

The background of the cover is a close-up photograph of several vibrant pink flowers with dark centers and prominent stamens. The flowers are in various stages of bloom, with some fully open and others as buds. The lighting is soft, highlighting the delicate texture of the petals.

# The American GARDENER®

The Magazine of the American Horticultural Society

January / February 2015

## Adaptable Annuals *from the* American West

New Plants for 2015

Weeping Trees for  
Dramatic Flair

Renee Shepherd:  
A Passion for  
Quality Seeds





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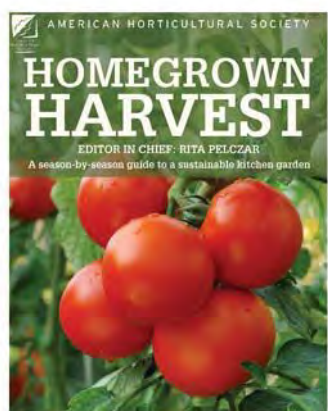
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## NOTES FROM RIVER FARM

**W**HILE THERE are many reasons our members value the American Horticultural Society (AHS), we consistently hear that you are passionate about plants and gardens, so you want to support an organization dedicated to promoting them. We also hear that you are keen to hone your own gardening skills and that *The American Gardener* is one of your favorite sources of reliable gardening information. As we embark on this new year, we are setting out to not only strengthen our existing member communications, but to expand our reach and provide more opportunities for interaction between our members and us.

Over the years, we have looked to a talented group of experts for guidance in shaping our editorial content. Serving as members of our Editorial Advisory Board, these horticultural authorities provide recommendations that help us identify the topics and people who are featured on the pages of *The American Gardener*. Starting in 2015, we welcome Ethne Clarke as the new chair of our Editorial Advisory Board. Most recently serving as Editor-in-Chief of *Organic Gardening* magazine, Ethne is an accomplished horticulturist and garden writer who has more than 15 books on gardening, garden design, and landscape history to her credit. We are excited to have the benefit of Ethne's experience, along with that of the other new board members, as we continue making our flagship publication even more relevant, engaging, and inspiring for today's gardeners.

To complement *The American Gardener*, we are expanding our online communications and our presence on social media. We recently launched Pinterest and Google+ accounts, and on Facebook we surpassed a major milestone of 10,000 likes last year! We've introduced the online *AHS Youth Gardening Gazette*, a daily compilation of internationally sourced news about gardening with children. And we are co-hosting a monthly #plantchat discussion hour on Twitter with our new corporate member, Corona Tools. If you haven't yet availed yourself of these resources, we hope you will check them out and join the conversation.

Dovetailing with our ramped-up online presence, this past summer we completed an extensive upgrade of the technology and communications systems that serve our headquarters offices here at River Farm. This ambitious project replaced decades-old equipment and cabling to provide us with greatly improved capacity, speed, and reliability.

All these accomplishments spring from our goal to embrace innovation and improvements that help us deliver more value to our members, to better promote the benefits of gardening, and to encourage more people—of all ages—to get out and garden. Much more is in the works, so stay tuned for further updates on our progress.

Now, down to the matter at hand—our first issue of *The American Gardener* for 2015! In it you will find our annual roundup of intriguing new plants hitting the market, a look at versatile wildflowers native to California, and a profile of the remarkable woman behind the highly successful Renee's Garden seed company: Renee Shepherd. And be sure to turn to page 57 to get a peek at the list of seeds available exclusively to our members through our annual seed exchange.

All of us at River Farm send our best wishes for a happy and plant-filled New Year!

Tom Underwood  
Executive Director



Tom Underwood

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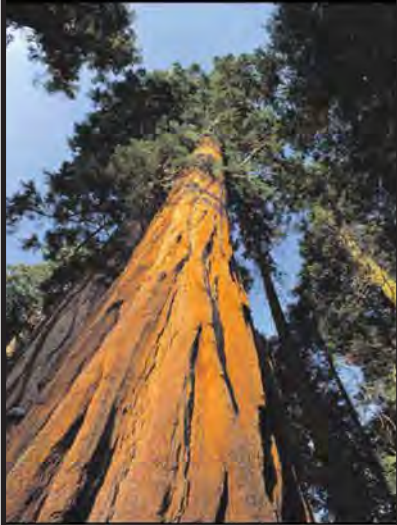
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**MEMBERS' FORUM**

**A NOTE FROM THE EDITOR**

This first issue of *The American Gardener* for 2015 marks the 94th year of publication for the American Horticultural Society's official membership magazine, which debuted in 1922 as *The National Horticultural Magazine*.

This year we are pleased to announce a transition to a new slate of editorial advisors who will help the staff guide the magazine's editorial philosophy, content, scientific accuracy, and style. These advisors have been selected not only for their overall expertise in American gardening and horticulture, but for their familiarity with gardening conditions in their respective regions of the country.



**Ethne Clarke, new chair of this magazine's editorial advisory board**

As Tom Underwood mentions in "Notes from River Farm" (page 5), the chair of the new editorial advisory board is **Ethne Clarke**, a veteran garden editor and writer who was most recently editor-in-chief of *Organic Gardening* magazine.

Clarke has gardened in numerous states, most recently at her new home in Colorado Springs, Colorado.

Also joining the board are: **Linda Askey**, a garden writer from Birmingham, Alabama; **Mary Irish**, a garden book author currently with the San Antonio Botanical Garden in Texas; **Panayoti Kelaidis**, senior curator and director of outreach for the Denver Botanic Gardens in Colorado; **Charlie Nardozi**, a garden writer and consultant in Burlington, Vermont; **Denny Schrock**, State Master Gardener Coordinator at Iowa State University in Ames; **Jessica Walliser**, a garden radio-show host and author in Pittsburgh, Pennsylvania; and **Kris Wetherbee**, a garden writer based in Oakland, Oregon.

**Feedback Sought for Article on Garden Injuries**

We are working on an article about avoiding injuries while gardening and are looking for anecdotes from AHS members about accidents or hazards they have encountered. If you have a story to share, let us know by e-mail to [editor@ahs.org](mailto:editor@ahs.org).

Another addition to our editorial team this year is Contributing Editor **Lynn Felici-Gallant**, who joins Contributing Editor **Rita Pelczar** and Contributing Writer **Carole Ottesen**. A resident of New Milford, Connecticut, Felici-Gallant was most recently associate editor of *Fine Gardening* magazine.

In addition to welcoming these new members of our team, we'd like to extend our appreciation to the outgoing members of the editorial advisory board, a group of horticultural luminaries who have generously shared their experience and wisdom with the magazine staff for the last several years. Rotating off the board is the former chair, Richard E. Bir, along with Allan M. Armitage, Nina M. Bassuk, Steve Bender, Richard W. Lighty, and Elvin McDonald.

The selection of a new editorial advisory board is the first step in a strategic review of the magazine's philosophy, content, and format. As part of this process, we welcome feedback from AHS members. Please send your comments or suggestions to us at [editor@ahs.org](mailto:editor@ahs.org), or by mail to *The American Gardener* at the address listed below.

David J. Ellis  
Editor

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**NATIONAL CHILDREN & YOUTH GARDEN SYMPOSIUM** For information about the Society's annual National Children & Youth Garden Symposium, e-mail [education@ahs.org](mailto:education@ahs.org) or visit [www.ahs.org/ncygs](http://www.ahs.org/ncygs).

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**WEBSITE: [www.ahs.org](http://www.ahs.org)** The AHS website is a valuable source of information about the Society's programs and activities. Users must set up a username and password to access the member's-only sections.

# News from the AHS

January / February 2015

PROGRAMS • EVENTS • ANNOUNCEMENTS

## AUSTIN IS HOST SITE FOR 2015 NATIONAL CHILDREN AND YOUTH GARDEN SYMPOSIUM

THE AMERICAN HORTICULTURAL SOCIETY's National Children & Youth Garden Symposium (NCYGS) is heading to the Lone Star state from July 9 to 11 this summer. Austin is the host city for the symposium, which will be co-hosted by the



The Grotto at the Lady Bird Johnson Wildflower Center

Lady Bird Johnson Wildflower Center (LBJWC) in Austin, and the International Junior Master Gardener Program, based at Texas A&M University in College Station.

The NCYGS provides teachers, garden designers, community leaders, program coordinators, and others with the opportunity to explore topics ranging from curriculum to program management to garden design and maintenance, all with an eye towards connecting

kids to the natural world. As a national model for youth gardening education, the symposium inspires, invigorates, and motivates attendees to educate new generations of gardeners. Now in its 23rd year, the three-day event is chock full of educational sessions, keynote presentations, and the always popular field trips.

This year includes a chance to explore the LBJWC's Luci and Ian Family Garden. Just opened in May 2014, this four-and-a-half-acre garden is a pilot project of the Sustainable Sites Initiative (SITES) program. LBJWC developed SITES in collaboration with the U.S. Botanic Garden and the American Society of Landscape Architects as the first comprehensive national rating system that enables public or private projects to achieve certification as sustainable landscapes. The garden's interactive features include a native shrub maze, giant grape vine nests, and a grotto complete with caves and a waterfall.

Program highlights include the chance for attendees to get a sneak peek at the International Junior Master Gardener Program's newly developed "Learn, Grow, Eat, & Go!" curriculum and research program.

For more information: Visit [www.ahs.org/ncygs](http://www.ahs.org/ncygs), e-mail [education@ahs.org](mailto:education@ahs.org), or call (703) 768-5700 ext. 121. Updates will also be posted on Twitter @AHS\_NCYGS

## 2015 AHS MEMBERS-ONLY SEED EXCHANGE

IT'S TIME TO order seeds from the AHS Seed Exchange list. One of the benefits of joining AHS is exclusive access to the annual AHS Members-Only Seed Exchange. AHS members from around the country and generous seed companies donate seeds to share, and only current members may select seeds. Those who donate seeds also receive priority on orders submitted by February 17. Don't delay because some seeds are in short supply and the seed order deadline is March 7, 2015.

Up to five packets of seeds are available free, although a donation is requested to help defray postage and handling costs. Members donating at the \$10 level will receive up to 10 packets of seed along with a 2015 AHS Reciprocal Admissions Program (RAP) book-



let that lists participant gardens and the privileges and discounts available to AHS members. The seed company **Botanical Interests**, sponsor of this year's exchange, is providing special gifts at higher donation levels, so donors at the \$30 level will receive up to



**Donors at the \$50 level will receive a calendar and set of wooden stakes provided by Botanical Interests, this year's seed exchange sponsor.**

15 packets of seed along with a RAP booklet and a set of 12 wooden garden stakes, while those donating at the \$50 level receive up to 20 packets of seed along with the RAP booklet, 12 garden stakes, and a Botanical Interests calendar.

Get started by turning to this year's list of available seeds and order form, which can be found on pages 57 to 59. In mid-January, complete descriptions of all the seeds and an order form will be available in an online catalog on the AHS website ([www.ahs.org/seeds](http://www.ahs.org/seeds)). For a printed copy of the catalog, please send a self-addressed, stamped envelope to: Seed Exchange Catalog Request, American Horticultural Society, 7931 East Boulevard Dr., Alexandria, VA 22308.

## Spring Garden Market at River Farm

Save the date for this year's Spring Garden Market, which will be held April 10 and 11 at the AHS's River Farm headquarters in Alexandria, Virginia. Vendors from around the mid-Atlantic region will offer a wide variety of annuals, perennials, native plants, vegetables, and fruits for sale. Garden-related items—including books, jewelry, and garden accessories—will also be available, along with food and beverages.

Regular attendees of this popular annual event will note that this year's event has been reduced from three days to two. The traditional AHS members-only shopping period will be from 10 a.m. to noon on Friday, April 10, after which the market will open to the public until the 6 p.m. closing. On Saturday, April 11 the market hours are from 10 a.m. to 6 p.m.

For more information, visit [www.ahs.org](http://www.ahs.org).

## COLONIAL WILLIAMSBURG GARDEN SYMPOSIUM

AS IN NATURE, creating different layers of plantings in a garden ensures visual interest throughout the year, utilizes vertical as well as horizontal space, and more effectively supports native wildlife. Encouraging home gardeners to explore the concept of garden layers and the implementation of levels within a landscape will be the focus of this year's Colonial Williamsburg Garden Symposium, to be held April 10 to 12 in Williamsburg, Virginia.



# Colonial Williamsburg — 69th GARDEN SYMPOSIUM —



## LAYERS OF THE LIVING LANDSCAPE

APRIL 10-12, 2015

Planting in layers allows gardeners to take full advantage of their space and include a diversity of plants that provide beauty and benefit wildlife. This program includes presentations by Rick Darke and Douglas W. Tallamy, authors of *The Living Landscape*, and two of the most important voices in sustainability and horticulture. ♦♦♦

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## Gifts of Note

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Ms. Andrea Brown

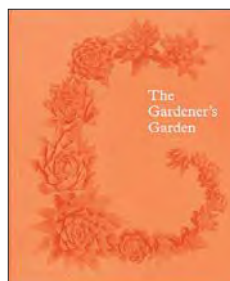
If you would like to support the American Horticultural Society as part of your estate planning, as a tribute to a loved one, or as part of your annual charitable giving plan, please call (703) 768-5700.

Keynote speakers for the symposium, titled “Layers of the Living Landscape,” are **Rick Darke**, an author, photographer, and landscape consultant based in Landenberg, Pennsylvania, and **Doug Tallamy**, an entomology and wildlife ecology professor at the University of Delaware, Newark. Darke and Tallamy, who collaborated on *The Living Landscape* (Timber Press, 2014), will discuss plants for the home landscape that are not only beautiful but benefit wildlife as well. Other notable speakers will explore topics such as how to select, design, and maintain different layers from the ground up to the canopy. There will also be a landscape practicum in which speakers will address selected landscape challenges submitted in advance by symposium attendees.

The AHS is a co-sponsor of this annual symposium, now in its 69th year, so members are eligible for a discounted registration fee. For more information, visit [www.history.org/conted](http://www.history.org/conted).

## SPECIAL BOOK DISCOUNT EXTENDED

AHS MEMBERS will continue to receive a 30 percent discount through February on *The Gardener's Garden* through a special arrangement with Phaidon, a New York based publisher. This large-format book features gardens ranging from 14th-century masterpieces to renowned contemporary landscapes. Packed with stunning photographs, this exploration of the historical and cultural significance of more than 250 gardens from around the world is a gardener's dream book. Use it this winter to armchair travel and gather ideas for your own garden. A full review of the book is on page 49. To order, visit the homepage of the AHS website, follow the link under “News,” and enter the code AHS at checkout.



## 2015 AMERICA IN BLOOM COMPETITION

REGISTRATION IS now open for the America in Bloom (AIB) competition, a nationwide community building program enhancing quality of life by encouraging community participation in beautification efforts. Cities, towns, townships, college and university campuses, business districts, military installations, and identified sections of large cities are all eligible to register. Experienced judges evaluate participants based on the following criteria: overall impression, heritage preservation, landscaped areas, environmental efforts, urban forestry, and floral displays. AHS sponsors the Community Involvement Award given to communities that demonstrate exemplary cooperation and service.

The registration deadline for the 2015 competition is February 28. Each participant receives an AIB Startup Kit. Participants may also earn a 25 percent discount on the registration fee, or a 25 percent refund on fees already paid, by recruiting a new participant to the program. For more information, visit [www.americainbloom.org](http://www.americainbloom.org).

## AHS TOUR EXPLORES ART AND GARDENS OF THE NETHERLANDS

THE LONG AND LUSTROUS art and gardening history of the Netherlands is on display this summer during “Discovering Gardens in the Netherlands,” an AHS Travel Study Program tour scheduled for June 9 to 21. Explore palaces, art galleries, and public and private gardens on this exclusive visit to hidden



## AHS NATIONAL EVENTS 2015 CALENDAR

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

- APRIL 10 & 11. **AHS Spring Garden Market.** River Farm, Alexandria, Virginia. **SOLD OUT**
- APRIL 10–21. **Mediterranean Cruise.** AHS Travel Study Program.
- APRIL 10–12. **Colonial Williamsburg Garden Symposium.** Williamsburg, Virginia.
- JUNE 4. **AHS Great American Gardeners Awards Ceremony and Banquet.** River Farm, Alexandria, Virginia.
- JUNE 9–21. **Discovering Gardens in the Netherlands.** AHS Travel Study Program.
- JULY 9–11. **AHS National Children & Youth Garden Symposium.** Austin, Texas.
- SEPT. 24–26. **America in Bloom Symposium and Awards Program.** Holland, Michigan.
- OCT. 7–15. **Gardens In and Around Rome, Italy.** AHS Travel Study Program.



gems and national treasures of the Netherlands. Exceptional accommodations for this program offer a perfect blend of historic charm and contemporary comforts, ranging from a castle with a private forest to a riverside urban hotel.



The Palace of Het Loo and its formal garden will be on the tour.

An exciting recent development is the inclusion of a tour to the private garden of **Piet Oudolf**, an internationally renowned landscape architect and author known for his innovative and inspiring use of ornamental grasses.

“Traveling with a small group of individuals who have a sense of adventure and appreciate history, art, fine food, good conversation, and of course, gorgeous gardens is what sets our AHS trips apart,” says AHS tour host and landscape designer **Jane Diamantis**. In addition to the Oudolf garden, tour participants will visit the private garden of the late **Mien Ruys**, one of the most significant landscape architects of the 20th century; the Palace of Het Loo’s recently restored 17th-century formal parterre gardens; and Kasteel de Haar, which has been restored to its medieval grandeur.

Exposure to Netherland’s storied garden traditions will be balanced by a chance to observe the country’s modern horticulture industry in action during the world-famous, frenetic flower auction at Aalsmeer, where flowers from more than 10 countries are bought and sold.

In addition to gardens and flower markets, the tour includes visits to a must-see list of art museums, starting with the Rijksmuseum, the national museum of the Netherlands, home to works by Vermeer, Frans Hals, and Rembrandt, among others. A trip to the Kroller-Muller Museum and Sculpture Park offers a chance to study masterpieces by van Gogh, Monet, and Rodin.

The tour brochure may be viewed on the AHS website at [www.ahs.org](http://www.ahs.org). For more information about the program, including pricing and reservations, contact Eleanor Nelson at [enelson@ahs.org](mailto:enelson@ahs.org) or (703) 768-5700 ext. 132.

*News from AHS written by Editorial Intern Mary Chaddock.*

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## AHS MEMBERS MAKING A DIFFERENCE: Cathie Lavis

by Mary S. Chadduck

**C**ATHIE LAVIS, who has been an American Horticultural Society (AHS) member since 2003, discovered her passion for teaching horticulture while she was a graduate student at Kansas State University (KSU) in 1990. As a teaching assistant for introductory horticultural courses, she found that she “enjoyed working with students, watching them grow and develop.”



Cathie Lavis

Today, as an associate professor and Extension specialist in landscape management for KSU’s Department of Horticulture, Forestry and Recreation Resources, Lavis radiates an infectious enthusiasm for both her subject and her students.

### PROMOTING PROFESSIONAL HORTICULTURE

At KSU, Lavis is also something of a horticultural evangelist, chairing a task force to brainstorm ways to increase the numbers of students going into the horticulture program. Her mission is to “get that excitement out that there are some really great opportunities in the green industry.” At KSU, she directs her promotional efforts at students with undeclared majors, but she believes the outreach would be more effective if it started with kids in upper grade school or junior high. “We really need to capture that group and let them know there is such a thing as horticulture,” she says.

Part of that mission includes making students aware of the diverse and rewarding career options available in horticulture and related fields. For instance, when one of her arboriculture students expressed surprise that there was a job that involved climbing trees, Lavis assured him that arborists not only do that, but “make a good living doing it, too.”

### INNOVATIVE MOTIVATION

Once she has them in her classroom, Lavis engages students by intertwining experiential learning with book knowledge. For example, in her Landscape Irrigation Systems course, students learn from lectures but also get down and dirty installing a residential irrigation system.

Nothing sparks student engagement like a little friendly intercollegiate competition, so Lavis taps into this energy by co-coaching the KSU Landscape Contracting Team for the industry group PLANET (Professional Landcare Network). Each year PLANET

for about 18 trees on campus that “identify the tree, what it does for the environment, how much the tree is worth, all sorts of fun facts about the tree,” explains Lavis.

### REWARDED EFFORTS

Lavis’s out-of-the-box approach to teaching has earned her numerous accolades. Most recently, she received the Alex L. Shigo Award for Excellence in Arboricultural Education from the International Society of Arboriculture in 2014. The award honors society members for enhancing the quality and professionalism of arbo-



Cathie Lavis and her students plant a red oak during an Arbor Day event at Kansas State University.

hosts Student Career Days, a career fair and three days of student competition judged by industry experts highlighting skills relevant to careers in the horticulture industries. “We get them hooked as freshman and they’ll go every year,” Lavis says.

She also has been successful at motivating her students with the Tree Campus USA designation sponsored by the Arbor Day Foundation. This program encourages annual student action to meet and maintain standards for sustainable campus forestry. As part of this effort last year, her students took the initiative to create signs

riculture through sustained excellence in education. She also received the AHS’s Teaching Award in 2013, in recognition of her motivational work with students.

While the acknowledgment from peers is a perk, Lavis feels the best reward is helping her students develop their passion for learning while intensifying their passion for horticulture. “I love seeing students get excited,” she says, “when they realize that, ‘Oh, my gosh, I get it!’”

Mary S. Chadduck is an editorial intern for *The American Gardener*.





# THE AMERICAN HORTICULTURAL SOCIETY TRAVEL STUDY PROGRAM UPCOMING TOURS



*Participation in the Travel Study Program supports the American Horticultural Society and its vision of Making America a Nation of Gardeners, A Land of Gardens.*

## ~ TOUR SPOTLIGHT ~

### **Discovering Gardens in the Netherlands**

**June 9–21, 2015**

#### **VISIT THE PRIVATE GARDEN OF PIET OUDOLF,**

one of the world's most influential and innovative garden designers, whose credits include the High Line park in New York City and Lurie Garden in Chicago.

See the colorful world-famous flower auction at Aalsmeer. Experience gardens that represent the best in Dutch horticulture, and discover how they have inspired gardens around the world. Hosted by AHS Board member Jane Diamantis and her husband, George, and tour leader Susie Orso of Specialtours, this is a journey you won't want to miss.

**Only a few spaces left, so reserve now!**

## ~ Other 2015 Travel Destinations ~

### **A Musical Journey of Historical Gardens from Lisbon to Rome**

April 10–21, 2015 **Sold Out**

### **Gardens of Rome**

October 7–15, 2015

For more information about the AHS Travel Study Program, visit [www.ahs.org/gardening-programs/travel-study](http://www.ahs.org/gardening-programs/travel-study) or contact Eleanor Nelson at [enelson@ahs.org](mailto:enelson@ahs.org), (703) 768-5700 ext. 132.



# New for 2015

BY CHARLOTTE GERMANE

**O**PTIMISM IS A cardinal quality among gardeners and what can inspire that more than the luscious images in the seed and plant catalogs that are stacking up on coffee tables all over the United States right now? Those pictures and the enticing descriptions ignite dreams of creating our best gardens yet. That siren call is even more seductive when considering all the new offerings coming into the market each year. The parade of new varieties promises more colors, more sizes (both larger and smaller), more disease resistance, more tolerance for a given climate, with each one sounding better than the next until it all becomes a bit overwhelming.

To help pare down the list of new offerings, I talked with garden writers who tried out these plants in their home gardens, conferred with public garden staffers about which trials demonstrated true winners, and consulted with the growers themselves about their favorites.

Representing a range of regions, those who shared their plant trial feedback include **Mark Dwyer**, director of horticulture at Rotary Botanical Gardens in Janesville, Wisconsin; "**Farmer Fred**" **Hoffman**, radio and newspaper garden communicator in the Central Valley of California; **Rebecca Sweet**, garden designer and author in Northern California; **Kylee Baumle**, garden author in Northwest Ohio; **Susan Morrison**, garden designer and author in the San Francisco Bay Area; **Stephanie Cohen**, garden writer, horticulture professor, and perennial "diva" in Collegeville, Pennsylvania; **Lisa Colburn**, garden author in Orono, Maine; and **Peggy Hill**, garden writer in Bremen, Alabama.

*Charlotte Germane is digital communications manager for the American Horticultural Society.*

## ANNUALS & TENDER PERENNIALS



SUNSET WESTERN GARDEN COLLECTION, SOUTHERN LIVING PLANT COLLECTION

One of the most talked-about new plants is **Illumination® 'Flame' *Digiplexis***, resulting from a cross between garden foxglove (*Digitalis purpurea*) and a Canary Islands relative called *Isoplexis canariensis*. This pink-and-orange-flowered hybrid garnered compliments from trial gardeners around the country. Mark Dwyer calls this "one of my favorite plants of the year" and says, "I was most amazed with their long bloom period, which extended until frost in some cases. The orange-red blooms have a yellow throat and the flower spikes invite attention from both a distance and up close." Lisa Colburn notes "it bloomed all summer and the color was fabulous. I will definitely plant it again and plant many more in a prominent location!" Susan Morrison was impressed by the vigorous growth and repeat blooms in part shade. Though it is hardy to about USDA Zone 8, it can be grown as an annual in colder climates. Zones 8–11, 11–3. Sunset Western Garden Collection, Southern Living Plant Collection.



SUNSET WESTERN GARDEN COLLECTION, SOUTHERN LIVING PLANT COLLECTION

***Lavandula xallardii* 'Meerlo'** is a variegated lavender that Southern Living Plant Collection calls "the most drought and heat tolerant of the lavender species." Garden designer Rebecca Sweet says, "It truly has the most heavenly lavender fragrance I've ever smelled." While it will reach two to three feet tall and wide, you can keep it compact by cutting one-third of it back after its first flowering. Zones 8–10, 10–3. Sunset Western Garden Collection, Southern Living Plant Collection.





JOHNNY'S SELECTED SEEDS, JOHNNYSEEDS.COM

**'Cherry Caramel' *Phlox drummondii*** has late-summer flowers with a cherry-colored center and buff-colored petals. In bloom, the plant gets about one-and-a-half feet tall. Zones 0–0, 12–1. Johnny's Selected Seeds.



W. ATLEE BURPEE & CO.

**'Candy Mountain' sunflower (*Helianthus annuus*)** blooms at each leaf node, sending branches in all directions. Flowers are a striking burgundy on yellow. Grow this eight- to 10-foot-tall annual in the back of a border or in a cutting garden. Zones 0–0, 12–1. W. Atlee Burpee & Co.



BALL HORTICULTURAL CO.

A purple-brown Rex begonia that sports a curling silver pattern on each leaf, **'Jurassic Silver Swirl' (*Begonia ×tuberhybrida*)** is eye-catching in a container on its own, or mixed with other shade lovers. Mounds to 16 inches tall and one foot wide. Zones 10–11, 10–1. Ball Horticultural Co.



PROVEN WINNERS

***Euphorbia Diamond Delight*<sup>™</sup>** is double-flowered, giving it twice the impact as it mounds to one foot tall and wide. Peggy Hill, who gardens in USDA Zone 7, says, "I grew it in full, blazing sun with very little supplementary water. Other white euphorbias, like Diamond Frost<sup>™</sup>, remind me of baby's breath, but Diamond Delight's flowers are much larger, and they cover the plant in a sheet of white." Mark Dwyer particularly appreciates that "the double blossoms on this drought-tolerant selection are self-cleaning and give an 'airy' look to beds, borders, and containers." Zones 10–11, 11–1. Proven Winners.

## PERENNIALS



SUNSPARKLER SEDUMS

×***Sedum 'Blue Elf'*** belongs to a brand new genus: It is the first hybrid between *Sedum* and *Orostachys*. Its breeder, Chris Hansen, says it offers "the best of both parents," combining dark pink flowers from the *Sedum*, and steel-gray, tufted rosette foliage from the *Orostachys*. The succulent is only three inches tall and spreads to 15 inches wide. The late-summer flowers attract pollinators and scent the air with a grape-soda fragrance. Zones 4–9, 9–1. SunSparkler Sedums.





COURTESY OF KYLEE BAUMLE

***Dendranthema 'Snowy Igloo'*** is an upgrade of 'Frosty Igloo' with improved vigor, habit, and flowering. Kylee Baumle trialed the hardy chrysanthemum and reports that "it kept wanting to bloom from the moment I planted it in late spring." The plant can grow up to 20 inches tall with a spread of 30 inches. Zones 5–9, 9–4. Blooms of Bressingham.



BALL HORTICULTURAL CO.

***Astilbe chinensis 'Little Vision in Pink'*** is a dwarf form of 'Vision in Pink', growing just 16 inches tall and wide with a summertime profusion of pink flowers. Part of Ball Seeds' Darwin Perennials line, it is purported to be more sun and drought tolerant than other selections. In Mark Dwyer's trial garden, "specimens in full afternoon sun did quite well," he notes. "The compact form and stature of this all-star make it perfect in mass plantings." Zones 4–8, 8–2. Ball Horticultural Co.



COURTESY OF DARRELL PROBST

***Coreopsis verticillata 'Berry Chiffon'*** is a tickseed that stays where you put it, due to sterile flowers. This highly mildew-resistant variety attracts butterflies. As temperatures drop, the raspberry color of the flower's eye spreads into the creamy petals, but the plant itself goes dormant later than other coreopsis. Zones 4–9, 9–1. Walters Gardens.



WALTERS GARDENS

Growing unsupported up to six feet tall, ***Clematis recta Serious Black***™ offers striking black foliage that contrasts dramatically with its white flowers. "This clematis is by far the darkest on the market with near-black spring foliage," says Mark Dwyer. "The foliage does fade to a greenish maroon in the heat of summer but a full sun location will bring out the darkest foliage during the early growing season." Zones 3–9, 8–1. Walters Gardens.



HIGHCOUNTRYGARDENS.COM

***Red Mountain® Flame*** is an ice plant (*Delosperma dyeri*) with hot-hued flowers ranging from red to orange instead of the usual magenta. Fire retarding—like all ice plants—it's even less thirsty than most, and will rebloom lightly with summer rain. This one-inch-tall succulent will spread up to 18 inches. Zones 6–9, 10–5. High Country Gardens.



HIGHCOUNTRYGARDENS.COM

***Intermountain Beauty*** is a selection of *Gaura lindheimeri* native to Utah. Topping out at 22 inches tall and 15 inches wide, it's a bit shorter than other gauras, but shares their drought tolerance and resistance to deer and rabbits. Its wands of white flowers bloom all summer. Zones 5–9, 9–6. High Country Gardens.



# EDIBLES



W. ATLEE BURPEE & CO.

**Prime Ark® Freedom blackberry** (*Rubus fruticosus*) is the first thornless version of the primocane blackberries that produce two crops a year. This new release from the University of Arkansas has canes that reach six feet tall and wide. Good flavor and disease resistance make this an excellent choice for home gardens. Zones 4–8, 8–4. W. Atlee Burpee & Co.



RENEE'S GARDEN

**'Litt'l Bites' cherry tomato** (*Solanum lycopersicum*) is ideal for window boxes or small containers. This cascading tomato grows only about 12 inches tall and 20 inches wide, covered in summer with small flavorful fruits. Zones 0–0, 12–5. Renee's Garden.

## Additional new edibles

- **'Petite Snap-Greens' snap pea** (*Pisum sativum*) is the first introduction in the new Calvin's Peas™ line from the original breeder of snap peas, Calvin Lamborn. With smaller leaflets than regular snaps, also enjoy this cultivar for its edible shoots and blossoms. Johnny's Selected Seeds.
- **'Cloudy Day' hybrid tomato** (*Solanum lycopersicum*) will take cool, long summers in stride. It also resists early and late blight. The plant produces four- to five-ounce tomatoes in about 70 days. W. Atlee Burpee & Co.
- Great for containers or small spaces, **Pixie® grapes** (*Vitis vinifera*) reach only 20 inches tall and about 12 inches wide, producing tiny bunches of sweet, tart fruit the first year. Available varieties are 'Riesling', 'Pinot Meunier Purple', 'Pinot Meunier White', and 'Cabernet Franc'. Zones 5–8, 8–5. Plug Connection®.
- Heirloom Vietnamese **'Bac Lieu' cilantro** (*Coriandrum sativum*) adds a note of citrus to the classic flavor. It grows like regular cilantro, but has more filigreed leaves. Renee's Garden.



FISHER FARMS

Winner of a Retailers Choice prize at the 2014 Farwest Trade Show in Oregon, **Lo-Hugger™ American cranberry** (*Vaccinium macrocarpon* 'Lohzam') serves as both a fast-growing groundcover and an edible. This selection grows to six inches tall and spreads up to three feet. It boasts three-season interest with pink spring blooms, summer berries, and bronzed evergreen foliage in the fall. Zones 2–7, 7–1. UpShoot LLC.



JOHNNY'S SELECTED SEEDS, JOHNNYSEEDS.COM

**Kalettes™** are a brand new vegetable created by crossing kale and Brussels sprouts (*Brassica oleracea*). The Brussels sprouts contribute the tall stalks, with edible, two-inch, kale-like rosettes growing up the sides. Ready to harvest in 110 to 138 days, they can be eaten raw or cooked and have a mild, nutty flavor. They are purported to pack quite a nutritional punch as well. Zones 0–0, 8–1. Johnny's Selected Seeds.



## TREES, SHRUBS, & VINES



DAVID AUSTIN ROSES

**Maid Marion rose** (*Rosa* 'Austobias') is one of four new rose varieties from David Austin. The fully double, clear pink blooms have lighter pink outer petals. The flowers exude a fragrance of myrrh, then clove as they mature. This shrubby, compact rose reaches three feet tall with equal spread, and blooms repeatedly from early summer through frost. Zones 5–9, 9–5. David Austin Roses.



MONROVIA

If you love the look of the jacaranda tree (*Jacaranda mimosifolia*) but don't have room for a 40-foot specimen, now there is a six-foot true dwarf version. Drought tolerant and sun-loving, **Jacaranda 'Bonsai Blue'** produces purple flowers in late spring that attract hummingbirds. Zones 9–11, 12–10. Monrovia.

### Additional new trees, shrubs, and vines

- Shade-loving **Red Rhapsody® Chinese hydrangea vine** (*Schizophragma elliptifolium* 'MonLaBaHe Blush') puts out shiny red leaves that contrast beautifully with creamy bracts before turning green. Growing to 10 to 15 feet tall, the self-clinging stems will not damage trees or other supporting structures. Zones 6–9, 9–6. Monrovia.
- Dwarf **Milestone™ sweet gum** (*Liquidambar styraciflua* 'Milestoz') has all the flashy fall color of the species but behaves itself in a small garden, topping out between 10 and 20 feet tall. It doesn't form spiny fruits, and the leaves are only half the size of the species' leaves. Bred by Warren County Nursery. Zones 5–9, 9–1. UpShoot LLC.



PROVEN WINNERS

**Azurri Blue Satin®** is a new seedless rose of Sharon (*Hibiscus syriacus*). Its large, blue-violet flowers appear in summer on a plant that can reach up to 12 feet tall and six feet wide. Zones 5–9, 10–3. Proven Winners.

**Yuki Cherry Blossom™** is a diminutive pink-flowering *Deutzia*. Mark Dwyer notes that the two-foot by two-foot mounding shrub is "not only covered by a profusion of pink spring blooms but is quite tough in a range of soils. As a specimen or in mass plantings in full sun, it contributes strong spring color, summer form, and fall color that develops late in the season." Zones 5–8, 8–5. Proven Winners.



PROVEN WINNERS





PROVEN WINNERS

**Castle Gold™ blue holly** (*Ilex xmeserveae* 'Gold Princess') will illuminate landscapes with evergreen, lime-gold foliage that matures to a deeper gold. It grows six feet in height and width. Zones 5–9, 9–5. Proven Winners.



BAILEY NURSERIES

**Highlights™ arborvitae** (*Thuja occidentalis* 'Janed Gold') grows eight to 12 feet tall and spreads four to five feet, making it well suited for small gardens. Its bright yellow foliage provides year-round color. Zones 3–7, 7–1. PlantHaven International, Bailey Nurseries, Monrovia.



COURTESY OF JOHN LEWIS, JLPN

Growing eight feet tall and five feet wide, **Marleys Pink™ Japanese snowbell** (*Styrax japonicus*) is a weeping form that has larger, glossier leaves than the species. The pink, bell-shaped, slightly fragrant flowers bloom profusely in early summer. Zones 6–8, 8–6. UpShoot LLC.

## Wholesale Nurseries/ Marketing Consortia

Visit these companies' websites to locate retail sources for their plants.

- Bailey Nurseries,**  
[www.baileynurseries.com](http://www.baileynurseries.com).
- Ball Horticultural Co.,**  
[www.ballhort.com](http://www.ballhort.com).
- Blooms of Bressingham,**  
[www.bloomsofbressingham.com](http://www.bloomsofbressingham.com).
- Monrovia,** [www.monrovia.com](http://www.monrovia.com).
- PlantHaven International,**  
[www.planthaven.com](http://www.planthaven.com).
- PlugConnection,**  
[www.plugconnection.com](http://www.plugconnection.com).
- Proven Winners,**  
[www.provenwinners.com](http://www.provenwinners.com).
- Southern Living Plant Collection,**  
[www.southernlivingplants.com](http://www.southernlivingplants.com).
- Sunset Western Garden Collection,**  
[www.sunsetwesterngarden.com](http://www.sunsetwesterngarden.com).
- SunSparkler Sedums,**  
[www.sunsparklersedums.com](http://www.sunsparklersedums.com).
- UpShoot,** [www.upshoothort.com](http://www.upshoothort.com).
- Walters Gardens,**  
[www.waltersgardens.com](http://www.waltersgardens.com).

## Retail Sources

- David Austin Roses,** Tyler, TX.  
[www.davidaustinroses.com](http://www.davidaustinroses.com).
- High Country Gardens,** Santa Fe, NM.  
[www.highcountrygardens.com](http://www.highcountrygardens.com).
- Johnny's Selected Seeds,** Winslow, ME.  
[www.johnnyseeds.com](http://www.johnnyseeds.com).
- Renee's Garden,** Felton, CA.  
[www.reneesgarden.com](http://www.reneesgarden.com).
- W. Atlee Burpee & Company,** Warminster, PA.  
[www.burpee.com](http://www.burpee.com).



# A Passion *for* Seeds



Introducing American gardeners to seeds for beautiful and delicious varieties of vegetables, herbs, and flowers is Renee Shepherd's enduring legacy.

BY NAN STERMAN

**T**O REACH Renee Shepherd's California mountain home, one takes a long driveway past beds of eggplant and cucumbers, then past a paddock inhabited by three beautiful horses.

The home's entry garden, designed by Shepherd's good friend and legendary edible landscape designer Rosalind Creasy, is filled with blood-red poppies, golden yellow coreopsis, purple sages, bronze-and-

**Annuals, perennials, and vines mingle in the colorful cottage-style entry garden around Renee Shepherd's California home, top. Shepherd, shown above with her yellow lab, Eliot, is the founder and owner of Renee's Garden seed company.**

yellow blanket flowers, stark white Shasta daisies, and dusky pink Peruvian lilies.

The front path leads past a cobalt-blue ceramic vase overflowing with a gentle trickle of water. It marks the entry to an outdoor dining room beneath a peaked metal arbor. Grapevines clamber up and over the arbor, shading a metal table and chairs, typical except for their colors: primary red, buttercup yellow, and periwinkle blue.

Shepherd, founder and owner of Renee's Garden seed company, welcomes



visitors at her door. A petite woman with short brown hair, she has a fierce intellect and keen business acumen. She's equally comfortable searching the world for seeds of the perfect, personal-sized kabocha squash, or sitting at her computer writing a detailed and inspiring description of a new variety of Vietnamese cilantro that has frilly leaves and a flavor that finishes with a hint of lemon.

## SOCCER AND SEEDS

Growing up in Cleveland, Ohio, Shepherd didn't garden at home, but she remembers with fondness weekends spent at her grandmother's house, where she and her grandmother worked in the garden together and then her grandmother used freshly harvested vegetables to prepare their lunch.

In the 1980s, she relocated to work on a doctorate in the history of consciousness at the University of California—Santa Cruz. Around that time, she bought a ranch-style home on four acres in Felton, a small town in the redwoods, about 20 minutes east of the university.

While in graduate school, Shepherd often invited fellow graduate students for weekend potlucks and games of soccer in the field below her horse pasture. Few American students were familiar with the game, so Shepherd invited European graduate students, all of whom knew how to play soccer.

Among the Europeans she met was Cees Boonman, who at the time worked for a seed company that sold Dutch seed varieties to farmers in the nearby agricultural community of Salinas, euphemistically known as “the Salad Bowl of the World.”

One day, Boonman—who went on to make his own name in the seed industry and is now president of the Ball Seed Company—made a comment that changed Shepherd's life. “I had a small vegetable garden,” she says. “When he looked at it, in typical straightforward Dutch fashion, he said, ‘This is all junk. These varieties aren't at all as good as what we have in the Netherlands.’” The Dutch, he informed her, shop for vegetables three or four times a week, and flavor is very important. “He told me the varieties in my garden just didn't live up to that standard and said, ‘Would you like to try some of ours?’”

The European varieties opened Shepherd's eyes to a whole new world of vegetables and herbs. At that time, vegetables were

perceived more as a commodity, valued for production and shipability, not for flavor. It struck her that other American gardeners would enjoy them as well, but there were no European seeds available to them at the time. So in 1985, Shepherd took the bold step of starting her first seed business, Shep-



“Rosette” tatsoi, top, is a new offering from Renee's Garden for 2015. ‘Watermelon’ heirloom Asian radish, above, is an older favorite introduced in the 2011 catalog.

herd's Garden Seeds, a mailorder company. “Today, we have wonderful vegetables in the U.S., and wonderful cooks,” explains Shepherd, “but back then, I was the only one selling a lot of specialty seeds like arugula, radicchio, mesclun, and baby kale.”

It may seem surprising for an academician to launch a seed business, but Shep-

herd's graduate experience played a big role in the evolution of her passion. Starting in the late 1960s, UC—Santa Cruz became a hotbed for all things sustainable. It was an exciting time of innovation that saw the birth of sustainable agriculture, the precursor to today's permaculture movement. It also spawned the “back to the land” movement in which many people tried their hands at simple living based in environmental consciousness. And that, of course, included growing one's own food.

The university hired English master gardener Alan Chadwick in 1967 to create a student garden. Chadwick developed a highly successful teaching garden where he introduced organic Biodynamic/French Intensive growing methods to hundreds of eager and enthusiastic students. Shepherd's studies were in a cross-disciplinary program, so many of Chadwick's students were her colleagues and she shared their interest in environmental studies. She even taught classes in the Environmental Studies department.

## SHARED WISDOM AND FIRST STEPS

Before starting Shepherd's Garden Seeds, Shepherd sought advice from several successful business owners. “I called up Rob Johnston at Johnny's [Selected Seeds] and Steve Solomon, who owned Territorial [Seed Company], Will Raap, who started Gardener's Supply [Company], and asked them about the seed business,” Shepherd recalls, smiling at the memory. “Since I wasn't in their geographic regions, I wasn't a competitor. Besides, they are wonderful and generous people, so they gave me their advice.”

Her first step was to write a catalog. “I thought gardeners and people who like to cook would like these varieties,” she says, “so I wrote as if I were talking to you.”

“Renee is very articulate and literate,” says Wendy Krupnick, who for close to a decade ran Shepherd's test garden, where she grew new varieties and witnessed the development of Shepherd's approach. “Her descriptions and the way she writes about varieties is part of what makes her business successful. She describes varieties in a way that makes your mouth water.”

While learning the seed business, Shepherd also honed her own gardening skills under the tutelage of local organic gardeners. As much as she was interested in vegetables, old-fashioned flowers al-



so caught her attention. As she explains, “Here in Santa Cruz, there was an organic farm called Camp Joy, and the people who ran it really knew their flowers.” One of the Camp Joy’s founders was a woman named Beth Benjamin, who became a friend and now works for Shepherd. “Beth helped me learn about flowers, which became a lifelong fascination,” she says. Her interest in herbs came from a seed-buying trip to Italy, where she was fascinated to discover that every region had a slightly different variety of basil.

*“The lovely semi-double blossoms of this tropical-looking pastel variety seem to float over the pretty rounded green leaves that remind us of water lilies.”*

*Renee’s Garden catalog description for ‘Buttercream’ nasturtium*

Shepherd was soon traveling to seed trials in France and other countries to learn about each region’s specialties. Her attendance at seed trials was unusual in two respects: First, she was a woman in the male-dominated industry; second, seed trials were traditionally the purview of buyers and brokers, not retailers. Shepherd and her staff tasted each variety, too—something no one else did. Krupnick recalls going to seed open houses in nearby Salinas Valley. “We’d do field walks, and we were the only ones bending over and breaking off leaves to eat,” she says. “The men would chuckle at us, but we thought (tasting the varieties) was the point.”

Rosalind Creasy adds, “Good food, local food doesn’t have to be grown that way. Renee came along with her cooking ability and the ability to change things.” Shepherd, Creasy says, reconnected food with flavor.

In 1988, Shepherd made a strategic decision to sell Shepherd’s Garden Seeds to White Flower Farm, a top-tier perennial mailorder company. White Flower Farm had a huge fulfillment facility in Connecticut that was busy during the spring to fall perennial season but quiet during seed-selling

season. By combining their operations, the two companies could increase their efficiency. The sales agreement allowed Shepherd to continue running the seed side of the operation from California. “They fulfilled all the orders while I was given free rein to develop the seed business,” she explains.

After the acquisition, Shepherd grew Shepherd’s Garden Seed catalog rapidly, including the addition of live plants. In the meantime, Shepherd says she learned

and started Renee’s Garden in 1998. She took a different approach to the business model with Renee’s Garden, which she describes as “an online company that sells seeds to garden centers and nurseries, and to home gardeners.” Shepherd’s Garden Seeds was, by comparison, “a mailorder catalog company in the heyday of catalogs.”

The business plan may have changed, but not Shepherd’s drive to search out



how to run a business from White Flower Farm owner Eliot Wadsworth. “I am very grateful for that,” she says.

## NEW BEGINNING

By 1996, Shepherd decided to focus more on seeds, so she left White Flower Farm

## Resources

**More Recipes From a Kitchen Garden** by Renee Shepherd and Fran Raboff. Ten Speed Press, Berkeley, CA, 1995.

**Recipes from a Kitchen Garden** by Renee Shepherd and Fran Raboff. Ten Speed Press, Berkeley, CA, 1994.

**The Renee’s Garden Cookbook** by Renee Shepherd and Fran Raboff. Shepherd Garden Publishing, Felton, CA, 2014.

the best-tasting, easiest-to-grow, and most productive varieties from across the globe. Thailand, Japan, Korea, Taiwan, Great Britain, France, Italy, Brazil, the Netherlands, Belgium, Czech Republic, Canada, the United States, Mexico, Israel, and New Zealand are countries Shepherd lists off the top of her head. Seeds come from a variety of sources, including companies that sell to farmers, those that sell to growers, and companies that produce for the home gardener.

Today, Renee’s Garden sells 5.5 million packets of seeds across the United States and Canada. The company employs 28 people, most of whom work in the company offices, a couple of miles away from Shepherd’s home, near the main crossroads in Felton, a small town in north-central California, just inland from Santa Cruz. Four employees work in the organic test garden that surrounds



Shepherd's home. Every year, they test 350 new varieties. Growing everything at her home first is a crucial component of Shepherd's approach. "I don't sell anything unless I grow it myself," she says, "I want people to be successful and have good results."

The test garden includes numerous raised beds divided between an upper and a lower section. The upper test garden, which surrounds much of her home, contains the smaller crops, those that need most protection from birds, or just a watchful eye.

Alongside the raised beds are beautiful deep blue and green ceramic pots brimming with beans, tomatoes, and other candidates for Renee's Garden's container vegetable collection.

Eliot, Shepherd's yellow lab, follows faithfully as Shepherd leads the way to the lower trial garden near the barn. Shepherd stops to nuzzle her three handsome horses in the paddock next to the garden fence. In her free time, Shepherd enjoys riding her horses around town and on trails through the surrounding redwood forest. "I'm very interested in



**Shepherd's test garden offers her the chance to trial new plant varieties, such as this "Prinz" celeriac, a relative of celery prized for its crisp, rounded roots.**

the natural horsemanship approach to riding," she says.

Past the horses and into the lower trial garden area, one finds larger scale vegetables and beds of mixed flowers. By mid-summer, there are tomatoes from eastern

Europe, peppers in different shapes and colors, enormous savoy cabbages, cauliflower, eggplant, and squash, just to name a few.

Shepherd is so well known for her vegetables and herbs that it is easy to overlook her passion for old-fashioned flowering annuals, perennials, and vines. She has a particular affinity for fragrant plants, including sweet peas, of which Renee's Garden offers more than 25 varieties.

One edge of this large, fenced-in garden is lined with tall, purple-flowering *Buddleia* that draws butterflies to the garden. Plants that attract beneficial insects, including butterflies and other pollinators, are another of Shepherd's big interests. One long test bed is given over to pollinator seed mixes that include various formulations of blue cornflowers, pink cosmos, yellow and red coreopsis, orange marigolds, magenta clarkias, and red zinnias. Cover crop mixes fill another bed, some of which will soon appear as Renee's Garden offerings.

Varieties that do well in Shepherd's home test garden are then trialed at a student-run garden at Middlebury College in Vermont. Each variety must perform well in both locations to be considered for the catalog, says Shepherd.

### CREATING A DISTINCTIVE BRAND

Over the years, Shepherd has brought a number of innovations to the seed business. Among the first was her "rainbow" packets of seed, each of which includes three varieties of the same vegetable; eggplant, tomato, or pepper. Each variety of seed is dyed a different color so gardeners can tell which are which. "I got the idea," Shepherd says "one day when I was coloring Easter eggs." A legend on seed packets decodes the colors.

Renee's Garden seed packets are widely regarded as among the best in the industry. "Unlike many seed companies, which simply offer generic information that is basically the same on every packet, Renee's packets include specific details about germinating,

**Blanketflowers (*Gaillardia* sp.) and other colorful plants grow in the cottage garden at the entry to Shepherd's home.**





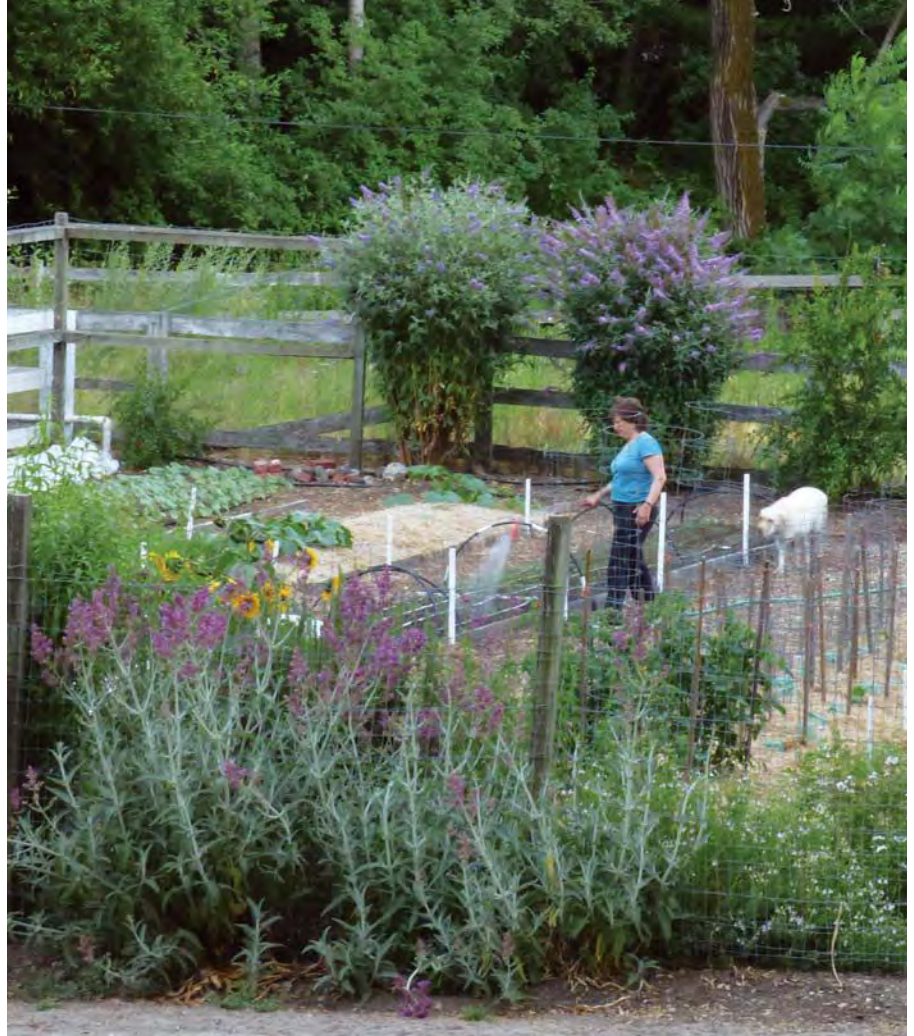
growing, and using that particular plant variety,” says Jim Long, owner of Long Creek Herbs in Blue Eye, Missouri. “The beautiful illustrations are a real bonus because they often show more detail than a photograph.”

Shepherd writes all of the packet material herself, incorporating observations from the test gardens and from her own kitchen. In addition to the mouth-watering descriptions, each seed packet features a beautiful watercolor portrait of the vegetable, flower, or herb, created by San Francisco Bay area artist Mimi Osborne. Shepherd added an extra flap to the envelopes to allow for a detailed description of each variety, its flavor, and how it



**Renee's Garden's seed packets feature watercolor illustrations by artist Mimi Osborne.**

grows—along with the seed color legend for rainbow seed mixes. Open the flap to find instructions on how to start the seeds, growing notes, and harvest and use. Along one edge is a key for when, where, and how deep to space or plant, plant height and width, days to germination, and so on. The same information and illustrations can be found on her company website ([www.reneesgarden.com](http://www.reneesgarden.com)).



Accompanied by her dog, Eliot, Renee Shepherd waters a bed of seedlings in the test garden that surrounds her home. Shepherd personally evaluates all the trial plants under consideration for her catalog, testing them not only in the gardens, but in her kitchen.

In addition to writing the catalog and seed packet information, Shepherd has three cookbooks to her credit, including the recently released *Renee's Garden Cookbook*, (see “Resources,” page 22).

Vegetable gardening, like everything else, has trends with Shepherd often at the cutting edge. Right now, she says, kale is the “hot” vegetable “because of its incredible health values and because it’s overtaking roasted beets in salads.” She is also seeing more interest in vegetables that can be grown in containers, and in root vegetables, which she says have become popular with chefs. Cilantro “seems to have overtaken basil as the best-selling herb and flat-leaf Italian parsley is very popular, as well as arugula.”

### PAYING IT FORWARD

Her long career in the seed business has offered Shepherd numerous opportunities for giving back. Krupnick describes Shepherd as “very generous. She’s a dedicated, smart person who sees the business

opportunity but still follows her personal mission of making more gardeners in the world who get joy from growing their own food, flowers, and herbs.” Renee’s Garden donates seeds to school gardens, gardens for homeless people, non-profit gardening organizations, and prison gardens. “I am still doing cultural history—just in a different way,” Shepherd says, “The pleasure of gardening, cooking, and having flowers in your home expands into most aspects of life and makes the world a better place.”

After a moment of reflection, Shepherd adds, “I am one of the most fortunate people in the universe because I get to do what I love. It’s doing well by doing good and doing good to do well.”

*Nan Stermán is a garden communicator, consultant, and designer based in Encinitas, California. She hosts the public television show, “A Growing Passion.” For more about Stermán, visit [www.plantsoup.com](http://www.plantsoup.com).*





## *Do you no longer need your life insurance policy?*

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The contorted limbs and cascading branches of this weeping blue Atlas cedar (*Cedrus atlantica* 'Glauca Pendula', Zones 6–9, 9–6) recall a waterfall thundering over boulders. The suggestion of water is reinforced by the striking silver blue of the short, densely-clustered needles. Although this tree may be trained to any shape, its habit and color demand careful placement in the garden. Here, the designer has set off the drooping cedar against the fountainlike sedge (*Carex elata* 'Aurea') beneath it.





# Weeping Beauties

BY CAROLE OTTESEN

For adding drama or elegance to a landscape, few plants can match trees that weep.

**W**ITH VERY few exceptions, trees are programmed to soar upward towards the sky. Whether vase-shaped, columnar, or colony-forming, whether pointed crowns punctuate space or branches arch into green cathedrals, the general direction of growth is up. Weeping trees are a delightful exception to this rule.

As weeping trees grow up and away from earth, their branches reach back, as if longing to return. In some—maples and birches, for instance—this is an eloquent gesture. In others—such as spruces and cherries—it is more like an embrace, as the tips of their branches, like fingers, stroke the ground.

The effect of pendant, weeping branches is at once eccentric, bittersweet,

and wonderfully graceful, endowing these trees with strong presence. They draw the eye and hold it with personalities so vivid and commanding that there is rarely enough room in the average garden for more than one of their kind.

It follows that they excel as focal points. It is not only their habit that sets them apart. Like bonsai, most weeping trees are crafted

Cherries such as this Higan cherry (*Prunus* × *subhirtella* ‘Pendula’, Zones 6–8, 8–6) are among the most popular of weeping trees—and with good reason. Like willows, weeping cherries are most dramatic in spring, when a flower shower of fragile and infinitely graceful blossoms on long, slender branches flows easily and evenly from a central trunk. The tips of the branches skirt the ground, making the flowers accessible and immediate. The tree’s long history as an ornamental in Japan has led to many excellent cultivars. This fact, when combined with its symmetrical habit and diminutive frame, renders the weeping cherry a peerless specimen for the residential landscape.



## WHY DO TREES WEEP?

“There are as many reasons for trees to weep,” says arborist Guy Sternberg, author of *Landscaping with Native Trees*, “as there are Inuit words for snow.”

“Weeping is genetic and varies with the species,” says Sternberg. “It is linked to the tree’s response to gravity (gravotropism) and light (phototropism).” If the response is strong, the tree grows starkly upright; if weak, it weeps. Robert Griesbach, a former research geneticist with the USDA’s Floral and Nursery Plant Research Program in Beltsville, Maryland, and now deputy assistant administrator for technology transfer, says hormone imbalances in certain trees may also play a role. “A particular hormone concentration can affect a plant so that it does not recognize gravity or has a negative response to light,” notes Griesbach.

Sternberg suggests weeping habits could also provide ecological advantages. “If a tree doesn’t invest energy becoming stiff, it can grow faster,” he says, or its pendant, pliable limbs may be less likely to break under the weight of snow or ice.

Trees such as weeping willows (*Salix babylonica* and *S. alba*) and European beech (*Fagus sylvatica*) weep naturally, even when grown from seed. Superior forms of these plants are often vegetatively propagated to retain special traits. This is true of the beech cultivar *F. sylvatica* ‘Pendula’, which was selected for its pronounced weeping habit.

Trees such as the Camperdown elm (*Ulmus glabra* ‘Camperdownii’) and the weeping flowering dogwood (*Cornus florida* ‘Pendula’) are created by grafting. A twig, or scion, of weeping wood is implanted onto rootstock of a closely-related species. Crucial to successful grafting is joining the cambium—a thin layer of cells inside plant stems and roots—of both scion and rootstock. To prevent grafted trees from reverting to the non-weeping habit of the rootstock, all new growth beneath the graft union must be pruned off promptly. —C.O.



The graceful cascading branches of weeping European beech (*Fagus sylvatica* ‘Pendula’, Zones 4–7, 9–4) provide visual interest in the winter garden. Branches grow horizontally at first, then turn sharply towards the ground. Other ornamental features include smooth gray-silver bark that turns dark with age and green leaves that turn coppery in fall. This slow-growing tree attains a height between 30 and 60 feet with similar spread at maturity.

by hand from stock that has been selected for its ornamental qualities. (See page 28, “Why Do Trees Weep?”) This makes them doubly attractive. The weeping forms that turn up in nurseries have been fashioned from showy materials—flowering cherries, small-needled evergreens, and species with neat leaves, contorted stems, or persistent berries. By virtue of the weeping habit, these special characteristics usually display themselves at eye level, enhancing their ornamental effect.

It helps, too, that the trees are generally small. While a few—the weeping European beech (*Fagus sylvatica* ‘Pendula’), for

instance—grow into large trees up to 60 feet tall, the majority do not. Habit, vigor, and the breeder’s intent keep most weeping trees below 30 feet and many under 15 feet tall, so they are well suited to be focal points in smaller, urban and suburban lots.

After the archetypal weeping willow (*Salix babylonica*), the most popular and easiest-to-find weeping tree is the cherry. Several selections of weeping cherry have been introduced, but Higan cherry (*Prunus ×subhirtella*) and its cultivars are among the most prized. Many cherry tree cultivars, both upright and weeping, originated in Japan, where *ohanami* (flower viewing) is





Left: Lavender Twist® redbud (*Cercis canadensis* 'Covey', Zones 4–9, 9–2) is a winner of multiple international awards since its introduction in 2007. Growing only six to eight feet tall and spreading eight to 10 feet wide, this tree, which was developed by Brotzman's Nursery in Madison, Ohio, is well suited for small spaces and packs a punch in spring when its contorted bare branches are covered with pinkish-lavender flowers. The flowers are followed by heart-shaped leaves that turn yellow in autumn.



Above: In spring, the rounded leaves of the weeping katsura (*Cercidiphyllum japonicum* 'Pendulum', Zones 4–8, 8–1) unfold in shades of purple. In summer, they darken to a blue-green before finally glowing apricot in fall. The fallen leaves have a fragrance variously compared to burnt sugar, cotton candy, and apple. This grafted tree can grow up to 25 feet at maturity.



Right: Larches are deciduous conifers with soft bright green needles that turn yellow in autumn before dropping. This weeping form of European larch (*Larix decidua* 'Pendula', Zones 3–7, 7–1) is achieved by grafting the larch onto a rootstock that forms the upright "trunk." Trees grow about six feet high and 10 feet wide at maturity, depending on the height of the graft. One-inch ornamental cones form in fall.



Above: This dwarf Japanese maple (*Acer palmatum* var. *dissectum*, Zones 5–8, 8–2), is clothed in finely-cut leaves—here in brilliant autumn color—that form dense layers to hide its branching structure. Only after the leaves fall is the intricate framework of limbs fully revealed as eye-catching winter sculpture.

a tradition and cherry trees have been bred for centuries. A gift of several thousand flowering cherries from the city of Tokyo to the city of Washington, D.C., in 1912 popularized these lovely spring-blooming ornamentals in the United States.

Like cherries, weeping crabapples (*Malus* spp.) bloom in spring as a fountain of flower-clad branches that spill to the ground. Some weeping crabapples, such as 'Red Jade', have persistent fruits that hang on the tree after the leaves fall, extending the season of show.



Even without fruits or evergreen foliage, weeping trees provide winter interest. While weeping evergreens are a constant garden feature, deciduous trees provide winter drama. The branches of weeping willow hang like a beaded curtain that seems to part, when the wind blows, by an invisible hand. And the dwarf weeping Japanese maple (*Acer palmatum* var. *dissectum*), a mound of cascading leafy layers during the growing season, reveals a living sculpture of craggy trunk and contorted limbs after the leaves fall.

While most weeping trees are smaller in stature than standard trees, they more than make up for it with big personality and, often, multi-season interest. They are exceptions in the tree world—and they offer exceptional ornamental value in gardens large and small.

*Carole Ottesen is a contributing writer for The American Gardener. This is an updated and adapted version of her original article, which was published in the January/February 2002 issue of this magazine.*



## MORE WORTHY WEeping TREES

Botanical Name/Common Name	Habit and Features	Height (feet)	USDA Hardiness Zones, AHS Heat Zones
<i>Betula pendula</i> 'Youngii' (Young's weeping birch)	Dark green leaves turn bright yellow in autumn; dazzling white, exfoliating bark.	to 20	3-7, 7-1
<i>Carpinus betulus</i> 'Pendula' (European hornbeam)	Erratic branching, broad, groundcovering.	30-40	4-8, 8-1
<i>Cornus florida</i> 'Pendula' (Weeping dogwood)	Stiffly pendulous branches, white spring flowers	20-40	5-8, 8-3
<i>Cupressus nootkatensis</i> 'Pendula' (Nootka cypress)	Evergreen; upright with drooping branches, needles.	20-35	4-7, 7-1
<i>Fagus sylvatica</i> 'Purpurea Pendula' (European beech)	Slow-growing, dome shaped; purple leaves.	5-12	5-7, 7-5
<i>Juniperus scopulorum</i> 'Tolleson's Blue Weeping' (Rocky Mountain juniper)	Silver-blue, evergreen, hanging needles.	15-20	3-7, 7-1
<i>Malus</i> 'Red Jade' (Weeping crabapple)	Graceful; pink flowers followed by persistent red fruits.	12-15	3-9, 9-1
<i>Picea abies</i> 'Pendula' (Weeping Norway spruce)	Evergreen; groundcovering; dense needles.	4-15	2-8, 8-1
<i>Pinus densiflora</i> 'Pendula' (Japanese red pine)	Evergreen; usually sprawls as groundcover, but may be trained as a tree.	3-6	4-7, 7-1
<i>Salix alba</i> 'Tristis' (Golden weeping willow)	Bright golden-yellow twigs; long graceful branches.	50-70	4-9, 9-3
<i>Styrax japonicus</i> 'Carillon' (Japanese snowbell)	Branches spread broadly before drooping at tips; fragrant white flowers; smooth gray bark.	10-12	6-8, 8-6
<i>Ulmus glabra</i> 'Camperdownii' (Camperdown elm)	Twisted, pendulous branches; large leaves.	15-25	4-8, 7-3



*Picea abies* 'Reflexa' (Zones 2-8, 8-1) is a slow-growing prostrate selection of Norway spruce that grows about six inches high and spreads about four feet unless it is staked—as it is here at Innisfree Garden in Millbrook, New York—to grow up, allowing the branches to hang to the ground, creating a flowing effect. The branches are densely packed with stiff evergreen needles about three-quarter-inch long with sharp tips. This tree can have a variable habit, with some being more upright or pendulous than others.





# Taming California's

With a little care, gardeners in different regions of North America can successfully grow some of the West's spectacular native wildflowers.

BY JUDITH LARNER LOWRY

**M**Y ARRIVAL in California one April almost four decades ago just happened to coincide with a good wildflower year. As I explored sunlit fields of sky-blue lupines and golden poppies, with baby blue-eyes, Chinese houses, and gillias in shaded corners, I began my “education by wildflowers.”

Through the years, I continued to observe and enjoy the annual wildflower bloom, growing many of these plants for Lerner Seeds, the company I founded in 1977. This process taught me, in the most pleasant way possible, the bones of what I needed to learn about my adopted state.

From an ecological standpoint, California is more diverse than the rest of the country. Because of this, some plants are challenging to cultivate outside their natural range and climate, while others are quite adaptable.

The good news is that among the rich diversity of wildflowers native to California and neighboring western states, there are a number of species that can be grown as annuals in other regions of North America. Among these are the plants I am focusing on in this article, drawn from 10 genera of the many I have personal experience with at our nursery

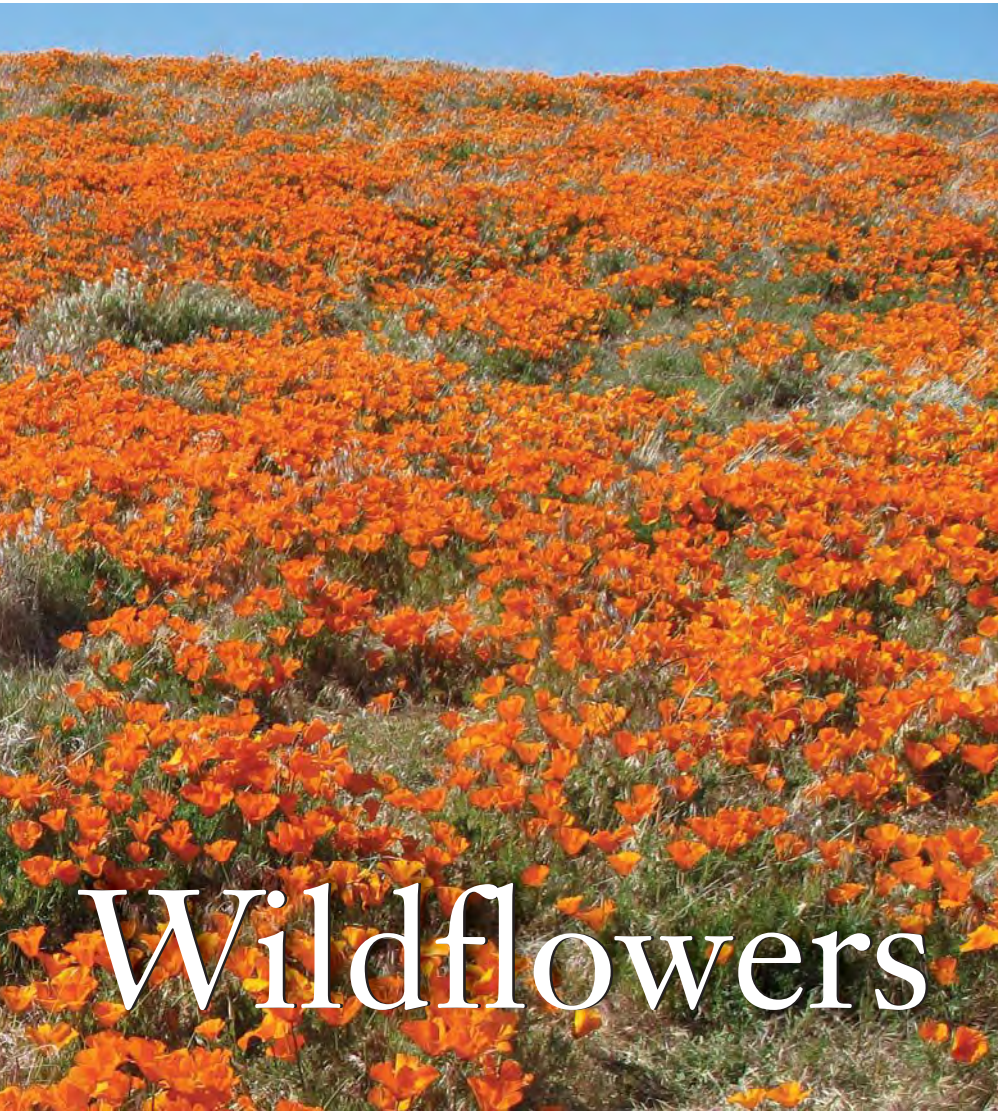
and seed-growing grounds in Bolinas, just up the coast from San Francisco.

## CLIMATE BASICS

In order to grow California's wildflowers, it's helpful to understand the basic template of the state's Mediterranean climate, where cool, wet winters are followed by warm, dry summers.

This pattern is endlessly nuanced every year, with rain starting anytime from September—or not—and continuing either sporadically or uninterrupted through March—or not. It almost never rains in June, July, or August, rarely in May,





# Wildflowers



Left: Visitors from around the world flock to California in early spring to view spectacles such as this luminous display of California poppies in Antelope Valley, located in northern Los Angeles County, California. Above: Douglas meadowfoam (*Limnanthes douglasii*) is native from central California north into Oregon. Its species name honors Scottish plant hunter David Douglas, who explored western North America in the early 19th century.

and five or six months of uninterrupted drought—as we experienced last year—is not surprising. Rain can be scanty or continuous, varying from southern parts of the state up to and beyond the northern boundaries, where California’s ecological zones merge with those of Oregon.

In the wild, California’s annual wildflowers begin to germinate with the fall and winter rains, make root growth and early aboveground growth in winter and early spring, starting to bloom as early as January and February. The same holds true for parts of Oregon and Arizona, while in the rest of the country, seeds planted in mid- to late spring will bloom in summer.

**MEADOWFOAM** Some of the toughest and most reliably reseeding wildflowers are in the genus *Limnanthes*, commonly

known as meadowfoam. Most familiar is Douglas meadowfoam (*L. douglasii*), which grows six to eight inches tall with deeply lobed leaves. Its striking five-petaled flowers are bright yellow in the center with white tips. These bloom from February to May on the West Coast.

Other meadowfoams that make good garden subjects include Point Reyes meadowfoam (*L. douglasii* ssp. var. *sulphurea*), which is native slightly north of our nursery and has deep yellow gold blossoms. Ranging even further north is white meadowfoam (*L. alba*), which has pure white flowers.

Meadowfoam is one of several Western wildflowers that favor vernal pools and seasonal wetlands. Vernal pools have a complex ecology that is difficult to reproduce artificially, but meadowfoam will thrive in the tiniest of dips and hollows that collect water,

even a footprint. Two weeks after a faint sprinkle, the sturdy, lobed seedlings appear.

Meadowfoam looks best when grown in masses three feet wide or more. But if you don’t have that kind of space, it also thrives in containers, where, if watered regularly, it often reseeds, germinates, and flowers again in a single season.

**BABY BLUE-EYES** Baby blue-eyes (*Nemophila menziesii*) is the star member of a genus of low-growing beauties that reach six inches to a foot tall. Its small flowers, sky blue around white centers, provide a rich contrast to the oranges and yellows of spring composites and the pinks and lavenders of midsummer clarkias. At Larner Seeds, we sow it sequentially, starting as early as October for early spring bloom, and as late as April for bloom in midsummer.



Also prostrate in habit is fivespot (*N. maculata*), native to the Sierra Nevada foothills and south, which has snowy-white flowers tipped with deep purple spots that serve as guides for the solitary bees that pollinate it.

Nemophilas shine in the forefront of a flower border and in containers. Unlike most of the other wildflowers discussed here, they grow best in part shade, especially in warmer regions, and can use a bit of extra moisture during dry spells. In



*Nemophila maculata*

regions with hot, humid summers, sow them as early as possible or sow in late summer for fall bloom. Transplanting requires a bit of extra care because of their somewhat weak stems, so they are more easily grown by sowing the seed in place.

**CLARKIA** Clarkias almost singlehandedly extend California's annual wildflower season into the summer, with numerous species presenting their lavender, pink, rose, and occasionally white blossoms among summer's dry golden grasses. Providing the wildflower season's last flowery moment is farewell-to-spring (*Clarkia amoena*).

An unnamed horticultural form of farewell-to-spring that we sell produces flowers as large as three inches across, in a variety of deep and pale pinks, lavenders, and whites with striking markings. Growing one to two feet tall, it is a true workhorse in the garden, blooming long and reseeding well. Adaptable to a variety of soils, it can be sown in late April



*Clarkia unguiculata*

to bloom well into October in milder climates. The wild form, with smaller, paler markings and smaller flowers, is better suited for those who prefer a more delicate appearance.

Punchbowl godetia (*C. bottae*), offers large pale lavender-pink blossoms with white centers. Ruby chalice clarkia (*C. rubicunda*) is dazzling June through August, with a striking deep red-purple heart at the base of the petals setting off the pale pink of the blossoms. It's hard to pick favorites in this genus, but if I had to, this would be mine.

Mountain garland (*C. unguiculata*), tall and slender with tiny, deeply lobed petals clinging to its elongated flower spikes. In the wild, the single flowers range from white to pink or purple, but hybrids with double flowers and a greater range of pastel colors are available. Growing two to four feet tall, it is ideal for the back of a flower border and makes a good cut flower.

**GILIA** Two species in the genus *Gilia* are frequently used in gardens. Both are sturdy and adaptable, but they offer a contrast in habit and appearance.



Bird's-eye gilia (*Gilia tricolor*), adaptable to sun or part-shade, has one- to two-foot stems. The most common form of this variable species has exquisitely tinted flowers only a half-inch across, with deep lavender-purple at the edges shading to white, the purple-black inner base sets off the blue pollen on the stamens, a characteristic of the genus. These flowers have an unusually long bloom period and can be used to unify a planting or a bouquet.



*Gilia tricolor*

Globe gilia (*G. capitata*) bears tight heads of dusty, medium blue flowers. Its upright, almost bushy stems, covered with bluish-green leaves, usually grow one to two feet tall in lean soil.

**MOUNTAIN PHLOX** Growing 12 to 18 inches tall with a tendency to sprawl, mountain phlox (*Leptosiphon grandiflorus*, syn. *Linanthus grandiflorus*) has tiny, needlelike dark green leaves and fragrant pale pink or white flowers with a yellow center that serve as a foil to the hot pinks of clarkias. Native to northern California, it blooms in mid-season, but with supplemental moisture will keep going into the summer.

Smaller *Leptosiphon* species are dainty, with exquisitely simple, intensely-colored magenta flowers. Mountain phlox is good in containers or planted in clusters by itself, but it can be overpowered in a wildflower mix containing taller species. Enjoy the fragrant flowers in a bouquet.

## WAYS TO GROW WILDFLOWERS

Here are some guidelines for how to use these annual wildflowers in your garden. The keys to success are to keep plantings free from weeds, protect them from birds, slugs, and snails, and provide sufficient water for germination and early growth.

**BEDS AND BORDERS** Seeds can be directly sown onto prepared ground by broadcasting, or for more controlled kinds of plantings, you may choose to start them in four-inch pots to allow for design. For example, if you are planting your wildflowers in standard flower beds, the main consideration is height. Plant the tallest species, such as tansyleaf phacelia, mountain garland, and globe gilia, in the back. Mid-size species include Chinese houses, tidy tips, and ruby chalice clarkia. And low-growers such as baby blue-eyes and Douglas meadowfoam should be in the front.

For this type of controlled planting, at our nursery we grow seedlings in four-inch pots in an unheated greenhouse, beginning in October. In cooler regions, such as the East and Midwest, seeds should be sown in March.

We sow four to 10 seeds per pot, cover them lightly and keep them evenly moist. Once they germinate, you may choose to pluck out all but one of the seedlings, or leave them growing closely, as they do in nature. Expect germination within two weeks at temperatures above 60 degrees Fahrenheit, somewhat slower in colder situations.

Transplant them outdoors a couple of weeks after your local frost-free date.

**WILDFLOWER MIXES** Sowing wildflower mixes directly where they are to grow provides a sampler of many species, and a succession of bloom, from the earliest spring bloomers to those flowering from late summer to early fall. One thing to be aware of is that when a large number of species is included, the taller and more vigorous tend to eliminate the shorter. Avoid packaged mixes that include weedy or non-native species.

**SWATHE PLANTING** If you have a fairly large area to work with, you can create a dramatic effect by sowing three or four species in large masses that overlap slightly. This kind of composition is frequently seen in nature, as shown below in the photograph taken at the Carrizo Plain National Monument in south-central California.



**CONTAINERS** You can sow seeds of native wildflowers directly in containers, barely covering them with a layer of soil. Keep the soil evenly moist. Lower-growing species work better in containers than taller ones. Shallow pots, eight inches to a foot deep, are good for nemophilas, Chinese houses, punchbowl clarkia, and others. The potential combinations, whether inspired by nature or by the gardener's creative process, are endless.

—J.L.L.



**CHINESE HOUSES** Chinese houses (*Collinsia heterophylla*, syn. *C. bicolor*) is one of some 20 species in the genus *Collinsia*, mainly native to the western United States. Related to snapdragons, it is aptly named, with regularly spaced, pagodalike tiers of two-lipped pale pink or white and pink-purple blossoms circling 16- to 18-inch-tall stems.

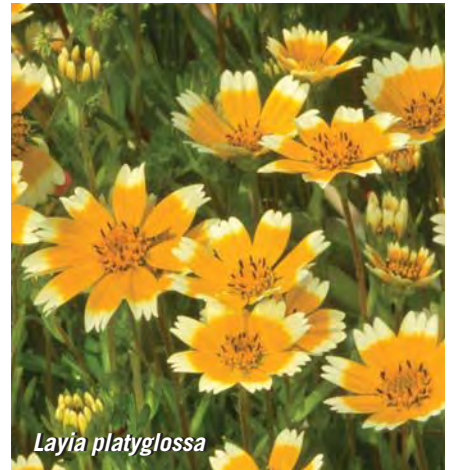
While in bloom, the plants glow from within shady and semi-shady nooks or on north-facing slopes. Chinese houses is not heat tolerant, so should be sown as early as possible in regions with warm summers and planted to receive some protection from the heat of the day. However, it is quite capable of handling full sun in milder climates.

**TIDYTIPS** The daisylike flowers of tidytips (*Layia platyglossa*) mirror the color pattern

of meadowfoam, with pure yellow flower centers sharply defined by creamy white petal tips. It grows on sturdy one- to two-foot stems bearing finely dissected foliage. Relatives in different parts of the state share its daisylike appearance, with some having all white and others all yellow flowers.

Tidy tips seems to handle a wide range of soil types, including clay soil that by the time of its bloom in April is already drying into a pattern of cracks like a jigsaw puzzle. Sow seeds where you want them to grow, because tidy tips doesn't transplant well.

**TARWEED** Tarweeds include a number of different genera that have in common daisylike flowers in yellow or white. The common name stems from a sticky substance that exudes from foliage and stems and can rub off



*Layia platyglossa*

on hands and feet. It has a pungent, fresh smell beloved by some.

Growing from one to two feet tall, Hayfield tarweed (*Hemizonia congesta* ssp. *luzula*) is a too rarely grown annual that provides welcome golden flowers in late summer. Its insect-attracting qualities are an added benefit in the garden, where it thrives with lean soil and full sun. Hayfield tarweed reseeds well in cultivation, yet has not fared as well in its native range in recent years. Once a fairly common species, it is now thought to be threatened in some areas.

**CALIFORNIA POPPY** Undoubtedly the most widely recognized California wildflower, California poppy (*Eschscholzia californica*) has a graceful habit and flower shape that has inspired architectural features, ceramics, paintings, and a plethora of songs and poems touting its beauty. Spanish explorers and settlers, who were early appreciators of California's wildflowers, called it *copa de ora*, or cup of gold. The Spanish were not the first, of course. Flower festivals were important spring ceremonials for many of the West's indigenous tribes.

The first poppy to be collected by Europeans was the coastal form of the California poppy (*E. californica* ssp. *californica*), a perennial form that produces yellow blossoms with orange centers for as long as six months. Its finely-dissected, gray-green mounding foliage makes it useful as a groundcover, or as a filler among other low-growing plants.

Many subspecies of the California poppy have been recognized, and horticultural selections in a wide variety of flower colors are also now available.



*Collinsia heterophylla*





*Hemizonia congesta ssp. luzula*

From an ecological standpoint, it is best for California gardeners to avoid contaminating gene pools by sowing seed that's not native to their region. For gardeners living in other parts of the country, this is not a concern.

Sow seeds in very early spring, or in late summer in mild-winter climates. Free draining sandy or loamy soil is ideal. California poppies have a long taproot, so if you plan to start them in pots, transplant them into the garden before the taproot reaches the bottom of the pot.

**PHACELIA** The genus *Phacelia* provides some of the most intense blues in the flower kingdom. Desert bluebells (*Phacelia campanularia*), one of the shorter members of the genus at eight to 16 inches tall, has velvety dark blue flowers. It



*Phacelia campanularia*

## Resources

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**J.L. Hudson, Seedsman**, La Honda, CA. [www.jlhudsonseeds.com](http://www.jlhudsonseeds.com).

**Larner Seeds**, Bolinas, CA. (415) 868-9407. [www.larnerseeds.com](http://www.larnerseeds.com).

**Nichols Garden Nursery**, Albany, OR. (541) 928-9280. [www.nicholsgardennursery.com](http://www.nicholsgardennursery.com).

is found in the Mojave Desert cuddling up to yuccas and Joshua trees. Adapted to full sun and lean soils in the wild, its bloom time is extended in moister, richer gardens soils.

Tansyleaf phacelia (*P. tanacetifolia*) is one of the tallest annual wildflowers, growing two to four feet tall with large curling lilac flowerheads that emit

a musky fragrance at day's end. Well known for attracting beneficial insects, it is often grown with row crops. It tolerates sun or part shade and is a vigorous re-seeder. Grow it with other tall species like *Clarkia unguiculata*, as it will crowd out lower-growing nemophilas or collinsias.

## A PLACE FOR WILDFLOWERS

The natural spectacle created by California's annual wildflowers is threatened by a variety of factors, primarily competition with weeds. Accordingly, anything that controls the weedy species—including hand-weeding, sheet mulching, controlled grazing, and even extreme events like fires and floods—can be good for the wildflowers. As colonizer plants, sun-loving native wildflowers like open ground and aren't fussy how they get it.

Agriculture can go hand in hand with wildflowers, or be antithetical to it. A case in point is the farm field where I first admired meadowfoam seed. This field had many seeps running through it and an extensive soil seed bank of many other wildflowers as well. The original rancher cut the field for silage for many years without endangering the meadowfoam.

When the field changed hands, so did agricultural practices. The field was drained, plowed, and sown with pasture grasses and wild mustard, which quickly outcompeted and eventually overcame the meadowfoam.

Before that happened, I harvested a handful of meadowfoam seed, which provided the start for our seed grow-outs. Sowings we have made in nearby private gardens now return every year. Giving native species places to grow—even if they are not native to your region—offers them refuge and the potential for return.

In the tersely written 1,400-page flora of California called *The Jepson Manual*, only six out of 27 species of clarkias are said to be "in cultivation." Another 11 are marked "TRY." With similar numbers of as-yet-untested species available in other genera of American wildflowers, an abundance of possibilities awaits intrepid gardeners and horticulturists.

*Judith Larner Lowry is the founder of Larner Seeds in Bolinas, California. She is the author of several books, including California Foraging (Timber Press, 2014).*



## Roselle: A Lovely Hibiscus for Tangy Teas

by Michelle Z. Donahue



**I**RA WALLACE, a co-owner of the cooperative Southern Exposure Seed Exchange in central Virginia, thought the first time she'd encountered roselle (*Hibiscus sabdariffa*) was in Egypt, when she was offered a refreshingly tart, citrusy, bright-red tea made from its calyxes. But after growing it herself, she realized that this lovely plant had been present throughout her childhood in Florida. "They call it sorrel there, and I didn't think it was the same thing until I grew it," she says.

**The dried calyxes of roselle, foreground, makes a delicious red tea with a bracing flavor.**

Although the geographic origins of roselle are somewhat murky, it is a common ingredient in the medicinal and culinary traditions of cultures in a wide range of tropical regions from Southeast Asia to Africa.

At one time it was a common hedge and home crop plant in the South, but it is now used in the U.S. primarily for commercial herbal tea—it's the main ingredient in Celestial Seasoning's popular Red Zinger® tea. However, the calyxes (the modified

leaves that envelop the fruit capsule) are now becoming more available in specialty stores—often labeled generically as "hibiscus"—either dried for tea-making or sugared as a candy treat. Many home gardeners are also beginning to cultivate roselle again for its herbal and ornamental qualities.

Only one selection, 'Thai Red', is generally available to home gardeners. Growing three to five feet tall and spreading to four feet, it has a neat, shrubby habit with dark green three-lobed leaves with deep red veins, red stems, and creamy yellow flowers with dark red "eyes," or centers. The first year I grew it, I planted it in my vegetable garden, but because it's such a striking plant, I now grow roselle in the flowerbeds at my Frederick, Maryland, home, where its exotic beauty shines.

### GROWING GUIDELINES

In North America, roselle is grown as an annual and can be started easily from seed or propagated from cuttings. Northern gardeners with short growing seasons need to get a head start by sowing seed indoors to improve their chances of getting a good harvest; start roselle about the same time as tomatoes. Delay transplanting to the garden until well after the last frost, when night temperatures are above 50 degrees Fahrenheit; the plants do not tolerate cold. Gardeners in USDA Hardiness Zones 8 to 11 or AHS Heat Zones 12 to 9 can direct-seed roselle in May.

Roselle thrives in hot weather and should be sited in full sun. It grows best in a well-drained, sandy loam but performs tolerably well in a range of soils, even in clay. Raised beds help provide the drainage roselle prefers when grown in a heavy soil.

Keep young plants well weeded and mulched. Older plants shade their own root zone and are more or less maintenance-free. If your soil is infertile, apply a balanced organic fertilizer or well rotted manure in early spring; overfeeding can result in fewer flow-



ers. A light, late-spring pruning will yield a more compact plant and increase the number of flowering stems.

Flowering begins after the summer solstice and lasts until frost, with the main harvest late in the summer. Flowers unfurl daily, their soft yellow petals fading to pink and wilting by late after-



Roselle's red-eyed flowers last only a few days and are followed by fleshy red calyxes, also present in this photograph, which can be harvested and used fresh or dried.

noon. Blooms are replaced in a few days by swollen wine-red calyxes.

As an ornamental, roselle can be grown in a flowerbed as an accent specimen; tuck it into its own corner and give it plenty of room so faster-growing annuals or perennials won't crowd it out. It also makes an attractive summer hedge.

## PESTS AND DISEASES

Roselle is largely trouble free, although leaves can develop powdery mildew if summers are damp. I experienced a bit of stem rot in October, but the plants were already in decline so it didn't affect calyx yield.

In hot, dry areas, root-knot nematodes are roselle's primary pest. Discourage infestations by rotating plantings each year and keeping the garden well mulched to conserve water.

Fortunately, deer seem to ignore roselle. Mary Beth Shaddix, who manages *Cooking Light* magazine's test kitch-

en garden near Birmingham, Alabama, notes roselle was the only plant left standing after she left her farm unsupervised during a short vacation. "The deer ate hundreds of strawberries, all our sweet potatoes, and all my heirloom peas," she says, "but they didn't touch the roselle."

## ENJOYING THE HARVEST

The red calyxes can be harvested while they are still fleshy; just remove them by hand. Once peeled away from the interior seed pod and cooked, the calyxes look and taste very much like cranberry sauce. One of its common names, in fact, is Florida cranberry. Early in the 20th century, growers in Florida and Hawaii hoped to market roselle as a substitute for cranberries, but the nascent industry never took off.

Harvested calyxes can be used fresh; they also dry and freeze well. One roselle plant produces up to two pounds of fresh calyxes each season. Tea is by far the most common preparation, but the juice can be made into jams, jellies, compotes, chutneys, vinaigrettes, and sorbets.

To dry for tea, use a food dehydrator or spread the peeled calyxes on a baking sheet and allow them to dry indoors at room temperature for a week, then store in an airtight container. Ten pounds of fresh calyxes will dry to about a pound.

To make tea, I boil two to three tablespoons of dried, crushed calyxes for several minutes in one cup of water, but you can also steep them for three or four minutes in freshly boiled water.

Fresh roselle calyxes are high in vitamin C, calcium, and riboflavin. Traditionally, roselle has been used to treat liver and kidney ailments, diabetes, and coughs. Studies indicate that roselle tea is a strong antioxidant and anti-inflammatory that may help reduce high blood pressure.

Fresh young leaves add tartness to salads; cooked, they are popular in South Asian cuisine. Thanda Tin, who runs the Moulmein Kitchen cooking blog from her home in Singapore, wrote that in her native Myanmar, locals favor a curry called *chin baung kyaw*, made with young leaves stir-fried with garlic, Thai chilies, bamboo shoots, cilantro, shrimp, shrimp paste, and fish sauce. Adding water transforms the curry into a soup, *chin baung hin yay*.

Those with less adventurous palates can try Wallace's recipe for easy "Florida cran-

## PLANTING BASICS

**Getting Started** Rub seeds lightly with sandpaper and sow half an inch deep and one inch apart. Provide lots of light. Keep moist but do not overwater. Bottom heat boosts germination

When seedlings are about two inches tall, transplant them to four-inch pots. Plant outdoors after soil has warmed and night temperatures are reliably above 50 degrees F.

**Spacing** Space plants three to five feet apart. Roselle also grows well in large containers.

**Days to Harvest** Roselle needs at least 100 consecutive days of warm weather to mature. Calyxes are usually ready to pick 10 to 20 days after flowering, and should snap off easily from the stem. Harvest older calyxes with shears. Flowering continues until frost.


## Sources

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**Richters Herbs**, Goodwood, ON, Canada. (905) 640-6677. [www.richters.com](http://www.richters.com).

**Southern Exposure Seed Exchange**, Mineral, VA. (540) 894-9480. [www.southernexposure.com](http://www.southernexposure.com).

berry" sauce: In a medium saucepan, heat one-and-a-half cups of water with a half cup of orange juice, a pinch of cinnamon, and a cup each of white and brown sugar. Once the mixture boils, turn down the heat and simmer gently for five minutes, stirring constantly. Add four cups of chopped fresh or thawed roselle, and continue to stir for a few more minutes until calyxes are tender. Don't say anything to guests when you serve the sauce at your next dinner party and see if they can tell it's not cranberries. 

*Freelance writer Michelle Z. Donahue grows vegetables and native plants in her gardens in Frederick, Maryland. She blogs about her gardening successes and slip-ups at [www.ploughandfurrow.com](http://www.ploughandfurrow.com).*



## Plant Breeding and Genetic Modification

by Scott Aker

**W**ITH ADVANCES in cell culture and techniques for transforming DNA, what once seemed like science fiction is now reality. Scientists are able to do things such as insert the genes of a jellyfish into the DNA of a mouse and genetic material from bacteria into plants, thus creating mice that glow in the dark and corn that manufactures its own pesticide.

Many gardeners, concerned that our juggling the building blocks of life might have unintended—and unacceptable—consequences, are striving to avoid genetically modified plants. In order to understand the potential risks, however, it helps to take a closer look at how humans have, throughout history, changed the genetics of the plants we grow.

### JUGGLING GENES IS NOT NEW

Genetic selection has been around as long as life itself. Before humans, changing environments shaped plant life. Early plants, evolving in relatively benign climates with few competitors, were very simple. As nature began to challenge them with drought, insect pests, diseases, and hungry herbivores, plants evolved new ways to survive, such as developing thorns to ward off the hungry, underground storage structures such as tubers to carry them through droughts, and fuzzy leaves to discourage insect attack, just to name a few. When humans began to grow plants for food, genetic change went into overdrive.

Grains were the first crops to be widely grown for food, and they are the plants we have most profoundly altered. We selected for the attributes that we most valued in them, and this was done generation after generation—to the point where crop plants bore little semblance to their wild forebears, as is the case with wheat and corn. We also took these crops to many parts of the globe, where the plants further adapted to local conditions, creating strains of crops with



Wheat is one of the oldest cultivated plants.

vast differences in performance. We didn't know the mechanism for these changes, and there was a lot of genetic variability within the plants we selected because they were open-pollinated—pollinated randomly by insects, birds, and wind.

Gregor Mendel, a 19th-century monk who lived in what is now the Czech Republic, changed the face of plant breeding.



Gregor Mendel

Working with peas, he demonstrated that pollination could be controlled to produce a certain kind of plant. This led to genetically uniform crops. Grains and vegetables became more productive, and uniformity allowed mechanization of harvesting. And for the first time, flowering

plants and shrubs became the subject of long-term breeding programs.

### ACHIEVEMENTS IN MODERN PLANT BREEDING

As the study of genetics progressed in the 1930s, it was discovered that colchicine, a substance found in autumn crocus (*Colchicum* spp.), could be used to cause a doubling of the number of a plant's chromosomes (a phenomenon called tetraploidy). This development helped extend the ornamental value of many garden plants. In general, tetraploidy causes plants to produce thicker leaves, which may be less appetizing to pests, and thicker flower petals, which hold up in the garden much better. By crossing a tetraploid—a plant with four sets of chromosomes—with a normal diploid, which has two sets of chromosomes, triploid offspring may result. These triploids don't produce fertile seed, so they are incapable of reproducing sexually. Breeders are using this attribute to create sterile versions of plants that currently pose an invasive risk.

With advances in tissue culture in the second half of the 20th century came the ability to genetically manipulate individual cells and grow them in plants that could be used for breeding. The advent of gene insertion technology, which allows scientists to directly change segments of DNA in a plant's genetic code, has opened up all kinds of possibilities.

One product of this technology is the development of potatoes that can manufacture the same proteins as the bacterium *Bacillus thuringiensis* (Bt), making their foliage toxic to the larvae of Colorado potato beetle. Gene insertion technology is also being used in an effort to control viruses that cannot be managed without killing the infected plant. It has been found in many cases that desired DNA can be inserted into plant cells to limit the impact of the viruses or shut them off altogether.

Additionally, promising work is being done in the area of foliar disease resis-



tance simply by creating subtle chemical changes in a plant's epidermal cells. When disease spores land on susceptible leaves, they don't germinate because the chemical cues that let the spores know they are on a leaf are missing. Plants may also be designed to produce proteins that help them cope with heat and drought, a trait that may prove very important in adaptation of plants to more extreme climatic conditions.

## THE PERILS AND BENEFITS

So what are the dangers of genetic manipulation? A big concern is the narrowing of the gene pool represented in the plants

that are threatened by a new disease or pest. In 1850, 350 apple varieties were grown in the United States. Today, a handful of varieties is commercially grown. As home gardeners, we can help enrich the gene pool of all cultivated plants by seeking out unusual varieties, growing plants from seed, saving the seeds from these plants to replant, and sharing seeds with other gardeners.

Another worry is about how genetically engineered crops may affect non-target organisms. One example is the monarch butterfly, whose populations have been dwindling rapidly. In laboratory and field experiments, monarch butterfly larvae were killed by consuming milkweed leaves



Many superior ornamental garden plants available today—such as 'Touch of Class' hosta, above, and 'Cherokee Star' daylily, left—are tetraploid selections.

heavily dusted with pollen from corn engineered to produce the same proteins as Bt. We must keep in mind, however, these controlled studies can't quantify the risk from these crops in the real world. Other variables—such as habitat loss and climate change—may be more significant threats to non-target species like the monarch butterfly. Proponents for genetic engineering also argue that these modified crops eliminate the need for frequent pesticide applications, which is known to have a negative impact on non-target organisms.

In the end, perhaps gardeners can opt to strike a balance with the type of plants we select for our gardens. We may even-

## Gardening Q&A with Scott Aker

### CULTIVATING LOTUS

**What is the best way to get American lotus started in the home water garden?**

Also known as yoncapin, water-chinquapin, and yellow lotus, American lotus (*Nelumbo lutea*, Zones 4–11, 12–1) is the only lotus native to the United States. This aquatic plant grows from tubers, producing two-foot-wide leaves on stems that rise two to three feet above water. Its pale yellow flowers, which can be 10 inches wide, bloom in mid- to late summer, followed by decorative seedpods.

To successfully grow American lotus, your pond must be located in full sun and be deep enough and wide enough to accommodate the plant's spread. You will need to provide it a large planting tub filled with rich clay loam. To start with seeds, scarify them with a file on one end to break the tough seed coat. Plant them in a pot and submerge it in water so the seeds are about two inches below the water's surface. Germination is best in water that is about 75 degrees Fahrenheit. For a quicker start, plant the banana-shaped tubers.

Unless you live where winters are mild, the tubers should be lifted and brought indoors after the first frost, then replanted outdoors in spring. (Note: American lotus is considered a noxious weed in Connecticut, and has the potential to become invasive, so never dispose of them in local waterways.) —S.A.

Send your gardening questions to Scott Aker at [saker@ahs.org](mailto:saker@ahs.org) (please include your city and state with submissions).

tually be able to purchase roses that are genetically modified to resist black spot, thus reducing the need for fungicide treatment. At the same time, we can leave a little wild space in our gardens for milkweed plants that are kept pesticide-free for the monarch butterflies.

*Scott Aker is a horticulturist based in Washington, D.C.*

we cultivate for food. Early humans, concerned solely with survival, did not spend much time conserving wild forebears of the plants they cultivated.

Now we recognize that these wild plants contain a wealth of genetic variability. Often, it is these wild genes that offer solutions for breeding better selections of plants



## Horticultural News and Research Important to American Gardeners

### TREES HAVE MICROBIAL “FINGERPRINTS”

A team of researchers from the University of Oregon in Eugene and the Smithsonian Tropical Research Institute have determined that each tree species has its own microbiome—a unique ecological community of microorganisms—living on its leaves. While studying the bacteria on the leaves of 57 species of trees in Panama, the scientists also discovered that the abundance of specific bacteria in these microbiomes appeared to be related to specific traits of the trees.

“Because of the importance of the microbiome for the growth and function of the host, understanding the factors that influence bacteria on the leaves of different trees could have important implications for our ability to model and conserve biological diversity and ecosystem function,” explains lead researcher Steven Kembel, who is currently a professor of biological sciences at the University of Quebec in Montreal. “Ultimately, we hope that understanding the factors that explain variation in bacterial abundances across host species will help us better manage biological diversity in forests and the health and function of forest ecosystems,” he adds.

Visit [www.uoneews.uoregon.edu](http://www.uoneews.uoregon.edu) for more details.

### NEW ORNAMENTAL DOGWOODS WITH GREATER DISEASE RESISTANCE

The eastern dogwood (*Cornus florida*), a much beloved small tree native to eastern North America, has been plagued in recent years by its susceptibility to fungal diseases such as anthracnose and powdery mildew. Plant breeders have been trying to develop more disease-resistant replacements for this landscape staple, often tapping the genetics of the kousa dogwood (*C. kousa*), native to Asia. Recently, the University of Tennessee (UT) Dogwood Improvement Program released three new kousa dogwood cultivars—‘Empire’, ‘Red Steeple’, and ‘Pam’s Mountain Bouquet’—that ex-



‘Pam’s Mountain Bouquet’ is one of three newly introduced kousa dogwoods that have exhibited good resistance to fungal diseases such as anthracnose and powdery mildew.

hibit good resistance to the fungal diseases that plague eastern dogwood.

Phillip Wadl, a UT research assistant professor and lead author of a report about the new cultivars published in the September 2014 issue of *HortScience*, notes that ‘Empire’ and ‘Red Steeple’ would make particularly good choices for urban street planting given that they top out at about 30 feet tall, but only five feet in diameter. He particularly likes their exfoliating bark as a winter feature. Where these two trees differ is in leaf and bract color. ‘Empire’ has the green leaf and brilliant white bracts traditionally associated with dogwoods. ‘Red Steeple’ puts on a show in spring when emerging leaves show red then fade to green as temperatures increase. Its floral bracts have red-tinted margins.

Wadl describes ‘Pam’s Mountain Bouquet’ as “spectacular when in bloom” because it is covered in large, white, fused bracts. The spreading habit, about 15 feet tall with equal spread, brings the display closer to eye level. Exfoliating bark also offers year-round appeal.

To find out more about these new trees, visit [www.hortsa.ashspublications.org](http://www.hortsa.ashspublications.org).

### INTERNATIONAL YEAR OF SOILS

In an effort to raise awareness about the important role of soil as a natural resource, the Global Soil Partnership at the Food & Agriculture Organization of the United Nations has declared 2015 the International Year of Soils. In the United States, the Soil Science Society of America (SSSA) will take the lead on coordinating related events. Its approach is organized around monthly themes starting with “Soils Sustain Life” in January, followed by “Soil Supports Urban Life” for February.



“Soil—like air, water, and sunlight—is one of the natural resources necessary for life,” says David Lindbo, past president of SSSA and professor of soil science at North Carolina State University in Raleigh. “By telling the story of what soil does for us, we hope to increase the respect humans give back to soil, to protect it for future generations,” he adds.



Of particular interest to K-12 teachers is a free monthly email with soil information, links, videos, and activities based on the theme of the month ([www.soils.org/iys](http://www.soils.org/iys) for sign-up). SSSA also has volunteer scientist speakers available for discussion on each monthly theme ([www.soils4teachers.org/ask](http://www.soils4teachers.org/ask)).

### TOP-NOTCH CORAL BELLS

Shade-loving coral bells (*Heuchera* spp.) can vary tremendously in terms of foliage color, flowers, and size. A multitude of selections are available, with new ones released each year. To help gardeners identify the best performers for the mid-Atlantic region, the Mt. Cuba Center in Hockessin, Delaware, recently completed a three-year trial of more than 80 selections bred from two coral bells species native to the eastern United States. Plants were evaluated for plant vigor, fullness, foliage color, floral display, and uniformity of growth.

At the top of the list was *Heuchera* 'Citronelle'. This robust cultivar displays intensely yellow leaves that fade to



*Heuchera* 'Citronelle', above left, needs full-day shade to prevent its bright yellow leaves from bleaching. The plum-colored foliage of 'Cajun Fire', above right, tolerates up to four hours of sun.

bright chartreuse. Reaching 14 inches tall by 30 inches wide, it maintains a dense and round habit. Similarly, silver-leaved 'Color Dream' and purple-leaved 'Cajun Fire' displayed outstanding foliage color and lushness. Among those that received high marks for floral display are 'Apple Crisp' and 'Frosted Violet'. 'Apple Crisp'

reaches only six inches tall with petite green leaves, but produces an impressive display of wispy white flowers in early summer. 'Frosted Violet' grows about 14 inches tall with silver-veiled purple leaves and light pink flowers in midsummer.

To read the full report, go to [www.mtcubacenter.org](http://www.mtcubacenter.org).

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## PEOPLE and PLACES in the NEWS

### NOTABLE ANNIVERSARIES IN 2015

The **Garden Conservancy**, which defines its mission as saving and sharing American gardens, turns 25 this year. Over the years since its founding in 1989, the organization has helped over 100 gardens all over the country survive, and educated the public through its events and educational programs. Information about its latest projects is at [www.gardenconservancy.org](http://www.gardenconservancy.org).

Celebrating 100 years is the **Marjorie McNeely Conservatory** in St. Paul, Minnesota. Originally opened in 1915 as the centerpiece of the city's Como Park, the conservatory covers two acres under glass and is one of the few Victorian style



The Marjorie McNeely Conservatory

glasshouses in the United States still functioning. In 1974 it was listed on the National Register of Historic Sites and in 1999 it was named a Horticultural Landmark by the American Society for Horticultural Science, becoming the third public garden in the U.S. to achieve this status. It houses a permanent botanical collection as well as hosting flower shows and other events. Event schedules and more information are at [www.comozooconservatory.org](http://www.comozooconservatory.org).

A half-century is now under the belt of the **California Native Plant Society**, which was created in 1965 to protect the native plant heritage of California. Since its inception, it has expanded to include conservation, education, gardening, rare plant science, and vegetation science. Visit [www.cnps.org](http://www.cnps.org) for more information.



### MONARCH BUTTERFLY CONSIDERED FOR ENDANGERED SPECIES LIST

America's beloved and iconic monarch butterfly may be getting some assistance from the U.S. Fish and Wildlife Service, which in December announced it was going to perform a status review to determine if the butterfly should be classified as "threatened" under the Federal Endangered Species Act.

Monarch butterfly (*Danaus plexippus*) populations have plummeted by 90 percent in less than 20 years, a phenomenon scientists believe is primarily related to some 165 million acres of habitat being lost to large-scale mechanized farming practices, which include planting of genetically engineered crops that withstand the use of glyphosate-based herbicides. Widespread spraying with the herbicide

eliminates native plants like milkweed.

The widespread disappearance of milkweed (*Asclepias* spp.) is important because the 3,000-mile monarch migration from their over-wintering sites in Mexico is accomplished by multiple generations reproducing and feeding on milkweed along the way. The life cycle of monarchs is deeply intertwined with milkweeds; monarchs only lay eggs on

The **American Public Garden Association** (APGA) turns 75 this year. Formerly the American Association of Botanical Gardens and Arboreta, in 2006 the organization changed its name to the APGA but has always served as a professional organization for public garden staff. There are more than 500 institutional members located throughout the United States and in eight other countries. Visit [www.publicgardens.org](http://www.publicgardens.org) for more information.

### GARDEN PERIODICALS: TWO RENAMINGS AND A NEW VENTURE

*Organic Gardening* magazine, a 72-year-old *grande dame* in the garden publication world, will be rebranded as *Rodale's Organic Life* starting with the May/June 2015 issue. *Organic Gardening* began in 1942 as *Organic Farming and Gardening* and was the first of many well known titles published by Rodale, including *Prevention*, *Men's Health*, and *Women's Health*. The rebrand will include a digital presence and live events.



Another name change will be coming up for *Zone 4*—its new moniker *Rocky Mountain Gardening* will take effect with the spring 2015 issue. The new name, selected by readers in a vote, is intended to more accurately reflect the true geographic extent of the magazine's reach.

A brand new gardening publication, *Pith + Vigor*, launched its inaugural issue in October 2014. Billed as "For people with dirt under their fingernails," this quarterly newspaper provides regional and community focused information. Currently, only the New England region is covered, but Rochelle Greayer, founder and editor, envisions local editorial teams covering all regions in the United States.

### SCOTTSMIRACLE-GRO EXPANDS EMPIRE

Scotts Canada Ltd., indirect subsidiary of ScottsMiracle-Gro Company, has acquired Fafard and Brothers Ltd. Known for its high-quality peat moss, Fafard has been in business since 1940 and was the first peat moss miner to achieve Veriflora certification for responsibly managed peat land. The company also distributes fertilizer, grass seed, and mulch across eastern Canada and the United States. ScottsMiracle-Gro anticipates that the acquisition of Fafard will add roughly \$40 million in annual earnings to the \$2.8 billion in worldwide sales it already books.





Populations of monarch butterflies have dwindled drastically in the last two decades.

milkweed, and milkweeds are the only food source for monarch caterpillars.

Other factors affecting monarch populations include changing weather patterns and logging in their winter grounds. (For more information about the decline of monarchs and information on how gardeners can assist in their recovery, see the article “Plight of the Butterfly” in the May/June 2014 issue of *The American Gardener*.)

By initiating the review, the Fish and Wildlife Service recognizes that there is substantial evidence that the listing may be necessary. The public may submit scientific and commercial data as well as other information during a 60-day period. Visit [www.fws.gov](http://www.fws.gov) for details.

## WHEAT GENE FIGHTS BLIGHT IN AMERICAN CHESTNUT

Ever since an introduced fungal blight nearly wiped out American chestnut (*Castanea dentata*) trees in the eastern United States a century ago, researchers have attempted to develop a more resistant tree. Some success resulted from crossbreeding the American chestnut with more resistant Chinese chestnuts (*C. mollissima*).

Even more promising, according to a paper published in the November 2014 issue of the journal *Plant Science*, is a line of transgenic chestnuts created through the State University of New York (SUNY) American Chestnut Research and Restoration Project in Syracuse,

New York. These chestnuts contain a single wheat gene that gives the trees the ability to break down the toxin the fungal pathogen uses to attack them.

“Our goal was to develop an American chestnut tree that has blight resistance equal to that of a Chinese chestnut,” says William Powell, a professor in the SUNY College of Environmental Science and Forestry, who leads the research project with his colleague Chuck Maynard. “We are there. We’ve done it,” Powell says.

These chestnuts represent one of the first instances of a bioengineered native landscape plant. Before these transgenic trees can be released, they first must pass



Researcher William Powell checks a hybrid chestnut tree being developed in a restoration project in Syracuse, New York.

muster with the U.S. Department of Agriculture, the Environmental Protection Agency, and—because the tree has edible nuts—the Food and Drug Administration. This will require years of rigorous testing to ensure that the new tree poses no ecological and health risks. In the meantime, Powell says the goal is to produce 10,000 American chestnut trees ready to go out into the wider world, if and when approval comes through.

To learn more, visit [www.esf.edu](http://www.esf.edu). ☺

Written by Editorial Intern Mary S. Chadwick with Associate Editor Viveka Neveln.

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## Staying Busy in Winter

by Rita Pelczar

**I**N JANUARY and February, things are pretty quiet in my garden, but not in my garage. Winter is a good time to organize garden supplies and tools, and to inspect, clean, and repair them if needed. Care for your tools and they'll last much longer.

Cleaning tools—particularly those that come in contact with soil—should be done after each use, but sometimes a shovel or hoe doesn't get cleaned as well as it should. A hard bristle brush or steel wool will remove accumulated dirt and metal corrosion. Once tools are dirt free, I like to coat the metal with **Fluid Film**, a non-toxic, lanolin-based cleaner, lubricant, and rust inhibitor from Gardeners Edge. A thin coating provides lasting protection for all metals and keeps the joints of pruners, loppers, shears, and hedge trimmers working smoothly. It also can be used to coat the underside of mowers to help prevent corrosion and inhibit grass build-up during mowing season.



**Fluid Film**

Another task I tackle every winter is sharpening blades. A well-sharpened hoe or spade reduces the elbow grease needed when it's time to put the tools to use. Garden knives, pruners, scythes, grass and hedge shears, axes—anything with a blade gets a going over.

A pair of blade sharpeners, also from Gardeners Edge, makes short work of the job. The **AccuSharp® Knife and Tool Sharpener** is designed for tools with double-edge blades, and the **GardenSharp® Lawn and Garden Tool Sharpener** is for blades with a single beveled edge. Both tools have reversible and replaceable diamond-honed, tungsten carbide blades that put a fine edge

on the business end of your tools. And both have a comfortable grip with a full-length finger guard. The tool getting



**AccuSharp Knife and Tool Sharpener**

sharpened remains stationary while you slide the sharpener along the edge a few times, applying light pressure. It's quick and easy. [www.gardenersedge.com](http://www.gardenersedge.com).

Storing tools so they are easy to locate when you need them can save a lot of time. After cleaning and sharpening



**Garden Tool Rack**

my long-handled tools, I hang them on the wall using **Garden Tool Racks** available from Gardener's Supply Company. They come as a set of two powder-coated steel racks with the necessary mounting hardware to install them in a convenient spot in your garage. They keep your tools in sight, within reach, and off the floor. The arms extend 12 inches, so each rack can

comfortably accommodate three shovels, rakes, and/or hoes. [www.gardeners.com](http://www.gardeners.com).

Assembling new tools is another good winter activity that gives me a head start on spring gardening. My new **Worx AeroCart™** was easy to put together—it took less than a half hour—and holds promise for a wide range of garden applications. It's quite versatile. First, it's a wheelbarrow with a thin, 22-inch width, making it a good fit for use in my vegetable garden, where the paths between beds are too narrow for larger carts. Its two wheels provide both stability and ma-



**Worx Aero-Cart**

neuverability; it turns on a dime! By folding up the legs and folding down a front plate, the cart converts to a hand truck for hauling bags of fertilizer, mulch, or potting soil. There are arm extensions for wider loads, a flowerpot strap for moving heavy plants, and a mesh sling for moving oddly shaped items, including rocks. I have been using the sling to collect and move boulders of various sizes for a new raised bed I'm building. I can see this tool getting quite a workout come spring. [www.worx.com](http://www.worx.com).

Before long, another growing season will be here and all my tools will be back in action. It's good to know they'll be ready when my garden is.

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





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## Recommendations for Your Gardening Library

### The Third Plate

Dan Barber. Penguin Press, New York, New York, 2014. 486 pages. Publisher's price, hardcover: \$29.95.

DAN BARBER, executive chef of the Blue Hill restaurants in downtown Manhattan and at Stone Barns in Pocantico Hills, New York, knows more about soil health, farming, food raising, and cooking than seems possible for such a busy chef; he's been a widely recognized leader in farm-to-table dining for well over a decade. While it was once groundbreaking to talk about the farmer's relationship with the chef, as Barber says in his new book, *The Third Plate*, "Farm-to-table has since gone from a fringe idea to a mainstream social movement."

Barber proposes that we are ready to evolve to a new phase of our modern relationship with food, one that builds an American cuisine around using the entire farm. This cuisine would eschew the "Westernized, meat-centric conception of a plate of food," and instead would "create demand for soil-improving crops and enlarge our sense of what is delicious."

It is not just Barber's chef credentials, multiple James Beard awards, or popular accolades (*Time* magazine named him one of the 100 most influential people in the world in 2009) that make him worth listening to. He also has an extraordinary ability to articulate what's going on at the local and global levels of food production, and how our complicated modern lives and eating habits influence it. He boils all this down to offer eloquent insight into what is currently on our plates and why.

*The Third Plate* is aptly subtitled "Field Notes on the Future of Food." Barber weaves together his own childhood farming experiences and lessons learned from kitchen and farm with those of innovative farmers, ranchers, and fishermen around the globe. He visits them firsthand to learn how their partnerships with chefs may change the way we eat and also relate to earth's fragile ecosystems.

I predict this book will make readers hungry for real food that tastes delicious, for more diverse food choices, and for innovative solutions to feeding humanity without destroying the environment. For the home gardener, it's an affirmation that how we treat the land and grow food has ramifications well beyond ourselves.

—Betsy Hays

*Betsy Hays is an environmental writer and children's book author based in Wayne, New Jersey.*

### The Glory of the Tree

Noel Kingsbury. Firefly Books, Buffalo, New York, 2014. 288 pages. Publisher's price, hardcover: \$39.95.

OCCASIONALLY I come across a book that tries to be all things to all people. *The Glory of the Tree* by Noel Kingsbury, with photography by Andrea Jones, is such a book. It is a coffee-table book, an ecology book, a history book, a utilitarian book, and an ornamental arboriculture book. It succeeds in all these roles, for the most part, in the course of profiling 90 species of trees from around the world.

I like many things about it, including the high-quality paper, the concise species abstracts, and the fascinating "Fathers of the Forest" chart at the end that shows the age and location of the oldest living examples of specific taxa. I also like that each tree profile is arranged seemingly at random instead of predictably alphabetically. Finally, the author did the exhaustive research that makes the content rise far above his own direct experience, resulting in some of the book's best characteristics.

Any book that tries to cover so many angles will inevitably contain little glitches, and this one is no exception. The most noticeable to me, keeping American readers in mind, is that the content is clearly the product of a British author. Though American spelling and grammar are used (no, you won't find a "u" in "color"), you'll occasionally come across a decidedly British common name, such as referring to linden trees as limes, or to baldcypress as swamp cypress.

A few statements reveal a lack of familiarity with North American tree species in general. For example, Kingsbury asserts that Scots pine is unusual among conifers in losing its symmetry as it ages. This suggests to me that he has never seen the many North American species that follow the same trend.

Dramatic scenic photographs throughout the book certainly do glorify their arboreal subjects. However, several close-up shots taken with overly selective focus left much to be desired.

Still, this book has so much to recommend it. Many of the chapters are brilliantly written, and I learned something new on nearly every page. Read it as a continuing story, not as a spot reference, and you will be richly rewarded.

—Guy Sternberg

*Guy Sternberg is the founder of Starhill Forest Arboretum of Illinois College in Petersburg, Illinois, and lead author of Native Trees for North American Landscapes (Timber Press, 2004).*



## The Gardener's Garden

Victoria Clarke, Commissioning Editor. Phaidon, New York, New York, 2014. 480 pages. Publisher's price, hardcover: \$79.95.

FROM THE comfort of their armchairs, readers of *The Gardener's Garden* can enjoy a whirlwind tour of many of the world's greatest gardens. The book, illustrated with 1,200 color photographs, features more than 250 outstanding public and private gardens from five continents around the world. Each garden's succinct profile is rich with lyrical descriptions of what makes it unique and significant, along with interesting historical tidbits to provide context.

For example, one featured location that stood out to me is a little-known public garden called Plaz Metaxu in Devon, England. A rare "garden of the mind," its name is Greek for "the place between, expressing the idea of transition and a sense of tentative, searching space. A recurring theme in the garden is the transition from enclosed spaces to open vistas."

Then I traveled through the pages to Nishat Bagh, a 17th-century garden in Kashmir designed by Asaf Khan IV. "Originally each of the 12 terraces was associated with a sign of the zodiac, and the garden was divided into two: a public pleasure garden and a private harem garden used only by the women of Asaf Khan's household."

Arriving at the book's entry for the botanic garden in Oaxaca, Mexico, I marveled at photos showing local desert plants used to great effect in its landscapes. The text affirms my reaction, stating, "For those tempted to believe that botanic gardens are fusty places, Jardín Etnobotánico de Oaxaca will be an epiphany. Its fusion of contemporary art and an array of native plants from the Mexican state of Oaxaca would convert even the most disaffected visitor."

Among the extraordinary private properties featured is El Novillero in Sonoma County, California. Having had the good fortune to visit this garden in person, I found the book's description matched my own impressions. Designed in 1947 by Thomas Church, the garden exemplifies the "California style" of design that Church pioneered in that it is "unashamedly abstract" while also being "deeply rooted in the landscape." For example, the free-form swimming pool at the heart of the design—unique in America at the time—was "inspired by the meandering salt marshes of the river beyond."

Travelers will want to refer to *The Gardener's Garden* when looking for gardens to visit. Gardeners may find ideas for their own gardens while browsing its beautiful pages. This is a book that anyone can read and reread, and each time it will provide fresh inspiration.

—Catriona Tudor Erler

*Catriona Tudor Erler is a garden writer and photographer based in Charlottesville, Virginia.*



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## Projects and Recipes

INCORPORATING A NEW PLANT or accessory into your garden can be a lot like working with an unfamiliar ingredient in the kitchen: it may require a little research. Maybe time is at a premium and you just need a straightforward, go-to recipe to guide your efforts. Or if you've decided to make your own ingredients instead of buying them, you may need some basic instructions. Like good cookbooks, these recently published gardening books contain ideas and guidance for using garden-related ingredients to create an enticing array of projects.



***Air Plants: The Curious World of Tillandsias*** (Timber Press, 2014, \$19.95) by Zenaida Sengo may inspire you to add a little exotic flavor to your environs with these unusual plants that don't require soil to grow. It begins with the history, care, and uses of tillandsias. An illustrated guide highlights some of the more common members of this genus. The remainder of the book is devoted to designing with and displaying air plants indoors, including a twist on terrarium plantings.



***Five-Plant Gardens*** (Storey Publishing, 2014, \$18.95) by Nancy J. Ondra makes it easy to whip up a gorgeous garden using just five different plants. The 52 perennial garden plans provide readers with "recipes" for specific situations or themes. For example, the "Hummingbird Magnet" plan yields a shade garden that will attract hummers, or if you want a monochromatic scene, try "Vision in Blue." Each color-coded plan includes photos of the plants in it, a shopping list, and a season-by-season care list.



Visually stunning indoor centerpieces are Baylor Chapman's specialty in the lushly illustrated ***The Plant Recipe Book*** (Artisan Books, 2014, \$24.95). Baylor assumes readers possess some basic potting knowledge, so most of the book is devoted to step-by-step construction of each composition. Because there is no index, finding a particular arrangement or plant may require paging through the book, but the photographs are so enticing that doing so is a pleasure.



In ***Living Wreaths*** (Gibbs Smith, 2014, \$19.99) floral designer Natalie Bernhisel Robinson provides "20 beautiful projects for gifts and decor." These include striking wreaths constructed with succulents, herbs, blooming plants, and even edibles like lettuces. For each, Robinson gives brief planning and prepping tips followed by step-by-step planting instructions and care advice. Lavish photography shows both the finished wreath and the process of creating it.



***Handmade for the Garden*** (Stewart, Tabori & Chang, 2014, \$27.50) will appeal to the do-it-yourself types. For projects ranging from two different newspaper seed pot styles to a sublime rose-draped "found wood" arbor, author Susan Guagliumi lists needed materials and provides clear instructions for completion. Large photos show the finished project and illustrate materials. There is a source list, but many of the projects can be completed with items that are very likely lurking in your shed.



"We all know how much time and love goes into growing your own flowers, fruit, vegetables, and herbs," writes Debora Robertson in ***Gifts from the Garden*** (Kyle Books, 2013, \$24.95). "When we transform them into gifts, we're sharing more than a piece of our gardens, we're sharing a piece of our hearts. And there is nothing more generous than that." In this book, Robertson provides 100 ways to be generous, complete with directions and lovely photographs from which to draw inspiration.

—Mary S. Chadduck, Editorial Intern



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## Santa Fe Botanical Garden

by Mary S. Chaddock



Rising high above the Meadow Garden, 'Spirit House', made of cast bronze and stainless steel by Santa Fe artist Kevin Box, was part of the recent large-scale 'Origami in the Garden' exhibit at the Santa Fe Botanical Garden.

WHEN IT COMES to growing plants, Santa Fe, New Mexico, is certainly one of the more challenging environments. This region, bathed in intense sun and drying winds, receives only an average of 14 inches of rain and snow a year and can experience temperature swings of 30 to 40 degrees in the same day. Despite these formidable conditions, the Santa Fe Botanical Garden (SFBG) is flourishing on two sites and constructing a formal public garden on a third.

### WILD BEGINNINGS

The SFBG, founded in 1987 by citizens sharing a vision of creating a botanical garden in Santa Fe, became a physical reality in 1993 when the organization began managing the 35-acre **Leonora Curtin Wetland Preserve**, located 11 miles south of Santa Fe. The main attraction of this spring-fed preserve is the *ciénega*, or marsh. Here, paths shaded by native trees such as Rio Grande cottonwood (*Populus deltoides*) and lanceleaf poplar (*P. ×acuminata*) guide visitors into the riparian/wetland zone, which is a haven for migratory waterfowl. The preserve also features a dry woodland, primarily populated by pinyon pine (*Pinus edulis*), the state tree, and New Mexico juniper (*Juniperus monosperma*).

This pinyon–juniper plant community is also indigenous to the 1,350-acre **Ortiz Mountains Educational Preserve**, managed by SFBG. Located 30 miles south of Santa Fe, this truly rugged preserve boasts Place Peak, which at 8,897 feet is the highest peak on the Ortiz range. Recent botanical research here has tripled the size of the SFBG herbarium's collection of native plants. The preserve is open only for scheduled events or by special arrangement.

### NEW URBAN LOCATION

In contrast to the preserves, the Santa Fe Botanical Garden at Museum Hill is





One of the SFBG's iconic features is La Rambla, a stone channel that functions as a stormwater drain. Here it also serves as a setting for Kevin Box's 'Painted Ponies' metal sculptures

centrally located on 14 acres in the city, surrounded by other cultural attractions. Opened in July 2013, it is already enjoying enormous popularity: In its first year, over 30,000 people representing all 50 states and many countries visited, according to Scott Canning, horticultural director. "You wouldn't mistake Santa Fe Botanical Garden for anyplace else. Here plants stand alone and distinct," says Canning of the garden's aesthetic, which takes full advantage of striking silhouettes and sculptural growth habits.

Native or non-native, plants for this garden are chosen both for beauty and for their adaptability to the semi-arid Santa Fe climate.



Golden prickly pear (*Opuntia basilaris* var. *aurea*) blooms in the SFBG's Dry Garden.

mate. Visitors may expect to see everything from the dramatic beaked yucca (*Yucca rostrata*), state flower of New Mexico, to the rambunctious, sun-loving 'Madame Galen' trumpet vine (*Campsis xtagliabuana*), a cross between a North American native and a Chinese trumpet vine that bears reddish-orange blooms all summer long.

The Santa Fe climate also can provide ideal conditions for unexpected plants. For example, the lack of humidity, abundant sunlight, and cool nights keep the garden's eight carefully selected varieties of roses looking great three seasons a year, notes Canning. Similarly, these conditions are helping a mix of usually disease-prone apple, apricot, cherry, plum, peach, and pear trees thrive in the **Orchard Garden**.

In striking contrast to the relative lushness of the orchard, the nearby **Dry Garden** and its xeric landscaping showcases a collection of cold-hardy but heat-loving cacti. One of these, claret cup hedgehog cactus (*Echinocereus triglochidiatus*), native to New Mexico, only grows two to 16 inches tall and spends the winter desiccated by a lack of water. But in spring, when the rains come, it plumps up and bursts into bloom from April through June.

The absence or relative abundance of water is a connecting theme throughout the garden. For example, a subtle feature of the **Meadow Garden** is its shallow bowl-shaped design to catch and hold precious rainwa-

## Additional Information

**Santa Fe Botanical Garden**, 715 Camino Lejo, Santa Fe, NM 87505. (505) 471-9103. [www.santafebotanicalgarden.org](http://www.santafebotanicalgarden.org).

- Hours: April to October open from 9 a.m. to 5 p.m. daily; November to March, open Thursday to Sunday from 11 a.m. to 3 p.m.
- Admission: Members free. Adult (12+) \$7, Senior (65+) and Active Military \$6, Students (with ID) \$5, Children (under 12) free.

SFBG participates in the American Horticultural Society Reciprocal Admissions Program. AHS members showing a current AHS membership card receive free admission and discounts on educational programs or events.

Other nearby sites to explore:

**Allan Houser Sculpture Gardens**, Santa Fe, NM. [www.indianart.us](http://www.indianart.us).

**Bandelier National Monument**, Los Alamos, NM. [www.nps.gov/band](http://www.nps.gov/band).

**Museum of Indian Arts and Culture**, Santa Fe, NM. [www.indianartsandculture.org](http://www.indianartsandculture.org).

**Museum of International Folk Art**, Santa Fe, NM. [www.internationalfolkart.org](http://www.internationalfolkart.org).

ter. **La Rambla**, a handcrafted rock channel running behind, through, and beyond the meadow, also helps to slow down stormwater, giving it a chance to seep into the soil.

## FUTURE DEVELOPMENTS

Still to come at Museum Hill are three more gardens—**Ojos y Manos: Eyes and Hands**, **The Courtyard Gardens**, and the **Arroyo Trails**. Embodying different aspects of the northern New Mexico landscape and centuries of human habitation, these future gardens will be an interactive experience encompassing art, landscape architecture, and educational experiences for children and adults.

While it works to complete these new spaces, SFBG already has plenty to offer by artfully combining the region's spare beauty, sweeping horizons, and tough plants into a destination that will appeal to visitors of all ages.

*Mary S. Chadduck is an editorial intern with The American Gardener.*






## REGIONAL HAPPENINGS

# Horticultural Events from Around the Country

### NORTHEAST

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

FEB. 4–6. **New England Grows!** Expo. Boston Convention & Exhibition Center. Boston, Massachusetts. (508) 653-3009. [www.newenglandgrows.org](http://www.newenglandgrows.org).

 FEB. 19–22. **Connecticut Flower & Garden Show.** Connecticut Convention Center. Hartford, Connecticut. (860) 844-8461. [www.ctflowershow.com](http://www.ctflowershow.com).

FEB. 19–22. **Rhode Island Spring Flower & Garden Show.** Rhode Island Convention Center. Providence, Rhode Island. (401) 872-0980. [www.flowershow.com](http://www.flowershow.com).

**RAP** FEB. 22 & 23. **Camellia House Weekend.** Music, tours, activities. Planting Fields Arboretum. Oyster Bay, New York. (516) 922-8600. [www.plantingfields.org](http://www.plantingfields.org).

**RAP** FEB. 24. **Native Alternatives to Problem Plants.** Lecture. New England Wild Flower Society. Framingham, Massachusetts. (508) 877-7630. [www.newenglandwild.org](http://www.newenglandwild.org).

**RAP** FEB. 28–APR. 19. **Orchid Show.** The New York Botanical Garden. New York, New York. (718) 817-8700. [www.nybg.org](http://www.nybg.org).

#### Looking ahead

MAR. 7. **Plant Symposium.** Connecticut Hardy Plant Society. Solomon Welles House. Wethersfield, Connecticut. (860) 747-8175. [www.cthardyplantsociety.org](http://www.cthardyplantsociety.org).

MAR. 11–15. **Boston Flower & Garden Show.** Seaport World Trade Center. Boston, Massachusetts. (617) 385-5000. [www.bostonflowershow.com/welcome](http://www.bostonflowershow.com/welcome).

### MID-ATLANTIC


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

JAN. 24–APR. 26. **Orchids: Interlocking Science and Beauty.** Exhibit. National Museum of Natural History. Washington, D.C. (202) 633-2200. [www.gardens.si.edu](http://www.gardens.si.edu).

JAN. 25. **Perennials with Pizzazz from Tony Avent.** Lecture. The Scott Arboretum of Swarthmore College. Swarthmore, Pennsylvania. (610) 328-8025. [www.scottarboretum.org](http://www.scottarboretum.org).

FEB. 6. **Today's Horticulture.** Symposium. Longwood Gardens. Kennett Square,

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

Flower and garden shows that offer free or discounted admission to AHS members or present the AHS Environmental Award are designated by a  symbol. For details on the specific benefits offered, visit [www.ahs.org/2015-flower-shows](http://www.ahs.org/2015-flower-shows).


Pennsylvania. (610) 388-5454. [www.longwoodgardens.org](http://www.longwoodgardens.org).


FEB. 12–15. **New Jersey Flower & Garden Show.** New Jersey Convention Center. Edison, New Jersey. (732) 449-4004. [www.macevents.com](http://www.macevents.com).

**RAP** FEB. 14. **Spring Pruning for Shrubs and Small Ornamental Trees.** Class. Lewis Ginter Botanical Garden. Richmond, Virginia. (804) 262-9887. [www.lewisginter.org](http://www.lewisginter.org).

**RAP** FEB. 15. **Winning Against Weeds.** Lecture. Green Spring Gardens. Alexandria, Virginia. (703) 642-5173. [www.greenspring.org](http://www.greenspring.org).

FEB. 28. **Bananas: Botany, History, Agriculture and Future.** Lecture. United States Botanic Garden. Washington, D.C. (202) 225-8333. [www.usbg.gov](http://www.usbg.gov).

 FEB. 28–MAR. 1 & MAR. 6–8. **Maryland Home and Garden Show.** Timonium Fairgrounds. Timonium, Maryland. (410) 863-1180. [www.mdhomeandgarden.com/Spring](http://www.mdhomeandgarden.com/Spring).

 FEB. 28–MAR. 8. **Philadelphia Flower Show.** Pennsylvania Convention Center. Philadelphia, Pennsylvania. (215) 988-8800. [www.theflowershow.com](http://www.theflowershow.com).

#### Looking ahead


MAR. 12. **Creative Approaches for Ecological Landscaping.** Symposium. Delaware Valley College. Doylestown, Pennsylvania. (215) 862-2924. [www.bhwp.org](http://www.bhwp.org).

 MAR. 12–15. **Springfest Garden Show.** Sussex County Fairgrounds. Augusta, New Jersey. (973) 948-9448. [www.springfestgardenshow.org](http://www.springfestgardenshow.org).

### SOUTHEAST

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

FEB. 11. **Raising Roses.** Lecture and demonstration. Bellingrath Gardens & Home. Theodore, Alabama. (800) 247-8420. [www.bellingrath.org](http://www.bellingrath.org).

 FEB. 20–22 & FEB. 27–MAR. 1. **Southern Spring Home & Garden Show.** The Park Expo and Conference Center. Charlotte, North Carolina. (704) 376-6594. [www.southernshows.com/sss](http://www.southernshows.com/sss).

**RAP** FEB. 21 & 22. **Garden & Bonsai Festival.** Flamingo Gardens. Davie, Florida. (954) 473-2955. [www.flamingogardens.org](http://www.flamingogardens.org).

**RAP** FEB. 28. **The Inspired Gardener.** Symposium and silent auction. Georgia Perennial Plant Association. Atlanta Botanical Garden. Atlanta, Georgia. (404) 876-5859. [www.atlantabotanicalgarden.org](http://www.atlantabotanicalgarden.org).

#### Looking ahead

MAR. 3. **Planting Outside the Lines.** Symposium. Davidson College. Davidson, North Carolina. (704) 894-2000. [www.davidsonsymposium.org](http://www.davidsonsymposium.org).

MAR. 5–8. **Nashville Lawn & Garden Show.** State Fair Grounds. Goodlettsville, Tennessee. (615) 876-7680. [www.nashvillelawnandgardenshow.com](http://www.nashvillelawnandgardenshow.com).

**RAP** MAR. 13–15. **International Orchid Festival.** Fairchild Tropical Botanic Garden. Coral Gables, Florida. (305) 667-1651. [www.fairchildgarden.org](http://www.fairchildgarden.org).

### NORTH CENTRAL

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

FEB. 6–15. **The Great Big Home + Garden Show.** Cleveland IX Center. Cleveland, Ohio. (216) 676-6000. [www.greatbighomeandgarden.com](http://www.greatbighomeandgarden.com).

**RAP** FEB. 7. **Sustainability Symposium 2015: The Year of the Tree.** The Holden Arboretum. Kirtland, Ohio. (440) 946-4400. [www.holdenarb.org](http://www.holdenarb.org).



**RAP** FEB. 8. **Wisconsin's Carnivorous Plants.** Workshop. Boerner Botanical Gardens. Hales Corners, Wisconsin. (414) 525-5601. [www.boernerbotanicalgardens.org](http://www.boernerbotanicalgardens.org).

FEB. 13–15. **Indiana Home & Garden Show.** Indiana Convention Center. Indianapolis, Indiana. [www.homeshowcenter.com](http://www.homeshowcenter.com).

**RAP** FEB. 14–APR. 19. **Orchidelirium: Illustrated Orchidaceae.** Rare book exhibition. Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. [www.chicagobotanic.org](http://www.chicagobotanic.org).

**RAP** FEB. 21. **Horticulture Symposium: The Living Landscape.** Indianapolis Museum of Art. Indianapolis, Indiana. (317) 923-1331. [www.imamuseum.org](http://www.imamuseum.org).

**RAP** FEB. 22. **Seed Swap.** Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. [www.chicagobotanic.org](http://www.chicagobotanic.org).

#### Looking ahead

MAR. 14–22. **Chicago Flower & Garden Show.** Navy Pier. Chicago, Illinois. (847) 970-9160. [www.chicagoflower.com](http://www.chicagoflower.com).

**RAP** MAR. 20. **Spring Thaw Symposium.** Green Bay Botanical Garden. Green Bay, Wisconsin. (920) 491-3691 ext. 122. [www.gbbg.org](http://www.gbbg.org).

### SOUTH CENTRAL

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

**RAP** FEB. 20–22. **Arkansas Flower and Garden Show.** Statehouse Convention Center. Little Rock, Arkansas. (501) 821-4000. [www.argardenshow.org](http://www.argardenshow.org).

**RAP** FEB. 26. **Propagate!** Workshop. Garvan Woodland Gardens. Hot Springs, Arkansas. (501) 262-9300. [www.garvangardens.org](http://www.garvangardens.org).

MAR. 1–31. **Nacogdoches Azalea Trail.** Guided tour. Nacogdoches, Texas. (888) 653-3788. [www.nacogdochesazaleas.com](http://www.nacogdochesazaleas.com).

### SOUTHWEST

AZ, CO, NM, UT

**RAP** FEB. 7. **Landscape Design with Rocky Mountain Native Plants.** Class. The Gardens on Spring Creek. Fort Collins, Colorado. (970) 416-2486. [www.fcgov.com/gardens](http://www.fcgov.com/gardens).

**RAP** FEB. 26–MAR. 12. **Botany for Gardeners.** Class. Red Butte Garden and Arboretum at the University of Utah. Salt Lake City, Utah. (801) 585-0556. [www.redbutte.garden.org](http://www.redbutte.garden.org).

**RAP** MAR. 6. **Tree Diversity Conference.** Denver Botanic Gardens. Denver, Colorado. (720) 865-3500. [www.botanicgardens.org](http://www.botanicgardens.org).

**RAP** MAR. 7. **Roses 101.** The Hudson Gardens and Events Center. Littleton, Colorado. (303) 797-8565. [www.hudsongardens.org](http://www.hudsongardens.org).

**RAP** MAR. 7–MAY 10. **Spring Butterfly Exhibit.** Desert Botanical Garden. Phoenix, Arizona. (480) 941-1225. [www.dbg.org](http://www.dbg.org).

### WEST COAST

CA, HI, NV

**RAP** JAN. 31. **Fathers and Sons: A Journey with the Bartrams, Hookers and other Famous Families in Western Botanical Science, Art and Exploration.** Lecture. University of California Botanical Garden at Berkeley. Berkeley, California. (510) 643-2755. [www.botanicalgarden.berkeley.edu](http://www.botanicalgarden.berkeley.edu).

**RAP** FEB. 5. **Maria Sibylla Merian: A Passion for Plants and Insects.** Lecture. University of California Botanical Garden at Berkeley. Berkeley, California. (510) 643-2755. [www.botanicalgarden.berkeley.edu](http://www.botanicalgarden.berkeley.edu).

FEB. 20–22. **Pacific Orchid Exposition.** San Francisco Orchid Society. Fort Mason Center Festival Pavilion. San Francisco, California. (650) 548-6700. [www.orchidsanfrancisco.org](http://www.orchidsanfrancisco.org).



#### 2016 "Gardeners" Calendar

One of the benefits that TGOA/MGCA offers its members is the opportunity for TGOA/MGCA and AHS members to participate in our annual photography contest. From these entries, photos are chosen for our annual calendar. We encourage all men and women to become a member of TGOA/MGCA and enjoy all the benefits of a worthwhile organization. For more information about TGOA/MGCA or to order calendars for \$7.00 postpaid, please call or email:

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(515) 278-0295 Email: [www.tgoasecv@qwestoffice.net](mailto:www.tgoasecv@qwestoffice.net)

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## Birds Roost in Lotusland

FROM FEBRUARY 28 to May 23, Ganna Walska Lotusland is hosting “FLOCK: Birds on the Brink in Montecito, California.” Designed to highlight the decline of wild bird populations, this contemporary art exhibit will use mixed media visual arts to expand public awareness of the interplay between birds, plants, species diversity, and environmental sustainability.



**Above:** The Blue Garden features a sculpture vignette called “Murder of Crows.” **Left:** A variety of cacti fill a bed along the main driveway.

Lotusland will host 28 international artists during this exhibition, with works displayed both indoors and throughout its 37 acre gardens. Two of the artists are in-residence: Gary Smith, who will be making

human-scale nests constructed from locally sourced indigenous materials, and David Hochbaum, who will be installing a work called “Flying Flock” in the Pavilion Gallery.

A concurrent lecture series on avian topics presented by authors and natural history experts will take place throughout March and April, with the final lecture scheduled for May 9 on International Migratory Bird Day. For more information about lectures, artists, hours, and directions, visit [www.lotusland.org](http://www.lotusland.org).

## Creating Living Landscapes

ON FEBRUARY 21, the Indianapolis Museum of Art (IMA) in Indiana will host “The Living Landscape.” This symposium, presented by IMA’s Division of Environmental and Historic Preservation with support from the IMA Horticultural Society, will bring together regional and national experts to explore how to create garden habitats alive with biodiversity.

The keynote speaker is Douglas W. Tallamy, University of Delaware entomology professor and co-author of the recently published book, *The Living Landscape*. Other speakers include restoration ecologist Kevin M. Tungesvick, presenting little known native plants that supply more than just their beauty; Jim McCormac, an avian education specialist who will address strategies for attracting birds to gardens; and Irvin Etienne, IMA horticultural display coordinator, who will discuss the pros and cons of using cultivars of native plants in landscapes.

For more information and registration, go to [www.imamuseum.org](http://www.imamuseum.org).

—Mary S. Chadduck, Editorial Intern

**RAP** FEB. 21. **History of the Garden and Human Uses of Plants.** Lecture. The Ruth Bancroft Garden. Walnut Creek, California. (925) 944-9352. [www.ruthbancroftgarden.org](http://www.ruthbancroftgarden.org).

**RAP** FEB. 28 & MAR. 1. **Camellia & Tea Festival.** Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. [www.descansogardens.org](http://www.descansogardens.org).

**RAP** MAR. 14. **Delights From Down Under.** Lecture. UC Davis Arboretum. Davis, California. (530) 752-4880. [www.arboretum.ucdavis.edu](http://www.arboretum.ucdavis.edu).

### Looking ahead

MAR. 18–22. **San Francisco Flower & Garden Show.** San Mateo Event Center. San Mateo, California. (415) 684-7278 ext. 3. [www.sfgardenshow.com](http://www.sfgardenshow.com).

### NORTHWEST

AK, ID, MT, OR, WA, WY

**RAP** FEB. 11–15. **Northwest Flower & Garden Show.** Washington State Convention Center. Seattle, Washington. (253) 238-3807. [www.gardenshow.com](http://www.gardenshow.com).

**RAP** FEB. 21. **Gardener’s Special Winter Guided Interest Walk.** Leach Botanical Garden. Portland, Oregon. (503) 823-9503. [www.leachgarden.org](http://www.leachgarden.org).

FEB. 27–MAR. 1. **Yard, Garden, and Patio Show.** Oregon Association of Nurseries. Oregon Convention Center. Portland, Oregon. (503) 682-5089. [www.ygpshow.com](http://www.ygpshow.com).

**RAP** FEB. 28. **Bringing the Living Space Into the Garden.** Class. Bellevue Botanical Garden. Bellevue, Washington. (425) 451-3755. [www.bellevuebotanical.org](http://www.bellevuebotanical.org).

**RAP** MAR. 5. **Plan Your Spring/Summer Vegetable Garden.** Class. Bellevue Botanical Garden. Bellevue, Washington. (425) 451-3755. [www.bellevuebotanical.org](http://www.bellevuebotanical.org).

### CANADA

FEB. 11 & 18. **Healthy Soils, Healthy Humans.** Class. VanDusen Botanical Garden. Vancouver, British Columbia. (604) 718-5898. [www.vandusengarden.org](http://www.vandusengarden.org).

**RAP** FEB. 21. **Get the Jump on Spring.** Open house. Toronto Botanical Garden. Toronto, Ontario. (416) 397-1341. [www.torontobotanicalgarden.ca](http://www.torontobotanicalgarden.ca).

### Looking ahead

MAR. 13–22. **Canada Blooms: “Let’s Play.”** Show. Direct Energy Centre. Toronto, Ontario. (416) 447-8655. [www.canadablooms.com](http://www.canadablooms.com).



# 2015 AHS SEED EXCHANGE

This year's Seed Exchange, available only to American Horticultural Society members, offers 231 kinds of seeds. For a quick reference, here is the list of seeds to choose from, with an order form on page 59. To see the full catalog with detailed plant descriptions, visit [www.ahs.org/seeds](http://www.ahs.org/seeds). If you prefer to receive a printed copy of the catalog, please send a self-addressed, stamped, legal-size envelope to us at Seed Exchange Catalog, AHS, 7931 East Boulevard Drive, Alexandria, VA 22308-1300.

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**KEY TO DESCRIPTIONS: CV(S)=CULTIVAR(S) SP. & SPP.=SPECIES SSP.=SUBSPECIES SYN.=SYNONYM VAR.=VARIETY**

## ANNUALS AND BIENNIALS

- 1 *Ageratum houstonianum* (floss flower)
- 2 *Alcea rosea* (hollyhock mix)
- 3 *Bupleurum rotundifolium* 'Green Gold' (hare's ear cv.)
- 4 *Calendula officinalis* 'Pink Surprise' (calendula, pot marigold cv.)
- 5 *Callistephus chinensis* (China aster mix)
- 6 *Centaurea cyanus* (bachelor's button mix)
- 7 *Cleome hassleriana* (spider flower mix)
- 8 *Consolida ajacis*, syn. *Delphinium ajacis* (larkspur mix)
- 9 *Convolvulus tricolor* 'Blue Ensign' (dwarf morning glory cv.)
- 10 *Cosmos bipinnatus* (cosmos mix)
- 11 *Cosmos bipinnatus* 'Sea Shells' (cosmos cv.)
- 12 *Dianthus barbatus* (sweet William mix)
- 13 *Dianthus chinensis* 'Gaiety' (China pink cv.)
- 14 *Digitalis purpurea* (common foxglove)
- 15 *Dimorphotheca sinuata* (African daisy mix)
- 16 *Eschscholzia californica* (California poppy)
- 17 *Helianthus annuus* (sunflower mix)
- 18 *Helianthus annuus* 'Dwarf Sungold' (dwarf sunflower cv.)
- 19 *Helianthus annuus* 'Mammoth' and 'Mammoth Gray Stripe' (giant sunflower cvs.)
- 20 *Iberis umbellata* 'Dwarf Fairy' (globe candytuft cv.)
- 21 *Impatiens balsamina* (balsam mix)
- 22 *Impatiens walleriana* (impatiens, busy Lizzie mix)
- 23 *Lobelia erinus* 'Crystal Palace' (trailing lobelia cv.)
- 24 *Lobularia maritima*, syn. *Alyssum maritimum* (sweet alyssum, carpet of snow mix)

- 25 *Lunaria annua* (honesty, money plant)
- 26 *Mirabilis jalapa* (four o'clock mix)
- 27 *Moluccella laevis* (bells of Ireland)
- 28 *Myosotis sylvatica* (garden forget-me-not)
- 29 *Nicotiana* spp. (flowering tobacco mix)
- 30 *Oenothera biennis* (evening primrose)
- 31 *Papaver somniferum* (breadseed poppy)
- 32 *Ricinus communis* (castor bean)
- 33 *Rudbeckia hirta* (black-eyed Susan mix)
- 34 *Rudbeckia hirta* 'Indian Summer' (black-eyed Susan cv.)
- 35 *Rudbeckia hirta* 'Irish Eyes' (black-eyed Susan cv.)
- 36 *Tagetes erecta* 'Garland Orange' (African marigold cv.)
- 37 *Tagetes patula* (French marigold mix)
- 38 *Tithonia rotundifolia* (Mexican sunflower)
- 39 *Tropaeolum majus* (nasturtium mix)
- 40 *Tropaeolum majus* 'Cherry Rose' or 'Scarlet Gleam' (red flowering nasturtium cvs.)
- 41 *Viola cornuta* 'Bambini' (viola cv.)
- 42 *Viola tricolor* (Johnny jump-up)
- 43 *Zinnia elegans* (dwarf zinnia mix)
- 44 *Zinnia elegans* (speckled zinnia mix)
- 45 *Zinnia elegans* 'Exquisite Pink' (zinnia cv.)
- 46 *Zinnia peruviana*, syn. *Z. pauciflora* (zinnia mix)

## PERENNIALS

- 47 *Aquilegia* spp. (columbine mix)
- 48 *Asclepias incarnata* (swamp milkweed)
- 49 *Asclepias syriaca* (common milkweed)
- 50 *Astrantia major* (greater masterwort)
- 51 *Baptisia australis* (false indigo)

- 52 *Belamcanda chinensis* (blackberry lily)
- 53 *Delphinium x cultorum* 'Magic Fountains' (delphinium cv.)
- 54 *Echinacea purpurea* (purple coneflower)
- 55 *Eutrochium purpureum*, syn. *Eupatorium purpureum* (Joe Pye weed)
- 56 *Gaillardia aristata* (blanket flower)
- 57 *Hibiscus coccineus* (scarlet rosemallow)
- 58 *Hibiscus moscheutos* (rosemallow)
- 59 *Hosta* sp. (hosta)
- 60 *Leucanthemum x superbum* (Shasta daisy)
- 61 *Liatris spicata* (dense blazing star, gayfeather)
- 62 *Lilium formosanum* (Formosa lily)
- 63 *Linum lewisii* (wild blue flax)
- 64 *Lupinus polyphyllus* (lupine mix)
- 65 *x Pardancanda norrisii*, syn. *Iris x norrisii* (candy lily)
- 66 *Platycodon grandiflorus* (balloon flower)
- 67 *Rudbeckia fulgida* var. *sullivantii* 'Goldsturm' (black-eyed Susan cv.)
- 68 *Salvia apiana* (white sage, sacred sage)
- 69 *Scutellaria lateriflora* (mad-dog skullcap)
- 70 *Senna hebecarpa*, syn. *Cassia hebecarpa* (wild senna, American senna)
- 71 *Solidago* sp. (goldenrod species)

## VINES

- 72 *Campsis radicans* (trumpet vine)
- 73 *Cardiospermum halicacabum* (love-in-a-puff)
- 74 *Clematis* 'Duchess of Edinburgh' (clematis cv.)
- 75 *Ipomoea purpurea* (common morning glory mix)
- 76 *Ipomoea tricolor* 'Heavenly Blue' (morning glory cv.)
- 76 *Ipomoea tricolor* 'Scarlet O'Hara' (morning glory cv.)
- 78 *Lablab purpureus* (hyacinth bean)

- 79 *Lagenaria siceraria* (birdhouse gourd)
- 80 *Lathyrus odoratus* (sweet pea mix)
- 81 *Luffa aegyptiaca* (loofah gourd)

## TREES AND SHRUBS

- 82 *Abies koreana* (Korean fir)
- 83 *Acer truncatum* (Shantung maple, purple blow maple)
- 84 *Hibiscus syriacus* (rose of Sharon)
- 85 *Maclura pomifera* (Osage orange)
- 86 *Magnolia tripetala* (umbrella magnolia)
- 87 *Mimosa pudica* (sensitive plant)
- 88 *Sophora secundiflora* (Texas mountain laurel, mescal bean)
- 89 *Styrax japonicus* (Japanese snowbell)
- 90 *Styrax japonicus* 'Pink Chimes' (Japanese snowbell cv.)
- 91 *Ulmus americana* (American elm)

## HERBS

- 92 *Allium schoenoprasum* (chives)
- 93 *Allium tuberosum* (garlic chives)
- 94 *Anethum graveolens* 'Fern Leaf Dill' (dill cv.)
- 95 *Anethum graveolens* 'Mammoth' (dill cv.)
- 96 *Artemisia dracuncululus* 'Sativa' (French tarragon cv.)
- 97 *Carum carvi* (caraway)
- 98 *Coriandrum sativum* (cilantro, coriander)
- 99 *Cuminum cyminum* (cumin)
- 100 *Dactylis glomerata* (cat grass, wheat grass)
- 101 *Foeniculum vulgare* (Florence fennel)
- 102 *Lavandula angustifolia* (English lavender)
- 103 *Levisticum officinale* (lovage)
- 104 *Matricaria recutita* (German chamomile)
- 105 *Melissa officinalis* (lemon balm)
- 106 *Nepeta cataria* (catnip)



- 107** *Ocimum basilicum* (purple-leaf basil)
- 108** *Ocimum basilicum* (sweet basil)
- 109** *Ocimum basilicum* 'Cinnamon Basil' (sweet basil cv.)
- 110** *Ocimum basilicum* 'Citriodorum' syn. *O. citriodora* (lemon basil cv.)
- 111** *Ocimum basilicum* 'Fino Verdi' (fine-leaved sweet basil cv.)
- 112** *Ocimum basilicum* 'Genovese' (sweet basil cv.)
- 113** *Ocimum basilicum* 'Lettuce Leaf' (sweet basil cv.)
- 114** *Ocimum basilicum* 'Spicy Globe' (dwarf, spicy basil cv.)
- 115** *Ocimum basilicum* var. *thyrsiflorum* 'Siam Queen' (spicy basil cv.)
- 116** *Origanum majorana* (marjoram)
- 117** *Origanum vulgare* (oregano)
- 118** *Petroselinum crispum* var. *crispum* 'Moss Curled' (curly-leaf parsley cv.)
- 119** *Petroselinum crispum* var. *neapolitanum* (flat-leaf Italian parsley)
- 120** *Pimpinella anisum* (anise)
- 121** *Rosmarinus officinalis* (rosemary)
- 122** *Salvia officinalis* (sage)
- 123** *Satureja hortensis* (summer savory)
- 124** *Thymus vulgaris* (thyme)
- VEGETABLES AND FRUITS**
- 125** *Abelmoschus esculentus* 'Burgundy' (okra cv.)
- 126** *Abelmoschus esculentus* 'Clemson Spineless' (okra cv.)
- 127** *Allium ampeloprasum* var. *porrum* (leek)
- 128** *Allium cepa* 'Borrettana Cippolini' (small white onion cv.)
- 129** *Allium cepa* 'Walla Walla Sweet' (sweet yellow onion cv.)
- 130** *Allium cepa* 'White Lisbon' (green onion cv.)
- 131** *Apium graveolens* var. *dulce* 'Utah' (celery cv.)
- 132** *Beta vulgaris* 'Bull's Blood' (beet cv.)
- 133** *Beta vulgaris* 'Cylindra' (beet cv.)
- 134** *Beta vulgaris* 'Detroit Dark Red' (beet cv.)
- 135** *Beta vulgaris* ssp. *cicla* 'Bright Lights' (Swiss chard cv.)
- 136** *Beta vulgaris* ssp. *cicla* 'Fordhook' (Swiss chard cv.)
- 137** *Brassica juncea* (Chinese mustard, gaichoi)
- 138** *Brassica juncea* 'Mizuna' (Asian mustard greens cv.)
- 139** *Brassica napus* var. *napobrassica* (rutabaga)
- 140** *Brassica oleracea* var. *acephala* 'Dwarf Blue Curled Vates' (kale cv.)
- 141** *Brassica oleracea* var. *acephala* 'Georgia Southern' (collards cv.)
- 142** *Brassica oleracea* var. *acephala* 'Red Russian' (kale cv.)
- 143** *Brassica oleracea* var. *botrytis* 'Early Snowball' (cauliflower cv.)
- 144** *Brassica oleracea* var. *botrytis* 'Snowball' (cauliflower cv.)
- 145** *Brassica oleracea* var. *capitata* 'Copenhagen' (cabbage cv.)
- 146** *Brassica oleracea* var. *capitata* 'Michihili' (cabbage cv.)
- 147** *Brassica oleracea* var. *capitata* 'Red Acre' (cabbage cv.)
- 148** *Brassica oleracea* var. *gemmifera* 'Long Island Improved' (Brussels sprouts cv.)
- 149** *Brassica oleracea* var. *gongyloides* 'Early Purple Vienna' (kohlrabi cv.)
- 150** *Brassica oleracea* var. *italica* 'Calabrese' (broccoli cv.)
- 151** *Brassica oleracea* var. *italica* 'Waltham 29' (broccoli cv.)
- 152** *Brassica rapa* (broccoli raab)
- 153** *Brassica rapa* var. *chinensis* 'Baby Bok Choy' (bok choy, pak choy cv.)
- 154** *Brassica rapa* var. *rapa* 'Purple Top White Globe' (turnip cv.)
- 155** *Brassica rapa* var. *rapa* 'Shogoining' (turnip cv.)
- 156** *Capsicum annuum* 'Banana' (sweet pepper cv.)
- 157** *Capsicum annuum* 'Cayenne Long Slim' (hot pepper cv.)
- 158** *Capsicum annuum* 'Chinese 5 Color' (spicy ornamental pepper cv.)
- 159** *Capsicum annuum* 'Poblano' (medium/hot pepper cv.)
- 160** *Capsicum annuum* 'Sunbright Golden' (sweet pepper cv.)
- 161** *Cichorium endivia* 'Batavian Full Heart' (endive cv.)
- 162** *Cichorium intybus* 'Guilio' (radicchio cv.)
- 163** *Citrullus lanatus* 'Crimson Sweet' (watermelon cv.)
- 164** *Citrullus lanatus* 'Sugar Baby' (watermelon cv.)
- 165** *Cucumis melo* 'Charentais' (melon cv.)
- 166** *Cucumis melo* 'Honeydew' (melon cv.)
- 167** *Cucumis melo* 'Sugar Cube' (muskmelon cv.)
- 168** *Cucumis melo* var. *flexuosus* (Armenian cucumber)
- 169** *Cucumis melo* var. *inodorus* 'Crenshaw' (melon cv.)
- 170** *Cucumis sativus* 'National Pickling' (cucumber cv.)
- 171** *Cucumis sativus* 'Spacemaster' (cucumber cv.)
- 172** *Cucurbita maxima* 'Atlantic Giant' (pumpkin cv.)
- 173** *Cucurbita maxima* 'Blue Hubbard' (squash cv.)
- 174** *Cucurbita maxima* 'Candy Roaster' (winter squash cv.)
- 175** *Cucurbita maxima* 'Jumbo Pink Banana' (winter squash cv.)
- 176** *Cucurbita maxima* 'Sibley' (winter squash cv.)
- 177** *Cucurbita moschata* 'Waltham Butternut' (winter squash cv.)
- 178** *Cucurbita pepo* (small fancy gourd)
- 179** *Cucurbita pepo* 'Buttercup' (winter squash cv.)
- 180** *Cucurbita pepo* 'Cocozella' (summer squash cv.)
- 181** *Cucurbita pepo* 'Gold Rush' (summer squash cv.)
- 182** *Cucurbita pepo* 'Golden Scalloped' or 'Pattypan Green' (summer squash cvs.)
- 183** *Cucurbita pepo* 'New England Sugar Pie' (pumpkin cv.)
- 184** *Daucus carota* var. *sativus* 'Danvers Half Long' (carrot cv.)
- 185** *Daucus carota* var. *sativus* 'Nantes' (carrot cv.)
- 186** *Eruca vesicaria* var. *sativa* (arugula)
- 187** *Lactuca sativa* 'Marveille des Quatre Saisons' (lettuce cv.)
- 188** *Lactuca sativa* 'Mesclun Zesty Mix' (lettuce cv.)
- 189** *Lactuca sativa* 'Parris Island Romaine' (lettuce cv.)
- 190** *Lactuca sativa* 'Red Deer Tongue' (lettuce cv.)
- 191** *Lactuca sativa* 'Tango' (lettuce cv.)
- 192** *Pastinaca sativa* 'Hollow Crown' (parsnip cv.)
- 193** *Phaseolus coccineus* (scarlet runner bean)
- 194** *Phaseolus vulgaris* 'Golden Wax' (bush bean cv.)
- 195** *Phaseolus vulgaris* 'Horsehead' (dry bean cv.)
- 196** *Phaseolus vulgaris* 'Jacob's Cattle' (dry bean cv.)
- 197** *Phaseolus vulgaris* 'Kentucky Wonder' (pole bean cv.)
- 198** *Phaseolus vulgaris* 'Tendergreen' (bush bean cv.)
- 199** *Phaseolus vulgaris* 'Vermont Cranberry Soup' (dry bean cv.)
- 200** *Phaseolus vulgaris* 'Yin Yang Soup' (dry bean cv.)
- 201** *Raphanus sativus* 'French Breakfast' (radish cv.)
- 202** *Raphanus sativus* 'Minowase' (daikon radish cv.)
- 203** *Raphanus sativus* 'Sparkler' (radish cv.)
- 204** *Solanum lycopersicum* 'Ace 55' (slicing tomato cv.)
- 205** *Solanum lycopersicum* 'Better Boy' (all-purpose tomato cv.)
- 206** *Solanum lycopersicum* 'Big Beef' (beefsteak tomato cv.)
- 207** *Solanum lycopersicum* 'Black Krim' (beefsteak tomato cv.)
- 208** *Solanum lycopersicum* 'Brand-wine' (beefsteak tomato cv.)
- 209** *Solanum lycopersicum* 'Celebrity' (slicing tomato cv.)
- 210** *Solanum lycopersicum* 'Cosmonaut Volker' (slicing tomato cv.)
- 211** *Solanum lycopersicum* 'Glacier' (salad tomato cv.)
- 212** *Solanum lycopersicum* 'Lemon Boy' (slicing, canning tomato cv.)
- 213** *Solanum lycopersicum* 'Marglobe' (slicing, canning tomato cv.)
- 214** *Solanum lycopersicum* 'Old Kentucky' (all-purpose tomato cv.)
- 215** *Solanum lycopersicum* 'Red Cherry' (small salad tomato cv.)
- 216** *Solanum lycopersicum* 'Red Pear' (salad tomato cv.)
- 217** *Solanum lycopersicum* 'Roma' (paste tomato cv.)
- 218** *Solanum lycopersicum* 'Super Sweet 100' (cherry tomato cv.)
- 219** *Solanum lycopersicum* 'Tumbler' (cherry tomato cv.)
- 220** *Solanum melongena* 'Black Beauty' (eggplant cv.)
- 221** *Solanum melongena* 'Long Purple' (eggplant cv.)
- 222** *Sorghum vulgare* var. *technicum* (broom corn)
- 223** *Spinacia oleracea* 'Bloomsdale Longstanding' (spinach cv.)
- 224** *Spinacia oleracea* 'Olympia' or 'Tyee' (slow-bolting spinach cvs.)
- 225** *Valerianella locusta* (mache, corn salad)
- 226** *Zea mays* (ornamental mixed corn)
- 227** *Zea mays* 'Dorinny' (sweet corn cv.)
- 228** *Zea mays* 'Early Sunglow' (sweet corn cv.)
- 229** *Zea mays* 'Earhtone Dent' (dent or field corn cv.)
- 230** *Zea mays* 'Hopi Blue' (flint corn cv.)
- 231** *Zea mays* 'Silver Queen' (sweet corn cv.)



# 2015 AHS SEED EXCHANGE ORDER FORM

Order must be postmarked by March 7, 2015.

*You must be a current AHS member—but you do not need to donate seeds—to participate in the Seed Exchange.  
Due to Federal regulations, seeds can only be shipped within the United States.*

- For questions about the Seed Exchange program, e-mail [seeds@ahs.org](mailto:seeds@ahs.org).

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip code \_\_\_\_\_  
Daytime phone \_\_\_\_\_  
E-mail \_\_\_\_\_  
AHS member # \_\_\_\_\_

**NOT A MEMBER?** You must be a current AHS member to order seeds. If you would like to join the AHS, please select an annual membership level below and add the fee to your payment. Visit [www.ahs.org/join](http://www.ahs.org/join) to find out more about membership and its many benefits.

## PAYMENT SUMMARY

I am not a member and would like to join the AHS:

- \$35 individual membership  
 \$50 dual membership

Amount of membership dues \$ \_\_\_\_\_

Donation for level of seed selection  
from right column:

- \$10    \$30    \$50

Amount of donation for seeds \$ \_\_\_\_\_

I would like to make an additional  
contribution to the AHS to support its  
important educational programs:

Amount of additional contribution \$ \_\_\_\_\_

**TOTAL PAYMENT** \$ \_\_\_\_\_

## PAYMENT INFORMATION

- Please charge the total payment amount above to my  
 VISA    MasterCard    AmEx    Discover
- Check enclosed (payable to AHS).

Card # \_\_\_\_\_

Exp. date \_\_\_\_\_

Signature \_\_\_\_\_

Name on credit card \_\_\_\_\_

*please print*

## SEED DONOR PRIORITY

- I donated seeds to the 2015 Seed Exchange and thus get first choice (**order due by 2/17/15**).

## SEED SELECTIONS AND CONTRIBUTIONS

Use seed number only, please.

- |           |  |
|-----------|--|
| 1. _____  | <b>COMPLIMENTARY</b><br>• FIVE packets of seeds.   |
| 2. _____  |  |
| 3. _____  |  |
| 4. _____  |  |
| 5. _____  |  |
| 6. _____  | <b>\$10 DONATION</b><br>• TEN packets of seeds.<br>• 2015 AHS Reciprocal Admissions Program brochure (guide to nearly 300 public gardens that offer free admission and other benefits to current AHS members). |
| 7. _____  |  |
| 8. _____  |  |
| 9. _____  |  |
| 10. _____ |  |
| 11. _____ | <b>\$30 DONATION</b><br>• FIFTEEN packets of seeds.<br>• 2015 AHS Reciprocal Admissions Program brochure.<br>• 12 wooden plant labels.   |
| 12. _____ |  |
| 13. _____ |  |
| 14. _____ |  |
| 15. _____ |  |
| 16. _____ | <b>\$50 DONATION</b><br>• TWENTY packets of seeds.<br>• 2015 AHS Reciprocal Admissions Program brochure.<br>• 12 wooden plant labels.<br>• Botanical Interests desk calendar.                                  |
| 17. _____ |  |
| 18. _____ |  |
| 19. _____ |  |
| 20. _____ |  |

## SUBSTITUTE SELECTIONS

In case any of the selections you listed above are sold out, please indicate secondary choices below.

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_  
5. \_\_\_\_\_

Do not substitute any of my selections.

Please send seed selections only. I do not wish to receive the eligible gift items for my order level.

**Return this form to:** Seed Exchange • American Horticultural Society • 7931 East Boulevard Drive • Alexandria, VA 22308-1300

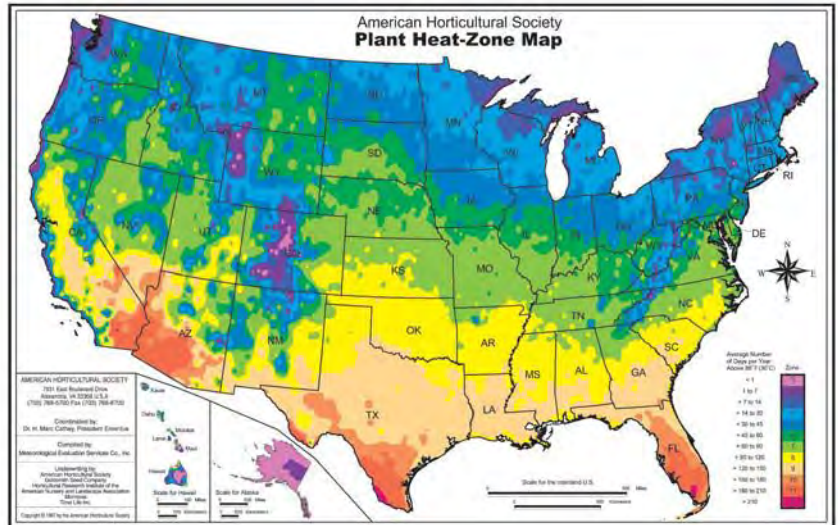
*Please allow 4 to 6 weeks for delivery. Order online at [www.ahs.org/seeds](http://www.ahs.org/seeds) for faster processing.*



# 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. USDA Zones listed are still aligned with the 1990 version of the USDA's map.

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 zones 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.



***Acer palmatum* var. *dissectum*** AY-ser pal-MAY-tum var. dih-SEK-tum  
(USDA Hardiness Zones 6–8, AHS Heat Zones 8–2)

***Astilbe chinensis*** uh-STIL-bee chy-NEN-sis (4–8, 8–2)

***Begonia* × *tuberhybrida*** beh-GOHN-yuh too-bur-HY-brih-duh  
(10–11, 12–1)

***Brassica oleracea*** BRASS-ih-kuh o-luh-RAY-see-uh (0–0, 8–1)

***Campsis* × *tagliabuana*** KAMP-siss tag-lee-ah-byew-AN-uh (5–9, 9–5)

***Carex elata*** KAIR-eks eh-LAY-tuh (5–9, 9–3)

***Cedrus atlantica*** SEED-rus at-LAN-tih-kuh (6–9, 9–6)

***Cercidiphyllum japonicum*** sur-sid-ih-FIL-lum jah-PON-ih-kum (4–8, 8–3)

***Cercis canadensis*** SUR-siss kan-uh-DEN-siss (4–9, 9–2)

***Clarkia amoena*** KLARK-ee-uh a-MEE-nuh (0–0, 9–1)

***C. botata*** C. BOT-ee (0–0, 7–1)

***C. rubicunda*** C. roo-bih-KUN-duh (0–0, 7–1)

***C. unguiculata*** C. un-gwik-yew-LAY-tuh (0–0, 9–1)

***Clematis recta*** KLEM-uh-tiss REK-tuh (3–9, 8–1)

***Collinsia heterophylla*** col-IN-see-uh het-ur-uh-FIL-luh (10–11, 12–9)

***Convallaria majalis*** kon-val-LAIR-ree-uh muh-JAY-lis (2–7, 7–1)

***C. majuscula*** C. muh-JUS-kew-luh (3–7, 7–1)

***Coreopsis verticillata*** kor-ee-OP-sis vur-tih-sih-LAY-tuh (4–9, 12–1)

***Delosperma dyeri*** del-o-SPER-muh DYE-ur-eye (6–9, 10–5)

***Echinocereus triglochidiatus*** eh-kee-no-SEER-ee-us try-glo-kih-dee-AY-tus  
(4–10, 12–3)

***Eschscholzia californica*** ess-SHOLZ-zee-uh kal-ih-FORN-ih-kuh  
(8–10, 10–1)

***Fagus sylvatica*** FAY-gus sil-VAT-ih-kuh (5–7, 7–5)

***Gaura lindheimeri*** GAW-ruh lind-HY-mur-eye (5–9, 9–6)

***Gilia capitata*** GIL-ee-uh kap-ih-TAY-tuh (0–0, 8–1)

***G. tricolor*** G. try-kul-ur (0–0, 8–1)

***Helianthus annuus*** hee-lee-AN-thus AN-yoo-us (0–0, 12–1)

***Hemizonia congesta* ssp. *luzulifolia*** hem-ih-ZO-nee-uh kon-JES-tuh ssp.  
loo-z-yoo-lih-FO-lee-uh (0–0, 7–1)

***Hibiscus sabdariffa*** hy-BISS-kus sab-duh-RIF-fuh (8–11, 11–1)

***H. syriacus*** H. sih-ree-AH-kus (5–9, 9–1)

***Ilex* × *meserveae*** EYE-leks meh-SER-vee-ee (5–9, 9–5)

***Jacaranda mimosifolia*** jak-uh-RAN-duh mih-mo-sih-FO-lee-uh  
(9–11, 12–10)

***Juniperus monosperma*** joo-NIP-er-iss mon-o-SPER-muh (6–8, 8–5)

***Larix decidua*** LAY-riks deh-SID-yew-uh (3–7, 7–1)

***Lavandula* × *allardii*** lah-VAN-dyew-luh al-LAR-dee-eye (8–10, 10–3)

***Layia platyglossa*** LAY-ee-uh plat-ee-GLOSS-uh (10, 10–9)

***Leptosiphon grandiflorus*** lep-toh-SY-fon gran-dih-FLOR-us (0–0, 7–1)

***Limnanthes alba*** lim-NAN-theez AL-buh (0–0, 8–1)

***L. douglasii*** L. dug-LASS-ee-eye (0–0, 9–1)

***L. douglasii* ssp. var. *sulphurea*** L. dug-LASS-ee-eye ssp. var.  
sul-FUHR-ee-uh (0–0, 8–1)

***Nemophila maculata*** nee-MOF-ih-luh mak-YEW-lay-tuh (0–0, 8–1)

***N. menziesii*** N. men-ZEES-ee-eye (0–0, 8–2)

***Phacelia campanularia*** fuh-SEEL-yuh kam-PAN-yew-LAIR-ee-uh  
(0–0, 9–1)

***P. tanacetifolia*** P. tan-uh-see-tih-FO-lee-uh (0–0, 9–1)

***Phlox drummondii*** FLOKS drum-MON-dee-eye (0–0, 12–1)

***Picea abies*** PY-see-uh AY-beez (3–8, 8–1)

***Pinus edulis*** PY-nus ed-YEW-liss (5–8, 8–5)

***Populus* × *acuminata*** POP-yew-lus ak-yew-min-AY-tuh (3–8, 8–3)

***P. deltoides*** P. del-TOY-deez (3–9, 9–1)

***Prunus* × *subhirtella*** PREW-nus sub-hir-TEL-uh (6–8, 8–6)

***Rubus fruticosus*** ROO-bus froo-tih-KO-sus (4–8, 8–4)

***Salix alba*** SAY-iks AL-buh (4–8, 8–4)

***S. babylonica*** S. bab-ih-LON-ih-kuh (6–9, 9–1)

***Solanum lycopersicum*** so-LAH-num ly-KO-PER-sih-kum (11, 12–1)

***Styrax japonicus*** STY-raks jah-PON-ih-kus (6–8, 8–6)

***Thuja occidentalis*** THEW-yuh ahk-sih-den-TAL-iss (3–7, 7–1)

***Ulmus glabra*** UHL-mus GLAB-ruh (3–9, 8–2)

***Vaccinium macrocarpon*** vak-SIN-ee-um mak-ro-KAR-pon (2–7, 7–1)

***Yucca rostrata*** YUK-uh ros-TRAY-tuh (5–11, 12–2)



## GARDEN MARKET

CLASSIFIED AD RATES: All classified advertising must be prepaid. \$2.75 per word; minimum \$66 per insertion. Copy and prepayment must be received by the 20th of the month three months prior to publication date. Display ad space is also available. To place an ad, call (703) 768-5700 ext. 120 or e-mail [advertising@ahs.org](mailto:advertising@ahs.org).

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# Hauntingly Fragrant Lily-of-the-Valley

by Margene Whitler Hucek

**R**ESearch HAS shown that the sense of smell can trigger memories of the past, and this is certainly true for me. Each spring, when I pick stems of lily-of-the-valley in my garden, I'm reminded of gathering bouquets of the flower as a child with my sisters, Janice and Nita, to give to our mother, who always took a moment from washing or baking to breathe in their sweet fragrance.

Lily-of-the-valley (*Convallaria majalis*, USDA Zones 2–7, AHS Zones 7–1) is a herbaceous perennial native to northern Europe. It produces clusters of small, white, nodding, bell-like flowers on four- to eight-inch stems in mid-spring. Plants typically grow six to eight inches tall, each featuring a pair of broad, bright green, pointed, upright leaves. Pollinated flowers form pealike green fruits that turn bright red in the fall. Plants spread quickly by specialized underground stems called rhizomes, which form bulblike structures called pips; each pip produces a new plant.

All parts of the plant are poisonous, which may explain why it's deer-resistant. In addition to its fragrant flowers, its merits include that it is easy to grow and forms an attractive, dense groundcover.

## A LITTLE VARIETY

A handful of lily-of-the-valley cultivars are worth seeking out. 'Fortin's Giant'



'Albostriata' lily-of-the-valley features white flowers and strikingly marked foliage.

reaches a foot tall and produces white blooms earlier than the species but with the same intense fragrance. 'Rosea' grows to eight inches high and has lavender-pink flowers. While lovely, it lacks the rich perfume of the white varieties. 'Bordeaux' grows six to eight inches tall, has large white flowers, and stems with reddish bases. 'Albostriata' grows six to nine inches tall and has green

leaves marked with many thin, vertical, cream-colored stripes.

## PLANTING AND CARE

Lily-of-the-valley grows best in a moist, humus-rich, slightly acidic, well-drained site. True to its woodland origins, it does not tolerate bright sun. Plant pips in mid-fall or very early spring in a spot with morning sun and afternoon shade. Space three to four inches apart and one-and-a-half inches deep with the pointed pips just below the surface. (Note: Lily-of-the-valley can become invasive where growing conditions are ideal, so monitor its spread. Plant it in a container or confine within a barrier, if necessary.)

Keep in mind that while a drift of lily-of-the-valley is elegant in the spring and early summer, by the end of July the leaves will start looking ragged as the plants transition toward fall dormancy. For that reason, you may want to plant it in a side garden where the yellowing leaves won't be as conspicuous as they continue manufacturing nutrients for next year's flowers.

If you notice your lily-of-the-valley patch starting to produce fewer flowers, it is time to divide the pips to give them more room to grow. Lift plants in late autumn with a spading fork. Separate the pips with a sharp knife and replant the sections.

Mulch with shredded leaves or well-rotted compost in the spring and the fall, and provide supplemental water during spring or summer droughts. Fungal diseases can sometimes afflict leaves that remain wet; reduce their incidence by applying supplemental water to the base of the plants only.

Pick lily-of-the-valley in the early morning or towards evening, when its fragrance is strongest. The simple flowers with their delicate scent will delight you, and, perhaps, over time, provide you with your own lily-of-the-valley memories.

*Margene Whitler Hucek is a garden writer based in Keswick, Virginia.*

## Sources

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[www.fieldstonegardens.com](http://www.fieldstonegardens.com).

**Klehm's Song Sparrow Farm and Nursery**, Avalon, WI. (800) 553-3715.

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## FOR NATIVE PLANT ENTHUSIASTS

Growing in the Appalachians and Piedmont of the Mid-Atlantic and Southeast, American lily-of-the-valley (*Convallaria majuscula*, Zones 2–7, 7–1) is similar to its better-known European counterpart, forming a groundcover and bearing fragrant white flowers in early summer. Although not widely available, it is now offered by a few mail-order nurseries.



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