason Powell of Petals from the Past nursery recommends this passalong phlox selection, which he simply calls "common purple."**

in 1994. The nursery's focus on heirloom perennials and shrubs stems from the influence of Jason's faculty advisor, William Welch, an Extension horticulturist at Texas A&M University who has written two books on Southern heirlooms.

"As a graduate student, I worked at the weekend home Dr. Welch and his wife were fixing up in Roundtop, Texas," says Powell. "They were restoring an early 1900s style Victorian home there and I was helping in the cottage garden."

Powell says his first real introduction to heirlooms was through antique roses. "Contrary to my experience with hybrids, these roses had real fragrance," he says. "I also observed that they had a great natural shape and that they weren't as fussy about companions and planting conditions as the hybrids." As Powell got closer to graduation, his experience with tough-as-nails heirloom plants inspired him to move back to his native Alabama to "find plants that will thrive in this region."

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## HISTORIC SITES FOR HEIRLOOMS

The renaissance in heirloom plants may also be linked to the increasing sophistication of restoration programs for historic homes, museums, and estates—along with city gardens and other public spaces. Public interest in historic sites is fueling a demand for plants that are as authentic to the period as are the building materials.

“It’s important for us to get it right,” says Peggy Cornett, director of the Thomas Jefferson Center for Historic Plants at Monticello in Charlottesville, Virginia. Just as the curators of the third president’s famous Virginia home wouldn’t want a Bauhaus-style chair in some corner, the landscape managers want to avoid lining the walkways with flowers that hadn’t been introduced during the period, or planting an inappropriate modern vegetable cultivar in the gardens.

Fidelity is particularly important in the case of Jefferson, one of America’s most famous horticulturists. The Center, which opened in 1987, is dedicated to the collection and preservation of the plants he grew, which included more than 500 varieties of fruits and vegetables. Jefferson also grew numerous flowering plants—each year he ordered hundreds of seed varieties from the Jardin des Plantes in Paris and he was also the recipient of many seeds and cuttings collected



Pot marigolds (*Calendula officinalis*), foxgloves (*Digitalis purpurea*), and corn poppies (*Papaver rhoeas*) are among the plants featured in Monticello’s restored garden.

by explorers Meriwether Lewis and William Clark in the early 1800s.

Heirloom cultivars of columbines, sweet peas, primroses, pinks, and wallflowers are among the herbaceous flowers on display in the restored Monticello gardens. Cornett notes that the Center also preserves heirloom plants—including special collections of irises, dianthus, and roses—at Tufton Farm, which is adjacent to Monticello. Many of these heirlooms are propagated and made available to the public at Monticello’s Garden Shop and on the Center’s website.

Another historic site dedicated to ensuring the integrity of its period plantings is Old Sturbridge Village in Sturbridge, Massachusetts. There, kitchen, herb, and flower gardens display plants that researchers have determined were commonly grown in New England gardens at the turn of the 19th century.

Heirloom plant nurseries often supply plants for restoration projects and historic gardens such as Monticello. One customer of Perennial Pleasures is the Historic Hudson Valley, a riverside string of estates and other historic sites near Tarrytown, New York. Mary Ann Witte, landscape manager for the sites, was relieved to find “plain old *Digitalis purpurea*, or common foxglove, at Perennial Pleasures, instead of fancier modern cultivars.” The original foxgloves aren’t showy, Witte says, and that’s perfectly fine with her.

—S.D.

bemoans, at the expense of fragrance and some resistance to powdery mildew. He carries a local selection of the wild species that has rosy pink flowers.

One indispensable heirloom for the South, according to Powell, is blackberry lily (*Belamcanda chinensis*), a member of the iris family native to China. “For us it’s evergreen, so it gives us 12 months of interest,” he says. “The speckled orange flowers bloom in July and August, followed by the dark clusters of seeds in fall, and then the evergreen foliage the rest of the year.”



Blackberry lily provides four-season interest in southern gardens.

## PRESERVING GARDEN HERITAGE

The trend toward mass production of a limited palette of widely adaptable plants means small specialty nurseries and dedicated gardeners are often the last refuge for heirloom plants, particularly on a regional level. “The selections that enjoyed fame and fortune in particular periods of our history are very reflective of the fashions and styles of the era and the state of horticulture at the time,” says Adams. “When a nursery takes on the task of offering these heirlooms they are not only making them accessible but keeping us connected with our past.”

Heirloom plant nurseries are also critical, says Adams, because their owners are often passionate about locating and preserving historic cultivars. “Searching out these old cultivars requires a lot of tenacity and perseverance,” she says. “But heirloom species in many genera are becoming more available thanks to the efforts of a lot of these individuals.”

Freelance writer Steve Dryden lives in Bethesda, Maryland.





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## Chris Wiesinger: The Bulb Hunter

by Linda McIntyre

**T**WENTY-SOMETHINGS with start-up companies aren't rarities these days. Twenty-somethings with start-up companies who are interested in horticulture, however, are pretty unusual.

If you're concerned about the younger generation's seeming lack of interest in the natural world, take heart. Chris Wiesinger, a 26-year-old horticultural entrepreneur, will restore your optimism in the future of gardening. Wiesinger is the founder and president of the Southern Bulb Company, a wholesaler and online re-

tailer dedicated to offering hard-to-find heirloom bulbs suited to hot climates (USDA Zones 6 to 10) such as that of his home base in Golden, Texas. A 2004 graduate of Texas A&M University, he developed his business plan while a horticulture student there and started the company the same year. He runs the business with his friend and former classmate, Brad Gaultney. In a few short years, thanks to tireless work, he has managed to make a name for himself in the business world—including coverage in *The New York Times*—as well as in the horticultural world, where he is a popular speaker at events throughout the country.

On a 22-acre farm in Golden, Wiesinger and his two-man crew propagate all the bulbs that Southern Bulb sells. To find the original material for his stock, Wiesinger spends a lot of time driving to hard-scrabble southern towns in Texas and elsewhere beyond the reach of horticultural fashion, where anything still flowering in the fields and in yards was likely planted years ago and has stood the tests of time, heat, drought, and neglect.

Freelance writer Linda McIntyre talked to Wiesinger about his gardening influences, the importance of preserving heirloom bulbs, and his plans for the future of his business.



Chris Wiesinger with his dog Fischer in Southern Bulb's growing field in Texas.

**Linda McIntyre:** What got you interested in gardening?

**Chris Wiesinger:** From the time my brother and I were little kids, my mom and dad made us help out in their garden in Houston. Later, I helped our pastor and some ladies down the street take care of their roses. I enjoyed working with the roses and read a lot of books and magazines to learn more about how to grow them.

In high school in Bakersfield, California, I started a garden in front of the school building with some bareroot roses

that someone gave to the school. Some people thought it was funny that I was into gardening, because I also played high school baseball and football and served as student body president.

**For more information** about the Southern Bulb Company, visit its website at [www.southernbulbs.com](http://www.southernbulbs.com), e-mail [info@southernbulbs.com](mailto:info@southernbulbs.com), or call (903) 768-2530. Catalog online only.

**So you knew before you started college that you wanted to study plants?**

Yes. I took my love of horticulture to Texas A&M. It was nice to arrive there knowing what I wanted to do.

**Why did you focus on bulbs?**

I bought my first bulb in the fourth grade at a local garden center in Bakersfield. It looked like a rock, but it came in a box with a beautiful picture on it. I took it home, put it in the ground, and kind of forgot about it.





tage. But bulb hunting is addictive once you get started. And I've been fortunate in that a lot of folks have believed in me and helped us out. I do live in a little cabin now, and we own some of the land we farm on, which we had been leasing from a sweet potato farmer.

**What are some of your favorite bulbs?**

The crinums are gorgeous in summer. I love narcissus, and the Byzantine gladiolus are amazing—magenta flowers on four-foot-high stalks. Real showstoppers. They're very different from the modern glads grown for cut flowers. These bloom around Easter and reproduce quickly.

**How do you see your business evolving in the future?**

We will always be an heirloom bulb farm.

The heart of our business is about capturing and preserving the gardening heritage of the South—and all gardening heritage, for that matter.

We're starting to expand our offerings beyond bulbs. We've commissioned a series of botanical drawings from British artist Ann Swan. We're also hoping to start importing fine pottery from the island of Jersey in the United Kingdom. Our aim is to provide products with real beauty that are crafted well and with integrity.



Among Southern Bulb's offerings is *Narcissus tazetta* 'Grand Primo', above and top. Each bulb produces clusters of fragrant blossoms in mid-spring. Byzantine gladiolus (*Gladiolus byzantinus*), right, blooms on sturdy stems that do not require staking.

Months later, I happened to be lying on the floor of our house one day when I looked outside at ground level through the open front door and noticed that my "rock" had turned into a beautiful red tulip! It seemed magical. That memory stayed with me when I was working on my business plan in college.

**How did you come to specialize in bulbs for warm climates?**

It goes back to that same red tulip. I waited for it to come back the next year, but it had rotted away. There's something fundamentally wrong with marketing plants that won't survive for many of the people who will buy them. I started looking for varieties that would do better in warmer climates, thinking it would be a good business niche. Most of them turned out to be



heirlooms and classics. At first I wanted to just broker them, but there weren't any sources, so I had to become the source, and thus I became a farmer.

**You keep a punishing schedule, giving talks and hunting for bulbs all over the country in addition to maintaining your plots. Did you realize what you were getting into?**

Not really! I pictured myself owning a plot of land, hoe in hand, living in a little cot-

be a backlash against it.

In fact, a lot of people of all ages mindlessly waste natural resources such as water, not realizing their behavior has negative environmental repercussions. At Southern Bulb, we want to help people appreciate things—including plants—as they *really* are, without cosmetic enhancement or the need for extraordinary care.

*Linda McIntyre is a freelance writer who lives in Washington, D.C.*



## Horticultural News and Research Important to American Gardeners

### COOL-SEASON GRASSES INHIBIT TRANSPLANTED TREE GROWTH

Mulching trees is important for several reasons, such as keeping mower blades away from the trunk, conserving soil moisture, and moderating soil temperature around the roots. If a tree is planted in a lawn, however, mulch may also be important for keeping turfgrass away from the tree's root zone, as several studies have shown that grass can inhibit woody plant growth.

A new study published in the April 2007 issue of *HortScience* further confirmed this, finding that cool-season grass species seem to have a greater effect than warm-season grasses. The study compared the growth of young eastern redbud (*Cercis canadensis*) and pecan (*Carya illinoensis*) trees when planted in plots with tall fescue (*Festuca arundinacea*), Kentucky bluegrass (*Poa pratensis*), bermudagrass (*Cynodon dactylon*), no vegetation, or with three inches of organic mulch.

With water and fertilizer applied equally on all trees, tall fescue and Kentucky bluegrass—both cool season grasses—seemed to have the greatest inhibiting effect on everything from trunk diameter to root weight. Bermudagrass, a warm season species, did not have as much of an inhibiting effect, but trees with mulch or in bare soil clearly grew the most.

Resource competition may be part of the reason but allelopathy—chemicals released by the grasses inhibiting growth of other plants—appears to be a more likely cause. Because of this, the report concludes that “clearing turfgrass away from the root zone of newly planted trees can dramatically increase growth of those trees.”

### SECURING THE FUTURE WITH A NEW SEED BANK

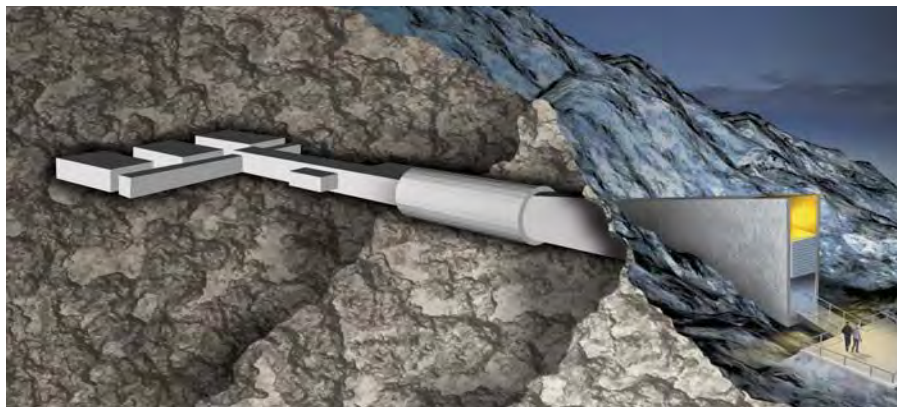
Construction for the Svalbard International Seed Vault (SISV) began near Oslo, Norway, last March, promising a “fail-safe” seed vault to better secure the world's agri-

cultural heritage. Built approximately 426 feet above sea level and 394 feet deep into a mountain cliff, the SISV is designed to withstand catastrophes such as nuclear war or natural disasters. Completion of the vault is scheduled for late September or early October of this year, with plans to officially open in late winter 2008.

“The period between the end of construction and the opening will be used for testing, and for mechanically cooling the vault and the entire stone area around it to negative 20 degrees Celsius,” says

Cary Fowler, executive director of the Global Crop Diversity Trust, an organization co-funding the project.

The vault will have the capacity to save three million seed samples. All seeds will be stored in “black box” arrangements, in which stored seeds will remain unopened unless all remaining seed sources have been depleted or destroyed. In addition to construction, numerous developments regarding the SISV are also underway, including an invitation to other seed banks for seed deposits.



**The Svalbard Seed Vault, shown at top in an illustration, is now being built in Norway. The vault's cornerstone, above, was on display at the March groundbreaking.**

Those interested in supporting the new seed vault can contribute through a variety of methods. For example, promoting the use of the SISV to the United States Department of Agriculture (USDA) will help to ensure sufficient seed varieties are collected. Another option is to “get involved with the Seed Savers Exchange ([www.seedsavers.org](http://www.seedsavers.org)), a non-profit group of gardeners involved with conserving heirloom varieties, and support them in using the Svalbard facility,” advises Fowler. Additionally, “one can certainly donate funds to the Global Crop Diversity Trust, helping us to build the endowment fund that will be used to maintain the Seed Vault forever,” she adds.

More information on the SISV and the Global Crop Diversity Trust can be found at [www.croptrust.org](http://www.croptrust.org).



## NEWS SPECIAL: An American Garden at the Chelsea Flower Show

by Graham Rice

London's Chelsea Flower Show, which has been held since 1913 and attracts 157,000 people each year, may be a quintessentially British institution, but this year an American garden won a coveted Gold Medal. The 20 outdoor show gardens created by businesses and organizations from around the world were one of the highlights of the five-day show, and among these, the Fetzer Sustainable Winery Garden from California was one of only seven gardens to be awarded a Gold Medal.



Sustainability was the focus of the garden, designed by Kate Frey. The garden featured a rustic winery built entirely from recycled redwood timber and was a scaled down ver-

sion of the original Fetzer Vineyard's winery. The vintage windmill came from a ranch in northern California, the seating and tables were made from an old wine vat.

The garden demonstrated five key sustainable gardening practices: planting the right plant in the right place, water conservation, wildlife conservation, recycling, and energy conservation and efficiency. It illustrated these themes using appropriate plantings for dry soils, a flowering border to encourage beneficial insects, and a wetland area with plants filtering and purifying the water. Drought-tolerant olive trees and Italian cypresses provided nest sites for birds.

As well as getting these messages across, the garden looked simply wonderful and provided visitors with plenty of planting ideas. California wildflowers, grown in England, provided a particularly spectacular tapestry that drew admiration from judges and visitors alike.

You can learn more about the Fetzer Sustainable Winery Garden, including a plant list, at [www.rhs.org.uk/chelsea/2007/exhibitors/showgardens/fetzer.asp](http://www.rhs.org.uk/chelsea/2007/exhibitors/showgardens/fetzer.asp).

*An award-winning author, Graham Rice is editor-in-chief of the American Horticultural Society Encyclopedia of Perennials (DK Publishing, New York, New York, 2006).*

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## CATNIP COMPOUND LURES LACEWINGS

While catnip (*Nepeta cataria*) can send felines into fits of rapture, it turns out that lacewings—beneficial insects that prey on aphids, mites, and other garden pests—also find a compound in catnip to be quite alluring. Scientists from the USDA Agricultural Research Service's Chemicals Affecting Insect Behavior Laboratory in Beltsville, Maryland, have discovered that iridodial, a chemical extracted from catnip



**Chemist Kamal Chauhan checks a trap laced with iridodial that has attracted both male and female lacewings.**

oil, is identical in structure to the male lacewing's pheromone and that the compound attracts both males and females from several lacewing species.

Rather than having to repeatedly release larvae to build up local lacewing populations for biocontrol purposes, this chemical lure, which stays active for up to five weeks, may give growers and gardeners another option. Studies are underway to develop a commercial formula. "Since any new pheromone blend or biopest control agent requires Environmental Protection Agency registration," explains Kamal Chauhan, a chemist from the ARS studying iridodial, "the anticipated time frame to get a product on the market would be one-and-a-half to two years."

Until then, since adults of some species also feed on nectar and pollen, lacewing populations can be encouraged by growing plants that attract them—such as dill and parsley—and avoiding the use of broad spectrum pesticides.

## PEOPLE and PLACES in the NEWS

### New Host for The Victory Garden

This September, *The Victory Garden* television program begins its 32nd season on PBS with a new host, Jamie Durie, who hails from Australia. The fifth host of the show since it debuted in 1975, Durie is an award-winning garden designer, author, and TV personality with a strong interest in environmental stewardship. Upcoming segments of the show will reflect this green bent, for example focusing on rainwater collection and other ways to conserve water.



Gardener Kip Anderson, gardening correspondent Paul Epsom, and lifestyle co-host Sissy Biggers all will be returning to the show. For more information, visit [pbs.org/victorygarden](http://pbs.org/victorygarden).

### Lady Bird Johnson's Legacy of Plant Conservation and Beautification

Lady Bird Johnson passed away in July at the age of 94. Born Claudia Alta Taylor on Dec. 22, 1912, in Karnack, Texas, she married Lyndon Baines Johnson in 1934. During her years as First Lady from 1963 to 1969, Lady Bird championed beautification efforts in Washington, D.C. as well as along America's highways. She also used her influence to make conservation and environmental issues a national priority.



On her 70th birthday, she and actress Helen Hayes founded the National Wildflower Research Center near Austin, which later became the Lady Bird Johnson Wildflower Center, to preserve native plants and landscapes. "To everyone at the Wildflower Center," says Executive Director Susan Rieff, "Mrs. Johnson was a constant presence, a source of inspiration, and a frequent visitor. We will miss her every day, but her vision will always guide us."

Lady Bird received numerous awards for her conservation and beautification efforts, including the AHS's National Achievement Award in 1984 and the Liberty Hyde Bailey Award in 1993. For more information about the life and work of Lady Bird, visit [www.ladybirdjohnsontribute.com](http://www.ladybirdjohnsontribute.com).

## GOOD TASTE OVERCOMES GOOD LOOKS

Just as the classic Beauty and the Beast tale calls into question the value society places on outside appearances, so does the UGLYRIPE® tomato. A decidedly un-picture-perfect fruit, this tomato's natural bulges and uneven coloring nearly kept it from appearing in a grocery store near you during the winter months, exactly the time of year when sun-ripened homegrown or locally grown tomatoes are only tantalizing memories.

According to the tomato's creator, Joe Procacci, not to mention a growing legion of fans, what the UglyRipe lacks in looks is more than made up for by its taste, purported to be far superior to the more uniform winter Florida tomatoes bred for ease



**An UglyRipe tomato ready for market**

of shipping and appearance rather than flavor. Nevertheless, UglyRipes, which were developed from the French heirloom beef-



steak 'Marmande' and first introduced in 1999, failed to meet grading standards for size, shape, and color set by the Florida Tomato Committee. This meant that from October to June, these tomatoes could not be shipped outside of the Sunshine State where they are exclusively grown by Santa Sweets, a subsidiary of Procacci Brothers Sales Corporation based in Philadelphia, Pennsylvania.

Then last January, responding to pressure from consumers, the U.S. Department of Agriculture exempted UglyRipes from the grading standards for shape. Because of this ruling, UglyRipes will now be available year round nationwide, rather than just during the summer. So when the craving for a "tomato that tastes like a tomato" in January strikes, shoppers willing to buy the high-priced, hand-picked, and homely fruits can make up their own minds whether beauty is in the eye—or taste buds—of the beholder.

### FAREWELL TO FLORASTAR

For nearly two decades, FloraStar, a containerized plant trialing organization

founded in 1988, has evaluated new varieties through a network of 20 testing locations around the country at universities, commercial growers, and green industry suppliers.



A total of 53 plants have earned FloraStar's well-respected award, recognized by breeders, growers, and gardeners alike.

Due to "changes in the floriculture industry in regards to plant trialing and marketing" that have reduced the value of the organization's function, FloraStar will cease operations by early autumn. All remaining funds will be donated to the American Floral Endowment to help support students with an interest in plant genetics.

### RETURN OF THE PINK FLAMINGO

When Union Products in Leominster, Massachusetts, the makers of the original plastic pink flamingos, went out of busi-

ness last June, it appeared to spell the end of the iconic garden ornament. Then earlier this year, HMC International, LLC, a custom plastic manufacturer in Rome, New York, bought the rights and original molds created by designer Don Featherstone in 1957 and plans to begin making and selling these flamboyant birds again this fall.

While there's no shortage of imitations on the market, J.C. Waszkiewicz III, head of family-owned HMC International, told the Associated Press, "none that I've seen hold a candle to the quality and detail" of the Featherstone flamingos. As collectors know, the original figures bear Featherstone's signature and are sold in a set of two birds—one standing straight and the other with neck lowered as if about to feed.



*Written by Assistant Editor Viveka Neveln and Editorial Intern Courtney Capstack.*

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—Scott Kunst, *Old House Gardens—Heirloom Bulbs*, Ann Arbor, Michigan  
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## Deterring Deer from the Garden

by Rita Pelczar

**A** FEW WEEKS AGO, I looked out my front window and spotted a fawn no more than six feet from the front door. It was beautiful, and there, nearby was mom—a lovely doe. But just a minute. They were nibbling away at my azaleas and hostas, and casting interested gazes toward my hydrangea. I strode out to my front porch and notified them, in no uncertain terms, that lunchtime was over.

As in many other suburban communities across the country, deer have become a common sight in my neighborhood in eastern Maryland. According to West Virginia's Division of Natural Resources, deer damage is the number one complaint in both urban and rural landscapes. This assessment is echoed nationwide.

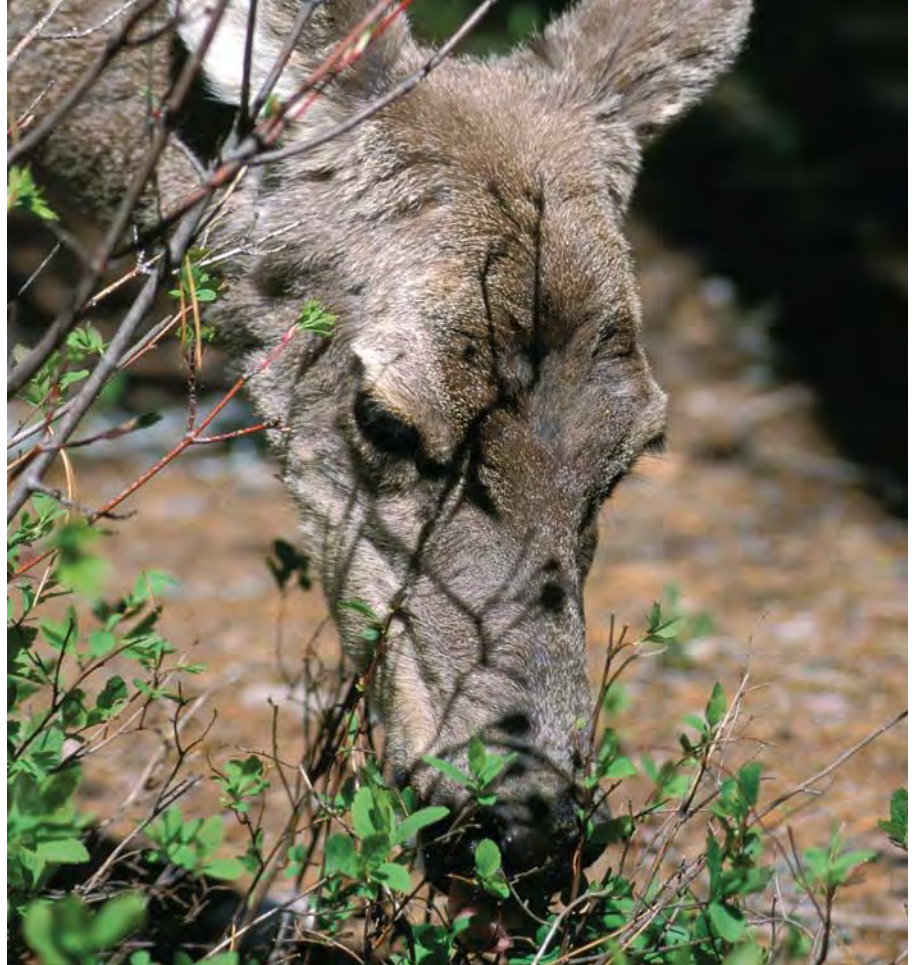
The extent of deer browsing in your garden depends on many factors, including overall deer population, proximity to undeveloped areas, presence of alternative food sources, and how attractive the plants that you grow are to foraging deer.

### GARDEN-PROTECTING STRATEGIES

Options for keeping deer out of your gardens include installing barriers, employing repellents and scare tactics, and growing plants that deer find unpalatable. The most effective strategies combine several methods to compound their effect, as well as periodic shifts in their application or placement—deer, being creatures of habit, can get used to and eventually may ignore scents, flavors, sounds, and other deterrents that once proved effective. “You’ve got to keep mixing things up,” says Doug Tregoning, director of Montgomery County Cooperative Extension Service in Derwood, Maryland.

### FENCING WORKS

“Fencing is one of the most effective methods of reducing deer damage to gardens and landscaping, provided it is high enough, properly installed and anchored to



White-tailed deer are common visitors to gardens in eastern North America.

the ground, and properly maintained,” says George Timko, urban deer biologist with the Maryland Wildlife & Heritage Service. And although it may be more expensive initially, an effective fence provides a long-term solution to deer invasions.

Fences are employed by many botanical gardens, where unrestricted deer browsing can otherwise result in thousands of dollars of damage each year. Yew Dell Gardens in Crestwood, Kentucky, adjoins several acres of prime deer feeding land. “Yew Dell happens to offer ideal deer food, with the yews (*Taxus*

spp.) being one of their favorite delicacies,” says garden manager Joanne Fischer. With so many plants and such a large area to cover, repellents are impractical. “The only method that works here is to put up deer fencing,” says Fischer.

Red Butte Garden and Arboretum in Salt Lake City, Utah, is located in the foothills of the Wasatch Mountains, surrounded by forests that are full of deer. “The garden erected an eight foot high fence to keep deer out,” says executive director Gregory J. Lee. The fence proved inadequate, however, when





Virtually Invisible Deer Fence, above left, deters deer when installed around a garden. Deer-X netting is a mesh for protecting individual plants. (See page 52 for product sources.)

snowpack provided deer a boost on up-slope hillsides. “We raised the fences to 12 feet, and now have very few deer problems,” says Lee.

To be effective, fencing must either be sufficiently high to keep deer from jumping over it, or confuse or shock deer into avoiding the barrier. Many municipalities have restrictions on the type or height of fencing that can be erected, although as deer populations increase, these restrictions may be revised.

“Our deer management program worked through the Montgomery County [Maryland] Council a couple years ago to amend the county code so that eight foot high, plastic mesh deer fencing can be used in any side or backyard in the county as long as more local restrictions don’t apply,” says Robert Gibbs, natural resource manager for the Maryland-National Capital Park and Planning Commission.

Non-electric deer fences should be a minimum of eight feet tall, but since deer lack good depth perception, they can be tricked into thinking a fence is higher by hanging reflective tape from wires that project from the top of the fence. Fences can be constructed of wood, wire, plastic mesh, or a combination of these materials. Several companies sell deer fencing kits, including electric fences (see “Sources for Deer Deterrents,” page 52).

Electric deer fences are effective and relatively inexpensive for use in rural areas, but they may not be appropriate in suburban landscapes where children and pets may come in contact with them; be sure to check local ordinances before installing one.

## REPELLENTS

The Maryland Cooperative Extension Service recently conducted a three-year study on the effectiveness of several deer repellents to prevent deer browsing damage. Among their conclusions they found that “commercial deer repellents had a significant effect on reducing deer browse on ornamental plants. Even at sites with the highest deer pressure, repellents held damage in check for six to eight weeks, in many cases.”

There are a number of products marketed to repel deer, either by taste, odor, or a combination of the two. “I tend to like odor based repellents better,” says Tregoning, because taste repellents only work after a deer has sampled the plant. “If you have to deer taking a chunk out of a plant, you can get pretty significant browsing damage before they decide they don’t like the taste,” he says. For continued success he suggests switching repel-



Liquid repellents are sprayed directly on plants to make them unpalatable or malodorous.

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10 LAWNS To Make QUICKER, deeper, TOUGHER TURF from SEED, SOD, Stelons, Sprigs, HYDRO-seeding

11 XMAS TREES 17 HYDROSEEDING 22 FLOWERING PLANT

12 REFORESTATION 18 LANDSCAPING 23 FLOWERING PLANT

13 HYDROPONICS 19 PROPAGATION 24 INTERIORSCAPING

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lents periodically, using those with different active ingredients, before deer learn to ignore any one odor or taste.

Several other factors influence the effectiveness of repellents in your yard. If you use a repellent and your neighbor does not, deer are likely to prefer his plants to yours. However, if your whole neighborhood uses repellents, deer will often put up with the bad odor or off-flavor, simply because they are hungry and there are fewer alternatives. And as deer populations rise and feeding pressure increases, they are less particular about what they eat.

During the growing season, more frequent applications of repellents are necessary to protect new, emerging growth than during the dormant season. Peggy Bowers, horticulturist at the American Horticultural Society's River Farm headquarters in Alexandria, Virginia, has had very good luck protecting tulips and pansies for the past two years with Liquid Fence, a taste and odor repellent. "We spray Liquid Fence once, and repeat it after seven days," explains Bowers, who says this provides 25

to 30 days of protection. This past spring, Bowers notes, "deer ate only 12 out of 1,800 tulips in the beds."

### NATURALLY DISTASTEFUL PLANTS

Another important factor that affects the level of browsing damage in your yard is the plants that you grow. A number of plants have been identified as unpalatable to—or at least, not favorites of deer. (For a list of "Plants that Deer Don't Like," go to [www.ahs.org](http://www.ahs.org) for a web special linked to the online version of this article.) If there are options, deer will eat something else. But like all other deer deterring factors, plant selection is a relative matter. If the deer population is large and the deer are hungry enough, they will eat almost anything.

### A VARIETY OF SCARE TACTICS

In many residential areas deer have grown more accustomed to humans, but there are non-lethal options that work to scare them off. Leaving a radio on at night may help. Motion detecting devices can be employed to activate lights or loud noises like

a barking dog. DeerChaser is a motion detecting device that triggers both a radio and a spotlight. Scarecrow Deer and Animal Repeller emits a spray of water when motion is sensed, an effective way to deter deer browsing during the growing season or in areas that don't experience freezing



**The ScareCrow uses a motion detector to trigger a strong stream of water to frighten away deer and other animals.**

## Sources for Deer Deterrents

The following are just a few of the many commercially available products aimed at reducing the likelihood of deer browsing in your landscape. Experts suggest switching from one deterrent to another to keep deer off balance and out of your garden.

### Barriers

**Baited electric deer fence.** (888) 422-3337. [www.mastergardening.com](http://www.mastergardening.com).

**Benner's Deer Fencing.** (800) BIG-DEER. [www.bennersgardens.com](http://www.bennersgardens.com).

**Deer-X Netting.** (865) 966-3256. [www.gardeneer.com](http://www.gardeneer.com).

**Virtually Invisible Deer Fence.** (888) 422-3339. [www.deerbusters.com](http://www.deerbusters.com).

### Repellents

**Bobbex.** (800) 792-4449. [www.bobbex.com](http://www.bobbex.com).

**Deer Away.** (877) 356-7333. [www.treehelp.com](http://www.treehelp.com).

**Deerbusters.** (800) 248-3337. [www.deerbusters.com](http://www.deerbusters.com).

**Deer Out.** (908) 769-4242. [www.deerout.com](http://www.deerout.com).

**Deer Stopper.** (888) 411-3337. [www.messinawildlife.com](http://www.messinawildlife.com).

**Liquid Fence.** (888) 923-3623. [www.liquidfence.com](http://www.liquidfence.com).

**Plantskydd.** (800) 252-6051. [www.plantskydd.com](http://www.plantskydd.com).

**Shake Away.** (800) 517-9207. [www.shake-away.com](http://www.shake-away.com).

**St. Gabriel Deer Repellent.** (800) 801-0061. [www.milkyspore.com](http://www.milkyspore.com).

**Repellex.** (877) 737-3548. [www.repellex.com](http://www.repellex.com).

### Mechanical and Electronic Products


**Scarecrow Deer and Animal Repeller.** (800) 767-8658. [www.scatmat.com](http://www.scatmat.com).

**Deer Chaser.** (260) 589-3384. [www.gardenharvestsupply.com](http://www.gardenharvestsupply.com).

temperatures; the potential for a frozen waterline limits its use in cold weather.

Or you can go for the real thing. A big dog that likes to chase deer is the most effective scare tactic I know. When my trusty Airedale went to spend the summer with my son, the deer quickly lost their inhibitions of roaming the yard. While my dog was in residence, however, the area within his invisible dog fence was fairly well protected.

### THE UNDERLYING ISSUE

As we struggle to protect our individual gardens from deer's natural feeding habits, it is important to recognize that as we continue to encroach on their habitats, our encounters with wildlife—both positive and negative—are likely to increase. Deer do not set out to ruin our landscapes; they simply must eat to survive. And as the forested and open spaces where they naturally browse are fragmented and lost to development, we must expect some level of browsing in our yards. Many communities are exploring options such as controlled hunts and sterilization programs to reduce deer populations. 

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





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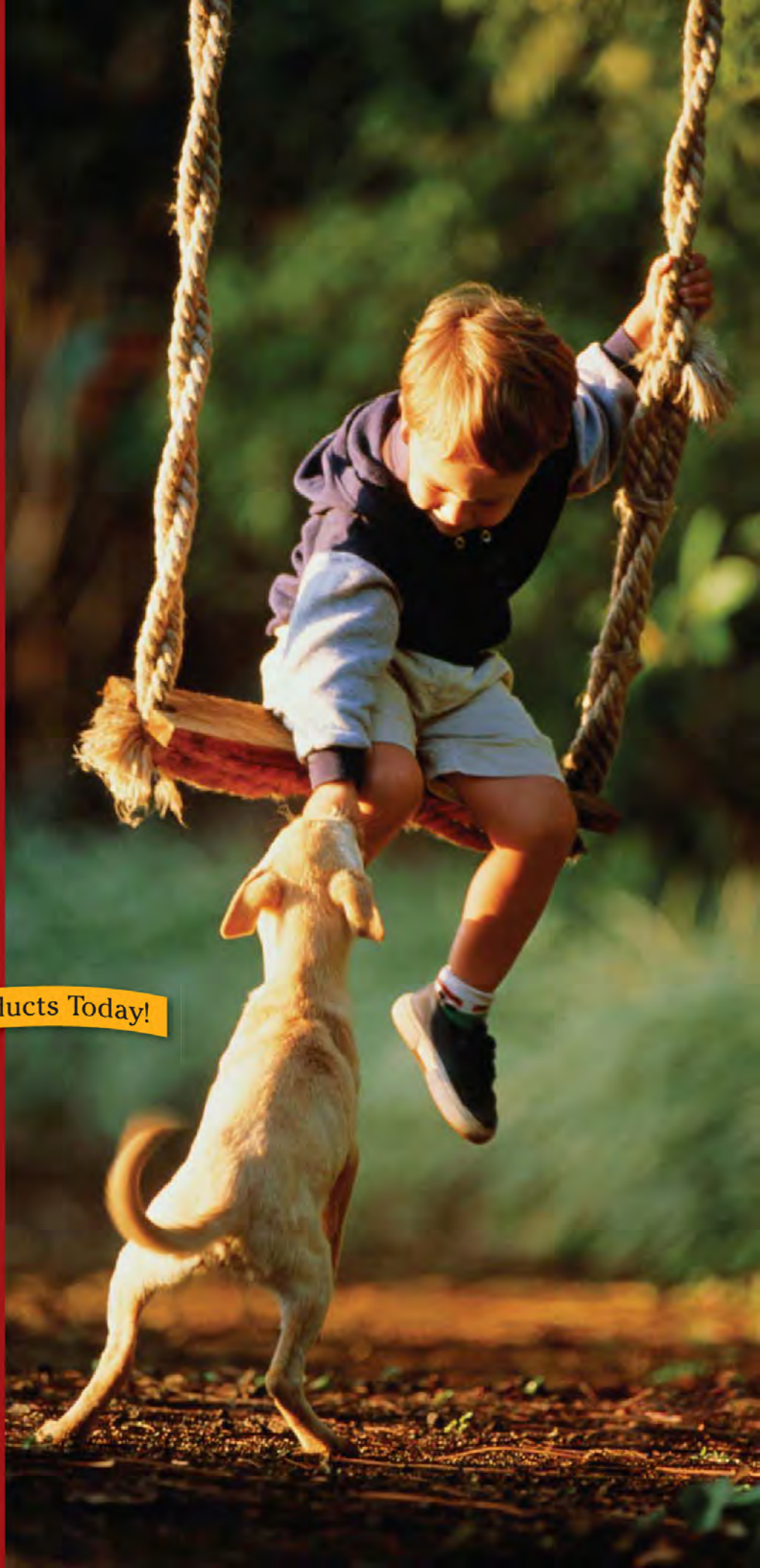


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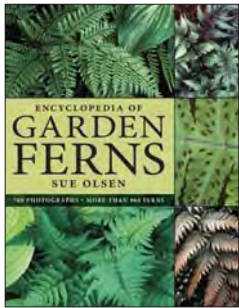


## Recommendations for Your Gardening Library

### Encyclopedia of Garden Ferns

Sue Olsen. Timber Press, Portland, Oregon, 2007. 444 pages. Publisher's price, hardcover: \$59.95.

FERNS ARE THE consummate shade plants, but many gardeners still believe "if you have seen one, you have seen them all." Though these ancient and captivating plants are but variations on a theme, the variation is beguiling and seemingly limitless. Nowhere is this made more apparent than in *Encyclopedia of Garden Ferns*.



With concise yet descriptive prose and more than 700 color photographs, fern maven Sue Olsen establishes just how variable and exquisitely beautiful ferns are. Olsen

ranks among America's most respected fern experts; in addition to her many years of experience as a gardener, she is the owner of Foliage Gardens fern nursery in Bellevue, Washington. Her in-depth understanding of all aspects of fern identification and cultivation becomes evident in this essential reference.

Olsen opens with a gallery of provocative fern portraits taken through the seasons. Brief introductory chapters cover history, cultivation, and propagation in ample detail. The bulk of the book is devoted to encyclopedic profiles of nearly 1,000 species—true ferns as well as fern allies such as *Selaginella* (spikemosses), *Lycopodium* (clubmosses), and *Equisetum* (horsetails). Though several garden-worthy tropical ferns are profiled, the book primarily addresses temperate species.

Each entry highlights botanical and common names, etymology of the specific epithet, whether the fronds are deciduous or evergreen, height, and hardiness zones. The nomenclature is up-to-date—no small feat in a field where names change as quickly as the weather. Entry text includes a full description of rhizome, frond, and sori; range and habitat; and culture, which covers garden conditions and anecdotal comments based on the author's experience with each species. The majority of the photographs are sharp and diagnostic. Useful appendices include lists of award-winning ferns, favorite ferns by hardiness zone, and ferns for special situations, as well as societies, gardens, and nurseries devoted to these plants.

This encyclopedia is an indispensable addition to the bookshelf of every gardener, from the obsessed pteridophile to neophytes with a new-found fancy for fronds.

*C. Colston Burrell is a fanatical frondsman, garden designer, and co-author of Hellebores: A Comprehensive Guide (Timber Press, 2006).*

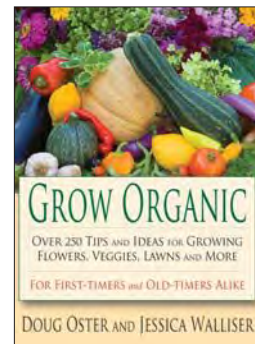
### Grow Organic

Doug Oster and Jessica Walliser. St. Lynn's Press, Pittsburgh, Pennsylvania, 2007. 224 pages. Publisher's price, softcover: \$18.95.

### The Elements of Organic Gardening

HRH The Prince of Wales with Stephanie Donaldson. Kales Press, Carlsbad, California, 2007. 176 pages. Publisher's price, hardcover: \$39.95.

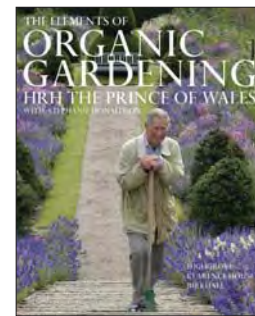
AT FIRST GLANCE, the two books couldn't be more different. *Grow Organic* is a hard working paperback, printed on recycled



paper, with charts, sidebars, and plenty of subheads that organize information into manageable chunks; *The Elements of Organic Gardening* is a glamorous hardcover book laced with photographs of Prince Charles and the Duchess of Cornwall (Camilla) in the gardens at Highgrove in Gloucestershire, Clarence House in London, and Birkhall in Scotland. However, once you start reading them, the books are surprisingly similar in their essence.

Both are based on personal experience, and both provide vital information on how to manage a garden organically.

Additionally, the authors of both books are eminently qualified to stand as experts. As well as writing garden columns, authoring books, and lecturing to garden clubs across the country, Oster and Walliser co-host a weekly radio program called "The Organic Gardeners" in Pittsburgh. Prince Charles has been a major force in making organic farming mainstream in Britain, and his estate at Highgrove is a well-known flagship for the organic movement. His co-author Stephanie



Donaldson, a devoted organic gardener for more than 30 years, has written 19 gardening books and serves as gardening editor of the British *Country Living* magazine.

In *Grow Organic*, the authors cover the basic principles, explaining everything from soil management to strategies for controlling pests and diseases. They also share personal anecdotes and lessons they have learned in their years of gardening organically. The writing style is lively and the information is clearly presented and comprehensive.


The chapter on growing an organic lawn is particularly valuable for homeowners who think organic gardening applies to edibles and ornamentals only. Other features include a handy



glossary and a “source list for all things organic” with companies and organizations that the authors trust for reliable organic gardening information and products referenced in the text.

Both Prince Charles and Donaldson are passionate about organic gardening, and it shows throughout the pages of *The Elements of Organic Gardening*. Regarding soil, Donaldson writes, “To organic farmers and gardeners, the soil is not merely a convenient medium in which to grow plants, but the very stuff of life itself.”

The book combines a tour of garden properties belonging to Prince Charles with a description of how they are managed organically. An explanation of the science behind the techniques is followed by suggestions for how a homeowner can scale down the estate procedures to suit a more typical suburban landscape. For example, a small tractor is used weekly to turn the compost heaps at Highgrove, so the book suggests homeowners consider purchasing a rotating compost bin designed for small gardens.

Both are excellent books with plenty of sound, practical information. *Grow Organic* is an ideal reference book and easy-to-understand guide on organic gardening. For those with a desire to get an insider’s view of Prince Charles’s properties as well as to learn about the science and practice of organic husbandry on both an estate and in a home garden, *The Elements of Organic Gardening* won’t disappoint. 

*A resident of Charlottesville, Virginia, Catriona Tudor Erler is the author of eight garden books, and has contributed to many more.*

**I**F YOU’VE EVER experienced the frustration of prying a stubborn dandelion from the ground, only to have five more pop up in its place, you might want to read *The Teeth of the Lion*:



*The Story of the Beloved and Despised Dandelion* (McDonald & Woodward Publishing Co., 2006, \$14.95). Anita Sanchez, a senior environmental educator at the New York Department of Environmental Conservation’s Five Rivers Environmental Education Center, will give you new appreciation for one of America’s most popular and pervasive weeds.

“No other plant in the world has been linked with such a wildly diverse assortment of cultures and times,” Sanchez writes. She takes an in-depth look at the humble dandelion’s biology, nutritional content, and its establishment in America, and even includes a few recipes for cooking with dandelion. Readers may be surprised to learn that at one time the dandelion had a favorable reputation. Sanchez tells the compelling story of how in less than 400 years, the plant evolved from a valued crop and garden ornamental to despised weed. For gardeners who don’t appreciate the dandelion, Sanchez concludes with tips on how to eradicate it from the garden.

—Courtney Capstack, Editorial Intern

PHOTO BY ANNE C. ALLEN FROM 2008 GARDENERS' CALENDAR



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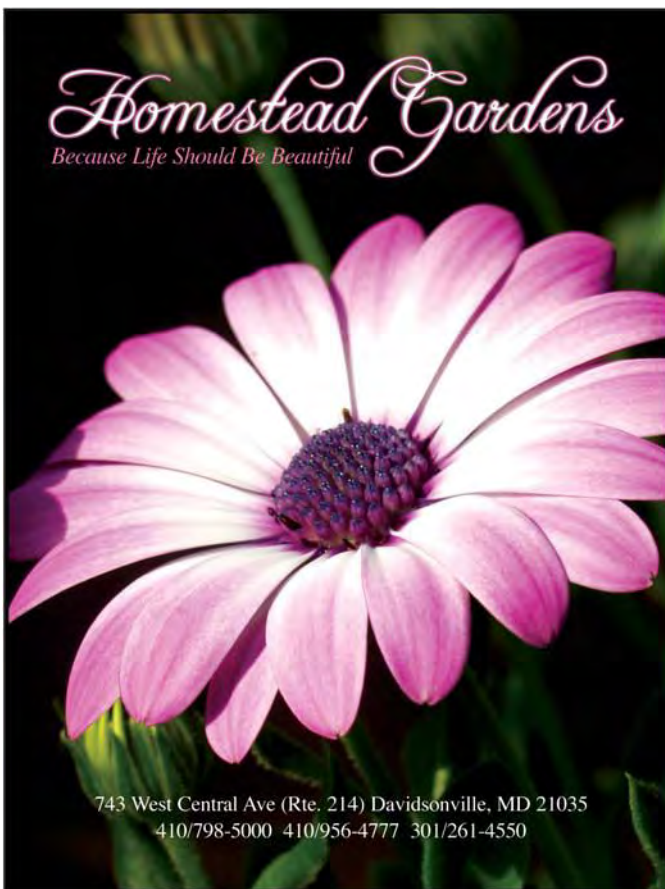
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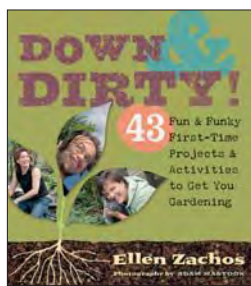
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## Do-It-Yourself Garden Project Guides

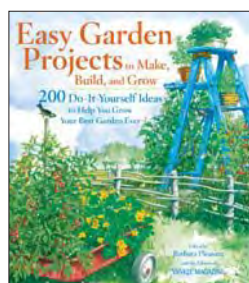
**I**F YOU HAVE made something with your own hands, you know that little can top that sense of accomplishment. At least, that's how I felt when, as a teenager, I knitted and proudly wore my first scarf. I get that same feeling whenever I manage to successfully pull off a complicated recipe—even better if I've thrown in some of my own modifications. And needless to say, I derive a lot of satisfaction from gardening since there are ample opportunities for getting creative, whether you are building a pond, laying out paths, designing a potager, or even constructing a whole greenhouse. For gardeners with a “do-it-yourself” urge, here are several books that will give you ideas and help guide you through the process of implementing them.

*Down & Dirty* by Ellen Zachos (Storey Publishing, 2007, \$19.95) describes more than 40 “fun and funky” projects and activities designed for novice gardeners, including children.



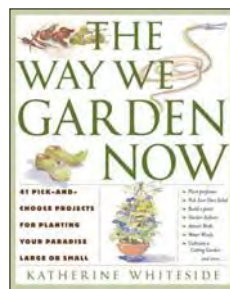
One of the more imaginative projects is making a “dinosaur garden” with ferns, mosses, and cycads for kids to “populate the land that time forgot with an army of T-rexes, velociraptors, and pterosaurs.” The book also includes more grown-up activities such as some garden photography basics, and instructions for building a containerized water garden and using cold frames. Many large color photographs help to illustrate steps and plants the book describes.

I particularly enjoy projects that recycle materials into something completely different than their original purpose—several of which appear in *Easy Garden Projects to Make, Build, and Grow*



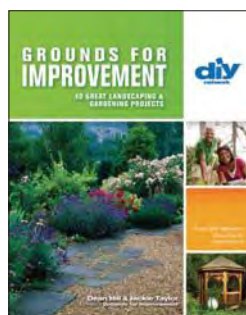
edited by Barbara Pleasant and the editors of *Yankee Magazine*. For example, one suggestion uses wooden pallets that are “usually free for the asking at lumberyards or home improvement stores” to make a sturdy compost bin. A sidebar explains how to make a compost aerator out of a coat hanger and a broom handle. Along with projects that employ household items or readily available supplies, the book also has a chapter on growing plants that can be used as resources, such as bamboo for trellises and fencing or gourds for birdhouses and craft projects.

*The Way We Garden Now* (Clarkson Potter, 2007, \$29.95) by Katherine Whiteside contains 41 practical projects that “any ordinary person with normal skill levels” can tackle. The projects range from simple, such as creating a compost pile and adding garden elements to attract birds, to more involved ones such as

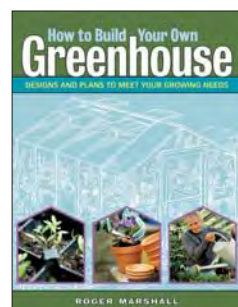


constructing a patio and installing a deer fence. As a “hands-on gardener with a healthy disregard for fancy tools, an aversion to overspending, and no time to recover from extreme exhaustion,” Whiteside realistically describes the scope of each project and provides easy-to-follow instructions. Each project includes a bulleted list of needed tools and materials as well as droll watercolor illustrations and instructional line drawings.

For those who enjoy breaking out the power tools and an occasional bag of quick-set concrete, there's *Grounds for Improvement* (Lark Books, 2007, \$17.95). Written by Dean Hill and Jackie Taylor, hosts of a DIY Network show by the same name, the book offers 40 hardscaping projects that will “help you make your dreams and ideas for your outdoor living spaces come true.” So if you have been dreaming of building patios, decks, water features, walkways, walls, or even a putting green, the concise instructions, step-by-step color photographs, and schematics provided in this book will walk you through each project. Useful tips on everything from operating a jackhammer to preventing warping of deck planks are sprinkled throughout the chapters, followed by an appendix of very basic planting tips for flowers, trees, and shrubs, and a handy metric conversion table.



If you've ever contemplated adding a greenhouse to your property but didn't know where to start, *How to Build Your Own Greenhouse* by Roger Marshall (Storey Publishing, 2006, \$24.95) will point you in the right direction. Pausing for a quick look at historical glasshouses, the book jumps right into an overview of various options available today. “Only by considering every aspect of owning a greenhouse,” Marshall writes, “can you determine what type and structural style it should be, as well as what glazing material to use and whether the greenhouse should have heating, plumbing, supplemental lighting, and misting or automatic venting systems.” Subsequent chapters demystify each of these elements, followed by a section with plans “geared for handy, do-it-yourself gardeners” or that can serve as models for a contractor.



—Viveka Neveln, Assistant Editor



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SEPT. 20. **Fall Plant Sale.** Enid A. Haupt Glass Gardens, Rusk Institute of Rehabilitation Medicine. New York, New York. (212) 263-6058. [www.med.nyu.edu/rusk/glassgardens](http://www.med.nyu.edu/rusk/glassgardens).

**RAP** SEPT. 26. **Gardening Successfully.** Lecture. Planting Fields Arboretum. Oyster Bay, New York. (516) 922-9200. [www.plantingfields.org](http://www.plantingfields.org).

OCT. 10–12. **Green Summit 2007.** New England Nursery Association Inc. Lenox, Massachusetts. (508) 653-3112. [www.nensyassn.org](http://www.nensyassn.org).

**RAP** OCT. 13. **Terrariums: Miniature Landscapes.** Workshop. Blithewold Mansion, Gardens, and Arboretum. Bristol, Rhode Island. (401) 253-2707. [www.blithewold.org](http://www.blithewold.org).

OCT. 14. **Fall Family Festival at Garden in the Woods.** New England Wild Flower Society. Framingham, Massachusetts. (508) 877-7630. [www.newfs.org](http://www.newfs.org).

**RAP** OCT. 20–NOV. 18. **The Art of the Japanese Chrysanthemum.** New York Botanical Garden. Bronx, New York. (718) 817-8700. [www.nybg.org](http://www.nybg.org).

### MID-ATLANTIC

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

SEPT. 20–22. **Fashion in Bloom.** Garden center exhibition. Garden Centers of America. Jennersville, Pennsylvania and Davidsonville, Maryland. (888) 648-6463. [www.fashioninbloom.com](http://www.fashioninbloom.com).

SEPT. 24. **Green Roofs.** Guided tour. Scott Arboretum of Swarthmore College. Swarthmore, Pennsylvania. (610) 328-8023. [www.scottarboretum.org](http://www.scottarboretum.org).

SEPT. 28–30. **Dahlia Show.** National Capital Dahlia Society. Brookside Gardens. Wheaton, Maryland. (301) 962-1400. [www.brooksidegardens.org](http://www.brooksidegardens.org).

SEPT. 29. **Mum Festival and Plant Sale.** Laurelwood Arboretum. Wayne, New Jersey. (973) 835-5683. [www.laurelwoodarboretum.org](http://www.laurelwoodarboretum.org).

OCT. 6 & 7. **Hiking Through Horticulture.** Hor-

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).

ticulture show. The Penn State Horticulture Club. University Park, Pennsylvania. (717) 649-5998. [www.psu.edu/horticultureclub](http://www.psu.edu/horticultureclub).

**RAP** OCT. 10. **DCH Annual Meeting and Hansen Lecture.** Delaware Center for Horticulture. Wilmington, Delaware. (302) 658-6262. [www.dehort.org](http://www.dehort.org).

**RAP** OCT. 13 & 14. **Arbor Fest.** Harvest festival and plant sale. State Arboretum of Virginia. Boyce, Virginia. (540) 837-1758. [www.virginia.edu/blandy](http://www.virginia.edu/blandy).

OCT. 20. **Reblooming Iris Show.** Meadowlark Park Botanical Gardens. Vienna, Virginia. (703) 255-3631. [www.nvrpa.org](http://www.nvrpa.org).

#### Looking ahead

NOV. 8. **Getting Green: Sustainable Energy Use for the Green Industry.** Conference. Maryland Greenhouse Growers Association. University of Maryland Cooperative Extension. Timonium, Maryland. [www.mdgga.org](http://www.mdgga.org).

### SOUTHEAST

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

**RAP** SEPT. 19. **Fall Back Into Your Garden.** Lecture. Aldridge Gardens. Hoover, Alabama. (205) 682-8019. [www.aldridgegardens.com](http://www.aldridgegardens.com).

**AHS** OCT. 4 & 5. **AHS Garden School: The Amazing World of Plants.** Yew Dell Gardens, Crestwood, Kentucky. (800) 777-7931. [www.ahs.org](http://www.ahs.org).

**RAP** OCT. 5 & 6. **Fall Plant Sale.** Memphis Botanic Garden. Memphis, Tennessee. (901) 576-4100. [www.memphisbotanicgarden.com](http://www.memphisbotanicgarden.com).

OCT. 8–10. **North Carolina Master Gardener Conference.** NC State University. Raleigh, North Carolina. (919) 515-5378. [www.ces.ncsu.edu/depts/hort/consumer/masgar/conference.html](http://www.ces.ncsu.edu/depts/hort/consumer/masgar/conference.html).

OCT. 13. **Native Medicinal Plants Conference.** Planting the Future. Flat Rock, North Carolina. (802) 476-6467. [www.unitedplantsavers.org](http://www.unitedplantsavers.org).

**RAP** OCT. 13 & 14. **Annual Carolina Bonsai Expo.** North Carolina Arboretum. Asheville, North Carolina. (828) 665-2492. [www.ncarboretum.org](http://www.ncarboretum.org).

OCT. 19–21. **Charleston Green: Charleston Garden Festival.** Charleston Horticultural Society. The Middleton Place Foundation. Charleston, South Carolina. [www.charlestongardenfestival.org](http://www.charlestongardenfestival.org).

**RAP** OCT. 27. **The Haunted Gardens.** Georgia Golf Hall of Fame & Botanical Gardens. Augusta, Georgia. (885) 874-4443. [www.gghf.org](http://www.gghf.org).

#### Looking ahead

**RAP** NOV. 3. **Herb Symposium.** Atlanta Botanical Garden. Atlanta, Georgia. (404) 876-5859. [www.atlantabotanicalgarden.org](http://www.atlantabotanicalgarden.org).

### NORTH CENTRAL

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

**AHS** SEPT. 27–29. **America in Bloom Symposium and Awards Banquet.** Rockford, Illinois. (614) 487-1117. [www.americainbloom.org](http://www.americainbloom.org).

SEPT. 29. **100 Trees for 100 Years: Tree Planting Event and Festivities.** Eloise Butler Wildflower Garden. Minneapolis, Minnesota. (612) 370-4903. [www.minneapolisparcs.org](http://www.minneapolisparcs.org).

SEPT. 29 & 30. **Barberton Annual Mum Fest.** Lake Anna Park. Barberton, Ohio. (330) 848-6653. [www.cityofbarberton.com](http://www.cityofbarberton.com).

**RAP** OCT. 4–7. **Introduction to Horticultural Therapy.** Workshop. Horticultural Therapy Institute. The Holden Arboretum. Kirtland, Ohio. (303) 388-0500. [www.htinstitute.org](http://www.htinstitute.org).

OCT. 6. **The Artful Garden.** Symposium. Boerner Botanical Gardens, Hales Corner, Wisconsin. (414) 525-5675. [www.boernerbotanicalgardens.org](http://www.boernerbotanicalgardens.org).



OCT. 6 & 7. **Iowa Bonsai Association Annual Fall Show.** Reiman Gardens. Ames, Iowa. (515) 294-2710. [www.reimangardens.iastate.edu](http://www.reimangardens.iastate.edu).

**RAP** OCT. 13 & 14. **Orchid Show and Sale.** Illinois Orchid Society. Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. [www.chicagobotanic.org](http://www.chicagobotanic.org).

**RAP** OCT. 21. **Pumpkin Walk at Twilight.** Fellows Riverside Gardens. Youngstown, Ohio. (330) 740-7116. [www.millcreekparks.com](http://www.millcreekparks.com).

#### SOUTH CENTRAL

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

SEPT. 27 & 28. **ONLA/OGGA 'Oklahoma Rising' Convention & Trade Show.** Oklahoma Horticultural Society. Oklahoma City, Oklahoma. (405) 942-5276. [www.okhort.org](http://www.okhort.org).

SEPT. 28-OCT. 2. **Garden Writers Association Symposium.** Oklahoma City, Oklahoma. (703) 257-1032. [www.gardenwriters.org](http://www.gardenwriters.org).

**RAP** SEPT. 29 & 30. **Fall Plant Sale.** Powell Gardens. Kingsville, Missouri. (816) 697-2600. [www.powellgardens.org](http://www.powellgardens.org).

**RAP** OCT. 19. **Fall Color Hike at Shaw Nature Reserve.** Missouri Botanical Garden. St. Louis, Missouri. (800) 642-8842. [www.mobot.org](http://www.mobot.org).

**RAP** OCT. 20. **Cacti and Succulent Sale.** Tulsa Garden Center. Tulsa, Oklahoma. (918) 746-5125. [www.tulsagardencenters.com](http://www.tulsagardencenters.com).

OCT. 20 & 21. **Fall Garden Show.** City Park of New Orleans. New Orleans, Louisiana. (504) 838-1170. [www.neworleanscitypark.com](http://www.neworleanscitypark.com).

**RAP** OCT. 21. **BOOtanica.** Halloween festival. San Antonio Botanical Garden. San Antonio, Texas. (210) 207-3250. [www.sabot.org](http://www.sabot.org).

**RAP** OCT. 27 & 28. **Fall Festival in the Japanese Garden.** Fort Worth Botanic Garden. Fort Worth, Texas. (817) 871-7686. [www.fwbg.org](http://www.fwbg.org).

#### SOUTHWEST

AZ, NM, CO, UT

**RAP** SEPT. 22. **Fall Plant and Bulb Sale.** Denver Botanic Gardens. Denver, Colorado. (720) 865-3500. [www.botanicgardens.org](http://www.botanicgardens.org).

SEPT. 29. **Fall Plant Sale.** Tucson Botanical Gardens. Tucson, Arizona. (520) 326-9686. [www.tucsonbotanical.org](http://www.tucsonbotanical.org).

**RAP** SEPT. 29. **Wildflower Walk.** Guided walk. The Arboretum at Flagstaff. Flagstaff, Arizona. (928) 774-1442. [www.thearb.org](http://www.thearb.org).

**RAP** SEPT. 29 & 30. **Fall Bulb and Native**

**Plant Sale.** Red Butte Garden. Salt Lake City, Utah. (801) 581-4747. [www.redbuttegarden.org](http://www.redbuttegarden.org).

**RAP** OCT. 20. **Vegetable Gardening Through the Seasons—A Comprehensive Approach.** Workshop. Desert Botanical Garden. Phoenix, Arizona. (480) 941-1225. [www.dbg.org](http://www.dbg.org).

**RAP** OCT. 26 & 27. **Garden of Goodies.** Trick-or-treat festival. The Hudson Gardens & Event Center. Littleton, Colorado. (303) 797-8565. [www.hudsongardens.org](http://www.hudsongardens.org).

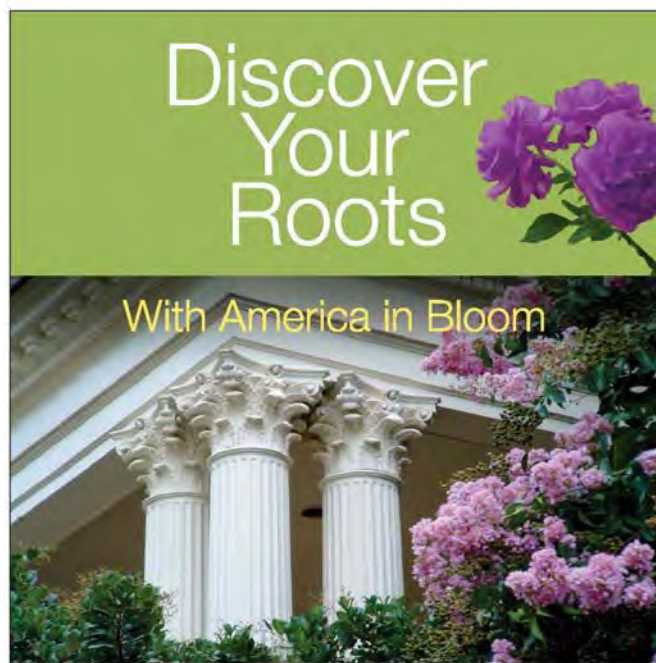
#### WEST COAST

CA, NV, HI

**RAP** SEPT. 22. **Transforming the American Lawn.** Lecture. Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. [www.descansogardens.org](http://www.descansogardens.org).

SEPT. 26-28. **Calscape Expo.** Plant Industry Alliance. Las Vegas, Nevada. (704) 462-2276. [www.piagrows.org](http://www.piagrows.org).


**RAP** SEPT. 29 & 30. **Gardening Under Mediterranean Skies: Lessons in our Gardens.** Symposium. San Diego Horticultural Society. Quail Botanical Gardens. Encinitas, California. (760) 295-7089. [www.sdhortsoc.org](http://www.sdhortsoc.org).



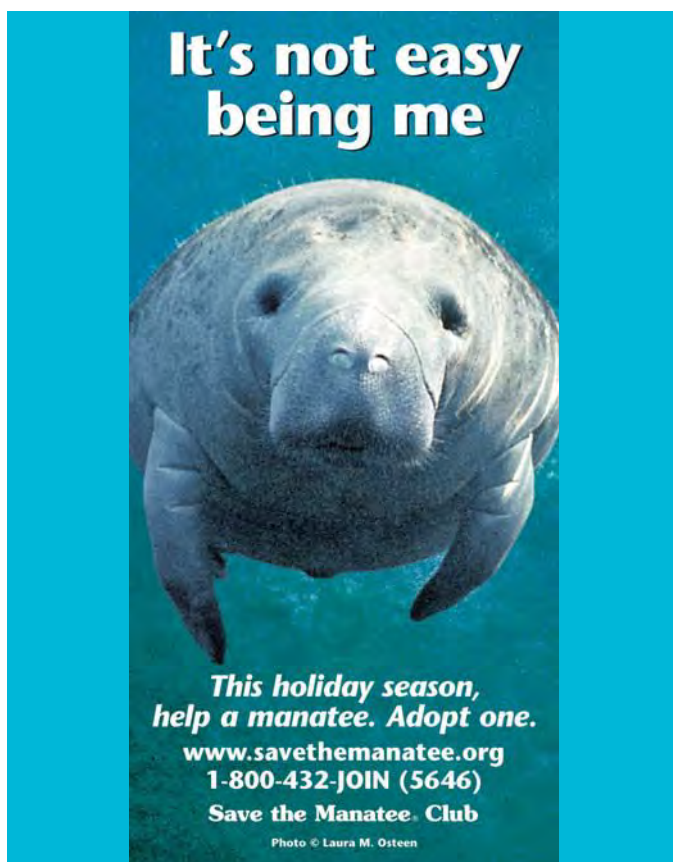
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**RAP** OCT. 3–6. **Introduction to Horticultural Therapy.** Workshop. Horticultural Therapy Institute. San Francisco Botanical Garden at Strybing Arboretum. San Francisco, California. (303) 388-0500. [www.htinstitute.org](http://www.htinstitute.org).

OCT. 11 & 12. **Desert Green XI.** Conference. Sam's Town. Las Vegas, Nevada. (704) 454-3057. [www.desert-green.org](http://www.desert-green.org).

**RAP** OCT. 13–NOV. 11. **Fall Plant Sale.** Santa Barbara Botanic Garden. Santa Barbara, California. (805) 682-4726. [www.sbbg.org](http://www.sbbg.org).

OCT. 21. **Organic Garden Tour.** Occidental Arts and Ecology Center. Occidental, California. (707) 874-1557 ext. 201. [www.oaec.org](http://www.oaec.org).

## NORTHWEST

AK, ID, MT, OR, WA, WY

**RAP** SEPT. 24–29. **Fall Clean Up at the Garden.** Alaska Botanical Garden. Anchorage, Alaska. (928) 770-3692. [www.alaskabg.org](http://www.alaskabg.org).

**RAP** OCT. 6. **Green Walk.** Guided tour. Hoyt Arboretum. Portland, Oregon. (503) 865-8733. [www.hoytarboretum.org](http://www.hoytarboretum.org).

**RAP** OCT. 6. **Oktoberfest.** Festival. Idaho Botanical Garden. Boise, Idaho. (208) 343-8649. [www.idahobotanicalgarden.org](http://www.idahobotanicalgarden.org).

**RAP** OCT. 7. **Fall Bulb & Plant Sale.** Washington Park Arboretum. Seattle, Washington. (206) 325-4510. [www.arboretumfoundation.org](http://www.arboretumfoundation.org).

OCT. 10. **Designing Mixed Borders for Sun and Shade.** Lecture. Northwest Horticultural Society. Seattle, Washington. (206) 527-1794. [www.northwesthort.org](http://www.northwesthort.org).

OCT. 20. **Pruning for Amateurs.** Workshop. Portland Japanese Garden. Portland, Oregon. (503) 223-1321. [www.japanesegarden.com](http://www.japanesegarden.com).

## CANADA

SEPT. 18 & 20. **Growing Native Woody Plants.** Workshop. The Arboretum at University of Guelph. Guelph, Ontario. (519) 824-4120 ext. 52358. [www.uoguelph.ca/arboretum](http://www.uoguelph.ca/arboretum).

SEPT. 30. **Plenty—A Local Harvest Celebration.** VanDusen Botanical Garden. Vancouver, British Columbia. (604) 257-8666. [www.vandusengarden.org](http://www.vandusengarden.org).

**RAP** OCT. 13 & 14. **Gourd Fest.** Festival. Royal Botanical Gardens. Hamilton, Ontario. (905) 527-1158. [www.rbg.ca](http://www.rbg.ca).

**RAP** OCT. 20. **Natural Insect, Weed & Pest Control.** Workshop. Glendale Gardens & Woodland. Victoria, British Columbia. (250) 479-6162. [www.hcp.bc.ca](http://www.hcp.bc.ca).

## Charleston Festival Goes Green

JOIN HORTICULTURISTS, garden enthusiasts, and environmentalists from October 19 to 21 for the Charleston Garden Festival at Middleton Place in Charleston, South Carolina. With the theme “Charleston Green... What’s Old is New Again,” the role of gardening in environmental stewardship will be the central focus of this year’s festival. “Through educational lectures, demonstrations, and vendor booths, the Charleston Garden Festival aims to increase awareness of basic practices of ‘green’ gardening,” says Executive Director Nancy Abercrombie. The festival will also feature exhibit gardens, in which landscape designers interpret “Charleston Green” through inspiring and eco-minded garden vignettes.

Green roof specialist Edmund C. Snodgrass, owner of Emory Knoll Farms, the first green roof nursery in the United States, and award-winning nursery owner, author, and plantsman Tony Avent, are featured speakers at the festival. Attendees can gain an inside glimpse of green roof installations in Chicago, Atlanta, Baltimore, Washington, D.C., and Charleston in Snodgrass’s presentation, “Planting Our Future: Green Roofs,” on Friday, October 19. Avent will be highlighting garden gems during his lecture, “Perennials for Lowcountry Gardens,” on October 20.

The Charleston Garden Festival at Middleton Place is sponsored by the Charleston Horticultural Society and the Middleton Place Foundation. Visit [www.charlestongardenfestival.org](http://www.charlestongardenfestival.org) or call (800) 782-3608 for more information.

## Las Vegas Springs Preserve Grand Opening

VISITORS TO LAS VEGAS, NEVADA, now have a new destination to add to their itinerary. The Las Vegas Springs Preserve celebrated its grand opening in June with various garden workshops, concerts, children’s festivals, and a special performance by three-time Grammy nominee, Jewel. “We had an amazing grand opening weekend with over 9,100 in attendance,” says Allison Copening of the Las Vegas Springs Preserve.

Once serving as the original water source for Native Americans residing in the area, travelers on the Old Spanish Trail, and Mormons venturing west, the Springs Preserve is now listed on the National Register of Historic Places.

The Preserve is a 180-acre “cultural and historic attraction” featuring museums, an outdoor amphitheater, an interpretive trail system, a botanical garden, and a children’s learning playground. An eight-acre botanical garden displays a collection of native and drought-tolerant plants, while archaeological sites, historic structures, and scenic overlooks are some of the many highlights along an approximately two-and-one-half mile trail system throughout the park. The Preserve is also home to the Cienega, a desert wetland where visitors can catch a glimpse of more than 250 wildlife species. Special programs include seasonal concerts, garden events, and educational classes.

Built with sustainability in mind, the Springs Preserve is the first attraction in America to earn the Leadership in Energy and Environmental Design (LEED) Platinum Certification recognition. Approximately 60 to 70 percent of the Preserve’s energy needs are powered via on-site solar panels, and both gray and black water is filtered and reused to flush the toilets and irrigate the gardens. Additionally, the Springs Preserve is the largest commercial straw-bale project in the United States.

For more information on the preserve, visit [www.springspreserve.org](http://www.springspreserve.org).

—Courtney Capstack, Editorial Intern



An artist's rendering of the Desert Living Center at Las Vegas Springs Preserve.



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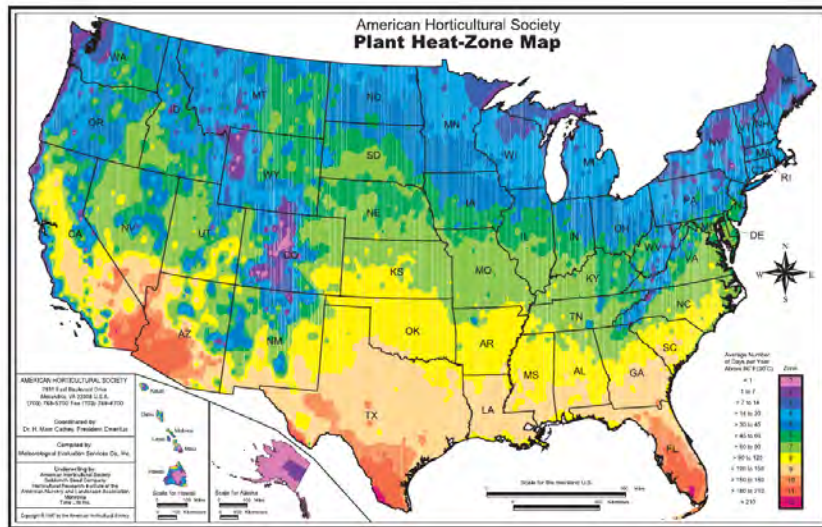
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# PRONUNCIATIONS AND PLANTING ZONES



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–G

- Arisaema consanguineum*** air-ih-SEE-muh kon-san-GWIN-ee-um (USDA 5–9, AHS 9–7)
- Belamcanda chinensis*** bel-am-KAN-duh chy-NEN-siss (5–9, 9–5)
- Brunnera macrophylla*** bruh-NEH-ruh mak-ro-FIL-luh (3–7, 7–1)
- Carya illinoensis*** KEH-ree-uh ill-ih-no-ih-NEN-siss (5–9, 9–5)
- Ceratostigma plumbaginoides*** sur-at-o-STIG-muh plum-baj-ih-NOY-deez (5–9, 9–4)
- Cercis canadensis*** SUR-siss kan-uh-DEN-siss (4–9, 9–2)
- Clarkia unguiculata*** KLARK-ee-uh un-gwik-yew-LAY-tuh (0–0, 9–1)
- Colchicum ×agrippinum*** KOAL-chih-kum uh-GRIP-ih-num (5–9, 9–1)
- C. autumnale*** C. aw-tum-NAL-ee (5–9, 9–1)
- C. bivonae*** C. by-VON-ee (6–9, 9–3)
- C. byzantinum*** C. bih-zan-TY-num (5–9, 9–1)
- C. speciosum*** C. spee-see-O-sum (4–9, 9–1)
- C. variegatum*** C. vair-ee-GAY-tum (7–10, 9–5)
- Cornus canadensis*** KOR-nus kan-uh-DEN-sis (2–7, 7–1)
- Cornus kousa*** C. KOO-suh (5–8, 8–5)
- Cynodon dactylon*** SIN-o-don DAK-tih-lon (7–12, 12–7)
- Cypripedium acaule*** sip-rih-PEE-dee-um uh-KAWL-ee (3–7, 7–1)
- Festuca arundinacea*** fes-TEW-kuh uh-run-dih-NAY-see-uh (4–7, 7–1)
- Geranium endressii*** juh-RAY-nee-um en-DRESS-ee-eye (5–8, 8–4)
- G. himalayense*** G. him-uh-lay-EN-see (4–7, 7–1)

## H–P

- Hyacinthoides non-scripta*** hy-uh-sin-THOY-deez non-SKRIP-tuh (4–10, 9–1)
- Hypericum buckleyi*** hy-PAIR-ih-kum buck-LEE-eye (7–8, 9–6)

- Iris siberica*** EYE-riss sy-BARE-ih-kuh (3–8, 9–1)
- Lobularia maritima*** lob-yew-LAIR-ee-uh muh-WRIT-ih-muh (0–0, 12–1)
- Nemophila menziesii*** nee-MAF-ih-luh men-ZEES-ee-eye (0–0, 12–2)
- Phlox maculata*** FLOKS mak-yew-LAY-tuh (5–8, 8–1)
- P. paniculata*** P. pan-ik-yew-LAH-tuh (4–8, 8–1)
- Picea abies*** PY-see-uh AY-beez (3–8, 8–1)
- P. omorika*** P. o-MOR-ih-kuh (4–8, 8–1)
- Pinus strobus*** PY-nus STRO-bus (4–9, 9–1)
- Poa pratensis*** PO-uh pruh-TEN-siss (3–7, 7–1)
- Podophyllum peltatum*** pah-doh-FIL-lum pel-TAY-tum (4–8, 8–2)

## Q–Z

- Saxifraga aizoides*** sak-sih-FRAY-guh ay-ZOY-deez (2–7, 7–1)
- S. careyana*** S. kair-ee-AN-uh (5–8, 8–5)
- S. caroliniana*** S. kair-o-lin-ee-AN-uh (5–8, 8–4)
- S. cortusifolia*** S. kor-tew-sih-FO-lee-uh (6–9, 9–5)
- S. fortunei*** S. for-TEW-nee-eye (6–8, 8–6)
- S. michauxii*** S. mih-SHO-ee-eye (4–8, 8–4)
- S. micranthidifolia*** S. mih-kran-thih-dih-FO-lee-uh (4–8, 8–4)
- S. nipponica*** S. nih-PON-ih-kuh (5–8, 8–5)
- S. odontoloma*** S. o-don-toh-LO-muh (6–9, 9–1)
- S. oregana*** S. or-eh-GAN-uh (5–8, 8–1)
- S. pennsylvanica*** S. pen-sil-VAN-ih-kuh (3–7, 7–1)
- S. stolonifera*** S. sto-lon-IF-ur-uh (7–9, 9–5)
- S. umbrosa*** S. um-BRO-suh (1–5, 5–1)
- S. xurbium*** S. ur-BEE-um (6–7, 7–6)
- S. virginensis*** S. vir-jin-ee-EN-siss (4–8, 8–4)



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