

The American GARDENER®

The Magazine of the American Horticultural Society

January / February 2013

fashionable Currants

New Plants for 2013

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**Chelsea Flower Show
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contents

Volume 92, Number 1 · January / February 2013

FEATURES



14 NEW FOR 2013

BY MARY YEE

Our annual look at some of the new plants that will be available for home gardens this spring.

20 KELLY GRIFFIN

BY NAN STERMAN

If you've purchased a colorful succulent recently, it might well be one introduced by this prolific California-based hybridizer.



26 CHELSEA TURNS 100

BY MARTY WINGATE

The grand dame of flower shows, located in London, celebrates a century of showcasing gardening at its finest.

32 TRUE TO SEED

BY GRAHAM RICE

When growing plants from seed, it's important to understand that not all seeds produce plants that resemble their parents.

37 A NEW ERA FOR CURRANTS

BY JO ANN GARDNER

Attractive and tasty currants are gaining popularity in the edible landscape.

DEPARTMENTS

5 NOTES FROM RIVER FARM

6 MEMBERS' FORUM

8 NEWS FROM THE AHS

The American Horticultural Society celebrates 40th anniversary at River Farm, 2013 seed exchange catalog available for members, 2013 AHS Travel Study Program destinations, new AHS website launching soon, register your community for 2013 America in Bloom competition.

12 AHS MEMBERS MAKING A DIFFERENCE

Russell Studebaker.

42 HOMEGROWN HARVEST

Fresh figs can't be beat.

44 GARDEN SOLUTIONS

Success with seeds.

46 GARDENER'S NOTEBOOK

Downy mildew epidemic strikes impatiens in 2012, renewable energy facilities may threaten native plants, western wildfire recovery slowed by seed shortages, why plant-eating insects are important, new fern genus named for pop star, Lady Bird Johnson featured on postage stamp, Jeffrey Downing is new director for Mt. Cuba Center, High Country Gardens closes.

Green Garage: Tools for winter gardening.

52 BOOK REVIEWS

Beautiful No-Mow Yards, Lawn Gone! and *Why Grow That When You Can Grow This?*

Special focus: Garden biographies and memoirs.

54 REGIONAL HAPPENINGS

57 2013 SEED EXCHANGE LIST

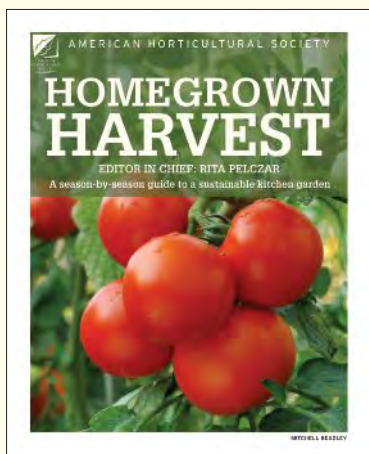
61 HARDINESS AND HEAT ZONES AND PRONUNCIATIONS

62 PLANT IN THE SPOTLIGHT

Flannel bush.

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Horticultural Society

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NOTES FROM RIVER FARM

TWO YEARS AGO in this column, we shared the news of a critical need to make a significant investment in upgrading the aging utility infrastructure at the American Horticultural Society's River Farm headquarters in Alexandria, Virginia, with our "By the Foot" campaign. Today, as you sit down with this issue of *The American Gardener*, we are pleased to report that the construction phase of this important work is underway and will soon be completed.

Bringing this project to fruition has been a long, involved process because we needed to navigate the intricacies of working with a property that is both unique and in an environmentally sensitive setting. In addition to the many AHS members who have generously contributed to the effort, we have been blessed with many supporters from the local community who have stepped forward in many ways to help us get where we needed to go. But we are not there yet. In order to accomplish the project efficiently, it has been necessary to secure financing. As a result, we will have interest and principal costs as part of the AHS's annual expenses. Retiring this mortgage as soon as possible will permit us to remain focused on the programs that carry out our mission. In addition, we, like many non-profit organizations, generally experienced a "down" year in 2012. We need your support in 2013 more than ever.

Coincidentally, this year marks the 40th anniversary of our acquisition of River Farm, so it is only fitting that we mark this milestone with a major investment in the Society's continued stewardship of the property. We are proud of the role we have played in preserving and protecting this regional and national treasure. Little known are the commitments that the AHS has made to the long-term protection of the open space that is so much a part of River Farm's character. Recognizing the importance of this, our predecessors in leadership of the Society took the step of entering into agreements with two like-minded organizations—the Virginia Outdoors Foundation and the National Park Service—to ensure that the scenic and natural beauty of the property would be enjoyed for generations to come. River Farm was one of the earliest properties subject to consideration by the Virginia Outdoors Foundation. Today, the Foundation is Virginia's leader in land conservation, protecting roughly 650,000 acres throughout the state.

As our River Farm construction project moves into its final phase this winter, we anticipate some disruptions within the public gardens and grounds. As a result, we will be closing the property to the public for the season, with an expected reopening in April. But, be assured, our offices will remain open and our member services and programs will not be affected. We look forward to opening a new chapter in the property's history when this important work is complete this spring.

For now, as you continue turning the pages of this issue of *The American Gardener*, you'll find our annual roundup of exciting new plants for 2013, meet Kelly Griffin from southern California who is helping fuel the current succulent craze, and get an intimate look at the United Kingdom's famed Chelsea Flower Show, celebrating its centennial this year. And be sure not to miss our article about which plants come true from seed—we hope it will inspire you to participate in the AHS's annual members-only seed exchange, which includes more than 180 different annuals, perennials, vegetables, and more to choose from! You'll find the list and order form on pages 57 through 59.

We hope your New Year's resolutions include more time enjoying the garden!

Harry Risetto, Chair, AHS Board of Directors
Tom Underwood, Executive Director

The American GARDENER

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

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MEMBERS' FORUM

JENSEN GARDEN RESTORATION

I was delighted to read of the Sloans' restoration of the Jens Jensen garden ("Restoration of a Jensen Garden," November/December 2012). It does not surprise me that Mark Zelonis was aware of the significance of the property, and I'm pleased to see the Sloan family chose to restore it.

As an aside, the photograph on page 23, captioned "fragrant sumacs (*Rhus aromatica*)," appears to be misidentified. It looks to me like smooth sumac (*Rhus glabra*), which has compound leaves.

*Paul Koloszar
Monroe, Ohio*

In your November/December issue, the sumac pictured on page 23 looks like staghorn or smooth sumac. Fragrant sumac has smaller leaves and is a terrific shrub with small yellow flowers in the spring followed by attractive foliage that turns color nicely in the fall. It's also deer resistant, bird friendly, and drought tolerant. A complete winner in my garden.

*Tim Purtell
Shelter Island, New York*

I enjoyed your articles on the Jensen Garden and the Montrose Garden. However, my husband spotted an incorrectly captioned photo on page 23. It is *Rhus glabra*, not *Rhus aromatica*. It makes me wonder which one was in the original design.

*Eva Pratt
Inman, South Carolina*

I thoroughly enjoyed reading the article on the restoration of the Jensen-designed garden. How wonderful and inspiring that the new owners hired someone knowledgeable to restore and improve the gardens. Thanks for creating a magazine containing informative articles covering a broad range of topics with outstanding photographs.

*Lucinda Reynolds
Mountain Home, Arkansas*



Editor's note: Paul, Tim, Lucinda, and Eva's husband were just a few of the sharp-eyed readers who spotted the misidentified sumac on page 23. The photograph (above) shows smooth sumac (*Rhus glabra*), but the plants listed in Jensen's original plan for the property were fragrant sumac (*Rhus aromatica*).

CORRECTING AN OAK'S RANGE

In your article "Solutions for Soggy Sites" (November/December 2012), the native range of one of my favorite oak species was misstated. Swamp white oak (*Quercus bicolor*) is native from Maine west to Minnesota and Missouri, where I have observed it growing. It barely makes it into the Southeast, although there are isolated populations in North Carolina and Tennessee.

*Michael A. Dirr
Bogart, Georgia*

BEST READS

Editor's note: We asked readers to tell us which of the articles in the November/December issue was their favorite and here are two of the responses:

My favorite article was the one on Nancy Goodwin. I love reading about gardeners

and their gardens, and coincidentally, just finished reading a piece written by Nancy that was included in an anthology called *The Roots of My Obsession*, edited by Thomas C. Cooper from Timber Press (2012).

Like Nancy, I, too, garden in deer country, and it is quite a challenge. I haven't been able to install fencing but I have learned about plants that I can grow and how to protect those things that are borderline tasty to deer. I love the garden I have been able to create over the past 10 years.

I also enjoyed the article "Enchanting Witch Hazels."

*Mary Hoblit
Garden Valley, California*

It's difficult for me to pick a favorite article because the November/December issue included so many interesting ones. Having lived in the Midwest, I appreciated the article about the restoration of a Jensen garden.

Earlier in my life, when I lived in the East, I became enamored of witch hazel, and featured it on my first Christmas card in 1955.

Learning more about Nancy Goodwin was delightful also. This issue is definitely "a keeper."

*Maya Manny
San Rafael, California*

CORRECTION

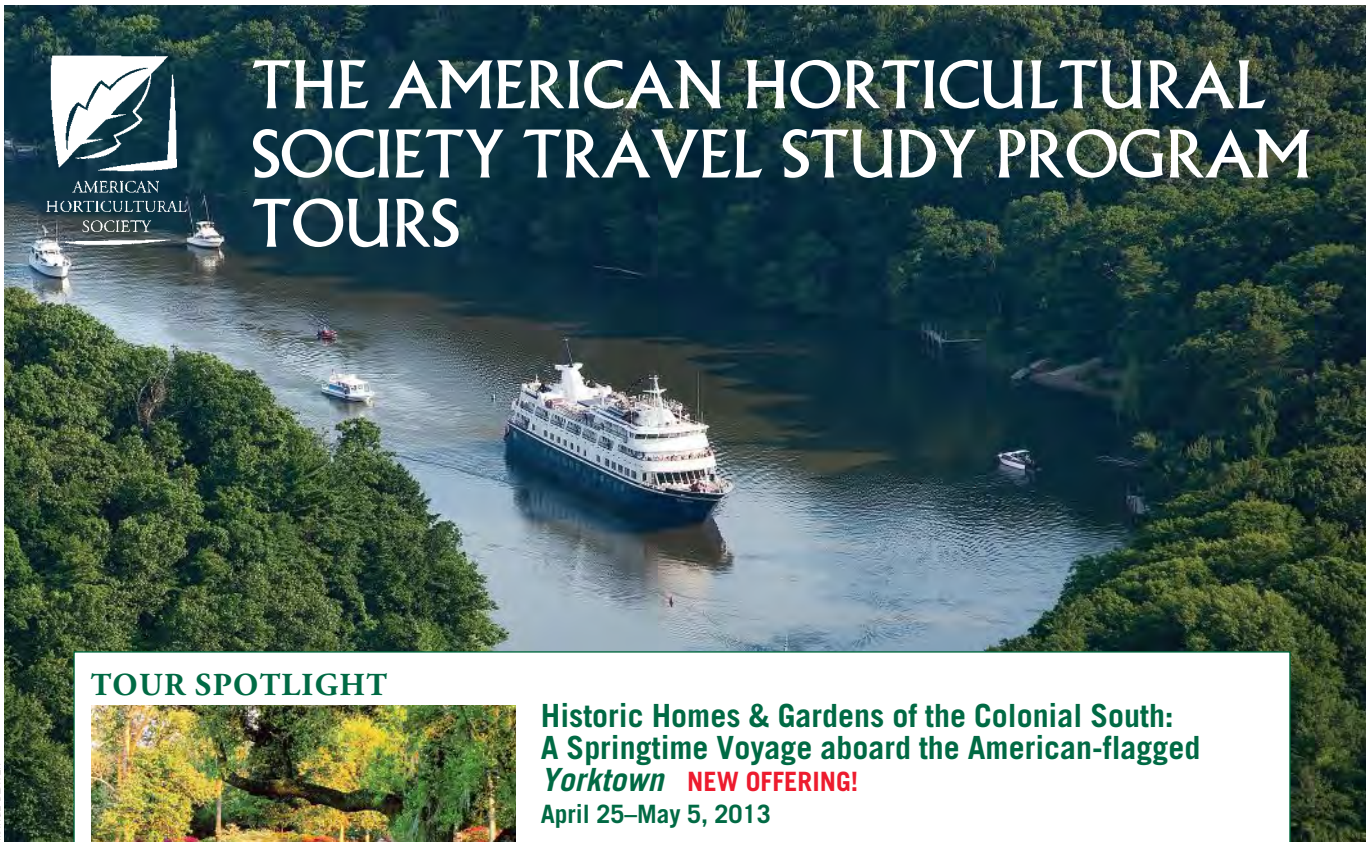
In an article in the "News from AHS" section in the November/December 2012 issue, the name of SAP NS2, a Washington, D.C.-area company whose employees volunteered at River Farm last fall, was rendered incorrectly. The company also was not credited for the \$500 they donated toward purchase of supplies for the volunteer projects. We apologize for the errors. 🍂

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



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~ 2013–2014 Travel Destinations ~

Historic Homes & Gardens of the Colonial South

April 2013

Gardens of the Northern Italian Lakes

June 2013

Gardens of Southern Spain

October 2013

**Gardens, Wine, and Wilderness:
A Tour of New Zealand**

January 2014

Gardens of Normandy

September 2014

Participation in the Travel Study Program benefits the work of the American Horticultural Society and furthers our vision of "Making America a Nation of Gardeners, A Land of Gardens."

**For more information about the AHS Travel Study Program or to be added to our mailing list, please contact Joanne Sawczuk:
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E-NEWSLETTER To sign up for our monthly e-newsletter, visit <http://americanhort.ahs.org/email>.

INTERNSHIP PROGRAM The AHS offers internships in communications, horticulture, and youth programs. For information, send an e-mail to education@ahs.org. Information and application forms can also be found in the River Farm area of www.ahs.org.

NATIONAL CHILDREN & YOUTH GARDEN SYMPOSIUM For information about the Society's annual National Children & Youth Garden Symposium, e-mail education@ahs.org or visit the Youth Gardening section of www.ahs.org.

RECIPROCAL ADMISSIONS PROGRAM The AHS Reciprocal Admissions Program offers members free admission and other discounts to nearly 300 botanical gardens and other horticultural destinations throughout North America. A list of participating gardens can be found in the Membership area of www.ahs.org. For more information, call (800) 777-7931 ext. 119.

RIVER FARM The AHS headquarters at River Farm is open 9 a.m. to 5 p.m. weekdays year-round (except Federal holidays), and 9 a.m. to 1 p.m. Saturdays from April through September. For information about events, rentals, and directions, visit the River Farm section of www.ahs.org.

TRAVEL STUDY PROGRAM Visit spectacular private and public gardens around the world through the Society's acclaimed Travel Study Program. For information about upcoming trips, call (703) 768-5700 ext. 132, send an e-mail to jsawczuk@ahs.org, or visit the Travel Study section of www.ahs.org.

WEBSITE: www.ahs.org The AHS website is a valuable source of information about the Society's programs and activities. Starting February 2013, users must set up a username and password to access the member's-only sections.

News from the AHS

January / February 2013

PROGRAMS • EVENTS • ANNOUNCEMENTS



Enid Haupt, right center, and First Lady Patricia Nixon, left center, at River Farm's opening ceremony in 1974. The event was attended by press from across the country.

40 YEARS AT RIVER FARM

THIS YEAR, the American Horticultural Society (AHS) will celebrate the 40th anniversary of the Society's presence at its River Farm headquarters in Alexandria, Virginia. The AHS was founded in 1922, but it was headquartered at a series of different office locations around the country—primarily in the Washington, D.C., area—until 1973. That year, thanks to a generous donation from the Enid A. Haupt Charitable Trust, the AHS was able to acquire its permanent River Farm headquarters.

The historic, 25-acre property required a number of renovations to convert the estate house into working offices, so it wasn't until 1974 that its gardens and grounds officially opened to the public. Since then, River Farm has evolved into a beloved community green space featuring display gardens, exhibits highlighting environmental stewardship, a four-acre meadow, and scenic views of the Potomac River. For a more detailed account of the history of the River Farm property, see the article in the January/February 2011 issue of this magazine.

NEW AHS WEBSITE TO LAUNCH IN FEBRUARY

THIS FEBRUARY, the AHS is planning to launch its redesigned website. In addition to having an updated look and streamlined navigation, the site will offer a number of new features. One of these is that AHS members will now be able to set up their own username and password to log in to the members-only area of the website. This will allow AHS members to have a more customized experience on the AHS website, with options to select different electronic newsletters, renew membership, and register for various events.

As of February, the generic username "garden" and the password "2012ahs" will no longer work. If you haven't already done so, please go to <https://americanhort.ahs.org> at any time to set up your personal username and password.

2013 SEED EXCHANGE CATALOG AVAILABLE

THANKS TO seed donations from companies, seed saver groups, and members from all over the country, the 2013 AHS members-only Seed Exchange includes more than 180 different seed varieties to choose from, including ornamentals, herbs, and vegetables. This is an opportunity to try unique or rare seeds, or enjoy old favorites again.



Conover Family butter bean

One particular seed of note on offer this year is the Conover Family butter bean, donated by **Bill Best** from the **Sustainable Mountain Agriculture Center** in Berea, Kentucky. According to Best, this bean traces back to the end of the Civil War when a soldier named Conover collected some butter bean seeds on his trek home from Kentucky to New Orleans. These flavorful beans, a type of lima bean with smaller seeds, come in decorative and colorful patterns.

The list of seeds available this year and an order form are on pages 57 to 59 of this issue. View the full catalog on the AHS website at www.ahs.org, or you may send a request to seeds@ahs.org to receive the catalog by e-mail. The Seed Exchange is a benefit of AHS membership, so only current members may order from the catalog. Those who donated seeds receive priority on orders submitted by February 15. The deadline to submit all orders is March 15.

UPCOMING TRAVEL STUDY PROGRAM DESTINATIONS

THREE EXCITING TRIPS are planned for the AHS's 2013 Travel Study Program. The year starts off with a cruise to see "Historic Homes & Gardens of the Colonial South," from April 25 to May 5. Sailing from Savannah, Georgia, to Richmond, Virginia, the voyage will make several stops along the way to explore the region's most spectacular plantations, mansions, and gardens in high spring. The AHS's Executive Director **Tom Underwood** and his wife **Jane** will serve as the tour hosts.



The AHS "Gardens of the Northern Italian Lakes" tour in June will include villa gardens like this one on Lake Garda.

The Gardener's Calendar 2013



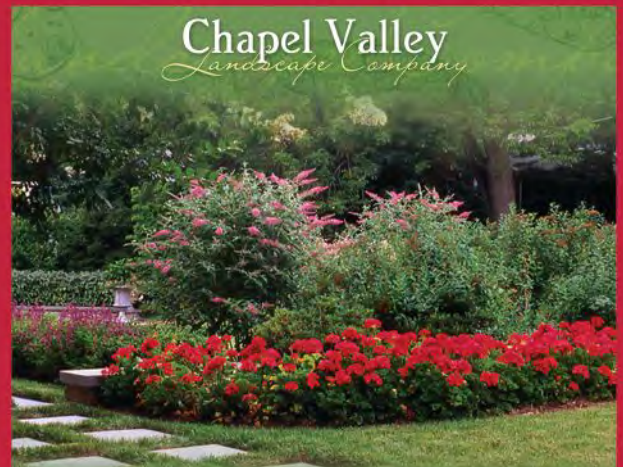
2013 "Gardener's" Calendar

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 the benefits of a worthwhile organization. For more information about TGOA/MGCA or to order calendars for \$3.95 postpaid, please call or e-mail:

The Gardeners of America/ Men's Garden Clubs of America

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Next will be a summer visit to the “Gardens of the Northern Italian Lakes,” from June 11 to 21. This tour around lakes Maggiore, Orta, Garda, and Como will feature both public and private gardens that exemplify the best in design and variety of plants. AHS President Emeritus **Katy Moss Warner**, an experienced traveler with a wealth of knowledge on garden history and culture, will serve as tour host.

Finally, enjoy a fall adventure to the “Gardens of Southern Spain” from October 21 to November 1. A similar trip offered last year was such a success that this destination is being offered again. Look for more details about this year’s itinerary in upcoming issues of this magazine.

Each of these tours have been designed with the most discerning garden traveler in mind, offering the chance to experience exceptional private and public landscapes as well as soak in local culture and history. For more information, contact **Joanne Sawczuk** at (800) 777-7931 ext. 132 or jsawczuk@ahs.org.



The AHS’s annual garden market is held each April at River Farm, when the property is at its peak of spring beauty.

AHS SPRING GARDEN MARKET

WINTER MAY still be keeping your garden in hibernation, but it’s not too early to mark your calendar for the AHS’s annual Spring Garden Market, held at the Society’s River Farm headquarters in Alexandria, Virginia. From April 18 to 20, vendors from across the mid-Atlantic region will be offering a wide variety of annuals, perennials, native wildflowers, vegetables and other edibles, and more. Garden-related products such as books, handmade jewelry, and outdoor accessories will also be available. AHS members are invited to attend the members-only preview sale on April 18, before the sale opens to the general public on April 19 and 20. For more information, please call (703) 768-5700 or visit www.ahs.org.

Gifts of Note

In addition to vital support through membership dues, the American Horticultural Society relies on grants, bequests, and other gifts to support its programs. We would like to thank the following donors for gifts received between November 1, 2012, and December 31, 2012.

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If you would like to support the American Horticultural Society as part of your estate planning, as a tribute to a loved one, or as part of your annual charitable giving plan, please contact Scott Lyons at slyons@ahs.org or call (703) 768-5700 ext. 127.

COLONIAL WILLIAMSBURG GARDEN SYMPOSIUM

THE 67th Colonial Williamsburg Garden Symposium will take place this year from April 13–15 in Williamsburg, Virginia. With the theme, “More Than a Garden: Creative Ideas to Enhance Your Life,” this year’s event will focus on teaching home gardeners how to design practical spaces for growing flowers, vegetables, fruits, and herbs that are alluring to the senses, yet low-maintenance. Among the well-known gardening personalities and experts speaking this year are **David Culp, P. Allen Smith, Kerry Mendez, Evelyn J. Hadden, and Tara Dillard.**

Because the Society is a sponsor of the symposium, AHS members are eligible for discounted rates on registration. For more information please visit www.history.org/conted or call (800) 603-0948.

AMERICA IN BLOOM 2013 COMPETITION

EACH YEAR, America in Bloom (AIB) invites the nation's cities and towns to compete against one another for the best public garden displays and green spaces based on criteria such as heritage preservation,



Colorful hanging baskets and window boxes are part of the beautification efforts in the town of McCall, Idaho, a winner in last year's AIB contest.

vation, floral displays, environmental efforts, and more. As a horticultural partner with the AIB, the AHS sponsors the Community Involvement Award for exemplary cooperation and service. The deadline to enter the 2013 contest is February 28, 2013. For more details, visit www.americainbloom.org or call (614) 487-1117. 🍀

News written by Editorial Intern Neel Patel and Associate Editor Viveka Neveln.



AMERICAN
HORTICULTURAL
SOCIETY

AHS 2013 NATIONAL EVENTS CALENDAR

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

APRIL 3–7. **AHS President's Council Trip.** Charleston, South Carolina.

APRIL 12–14. **Great Gardens and Landscaping Symposium.** Manchester, Vermont.

APRIL 14 & 15. **Colonial Williamsburg Garden Symposium.** Williamsburg, Virginia.

APRIL 18–20. **Spring Garden Market.** (18th is AHS members-only preview sale.) River Farm, Alexandria, Virginia.

APRIL 20–27. **Historic Garden Week in Virginia.**

APRIL 25–MAY 5. **Historic Homes & Gardens of the Colonial South.** AHS Travel Study Tour.

JUNE 6. **Great American Gardeners Awards Ceremony and Banquet.** River Farm, Alexandria, Virginia.

JUNE 11–21. **Gardens of the Northern Italian Lakes.** AHS Travel Study Tour.

JUNE 27–29. **The Gardeners of America/Men's Garden Clubs of America Annual Convention.** Springfield, Illinois.

JULY 11–13. **National Children & Youth Garden Symposium.** Denver, Colorado.

Colonial Williamsburg® 67th Garden Symposium

*More Than a Garden:
Creative Ideas To
Enhance Your Life
April 13-15, 2013*

Guest speakers
include:

P. Allen Smith
Kerry Mendez
David Culp
Tara Dillard



Contact 1-800-603-0948 or visit history.org/conted

AHS MEMBERS MAKING A DIFFERENCE: Russell Studebaker

by Neel Patel

EVEN AT A young age, Russell Studebaker was eager to get his hands dirty. “I’ve always wanted to be involved with activities that concerned different aspects of nature,” he says. Born and raised in the small Texas panhandle town of Pampa, Studebaker credits his life-long interest in horticulture to his family tree.

A FARMING HERITAGE

“I come from a long line of farmers on both sides of my family,” he says. Both grandfathers farmed in Oklahoma, “and my adorable grandmother always had a large vegetable garden,” he says.



Russell Studebaker

Not surprisingly, Studebaker majored in horticulture at Texas Tech University in Lubbock, graduating in 1961. He became a Peace Corps volunteer the following year. He was assigned to work with farmers in a rural village in El Salvador, introducing them to new cultivars of pineapples and grafted tropical fruit trees. “We promoted home vegetable gardens, composting, soil conservation, contour terracing of crops, and worked with 4-H clubs.”

PRESERVING OKLAHOMA HISTORY

After leaving the Peace Corps in 1964, Studebaker moved to Tulsa, Oklahoma, and became a senior horticulturist for the Tulsa Parks and Recreation Department. One of his most memorable projects was working with the Tulsa Garden Club in Woodward Park, where he oversaw the design and planting of an azalea garden of 15,000 plants. This garden “not only stabilized the eroded banks there,” he says, “but also embellished the park’s beauty.”

In 1972, the Parks and Recreation Department received a donation of land

that included the Creek Council Tree. This enormous post oak (*Quercus stellata*) marks the location where Creek Indian Tribal Elders started their first council fire in 1836 after being forced to leave their ancestral home in Alabama. Studebaker and other horticultural employees transformed the land into the Creek Nation Council Oak Park, incorporating numerous plants that were significant to Creek traditions.

GARDENING AND WRITING

While he was at the Parks and Recreation

Department, Studebaker began writing a garden column for the *Tulsa World* newspaper. Three decades later, the column is still going strong. He also has written for the *Oklahoma Gardener* magazine since its inception in 2003. In addition to penning articles for many other publications, he co-authored two gardening books on roses and perennials. Studebaker has received several awards for his work, including the Garden Writer’s Association’s Golden Globe Writing Award in 2002.

ever with garden-writing projects. He also hopes to write a couple more books, one in particular about a Salvadoran boy “who was my shadow in the village during my time in the Peace Corps. He has had some remarkable life experiences, from arriving solo in the U.S. as a pre-teenager, to his work here, to becoming a U.S. citizen. Now he’s a very successful land developer in North Carolina.”

Studebaker is also enjoying more time in his own garden, where he feels “challenged to grow things that I never seemed



While working with Tulsa Parks, Studebaker helped create the Creek Nation Council Oak Park.

to have time for when working.” In 2001, he became a member of the American Horticultural Society, and finds *The American Gardener* a valuable source of information. “I like the balance of the types of articles, especially ones about native environments and plants that other magazines don’t seem to have.”

Thanks to Studebaker’s dedication to sharing his enthusiasm for gardening, the world is certainly a greener place. 🌿

Although Studebaker retired from his Tulsa Parks job in 1996, he is still busy as

Neel Patel is an editorial intern for The American Gardener.



Legacies assume many forms



Whether making estate plans, considering year-end giving, honoring a loved one or planting a tree, the legacies of tomorrow are created today.

Please remember the American Horticultural Society when making your estate and charitable giving plans. Together we can leave a legacy of a greener, healthier, more beautiful America.



For more information on including the AHS in your estate planning and charitable giving, or to make a gift to honor or remember a loved one, please contact Scott Lyons at slyons@ahs.org or call (703) 768-5700 ext. 127.

Making America a Nation of Gardeners, a Land of Gardens

New for 2013

BY MARY YEE

ANOTHER GARDENING season will soon be here, so it's time to see what new plants will be competing for our attention come spring. Horticulturists, garden writers, and landscape designers are often encouraged by seed and plant companies to give new introductions a test run before the plants hit the retail market, so we asked a number of these professionals for their feedback on the plants that stood out in their gardens last season. Among the experts we consulted are: **Mark Dwyer**, director of horticulture at Rotary Botanical Gardens in Janesville, Wisconsin; **Bob Hill**, a nurseryowner and garden writer in Jeffersonville, Indiana; **Patricia A. Taylor**, a garden writer in Princeton, New Jersey; **Heather Will-Browne**, horticulturist with the Walt Disney Company in Orlando, Florida; **Robert Bowden**, director of Leu Gardens in Orlando, Florida; **Allen Owings**, professor of horticulture at Louisiana State University's AgCenter-Hammond Research Station; **Paul Lee Cannon**, a garden writer from Oakland, California; **Phyllis Gricus**, a landscape designer in Pittsburgh, Pennsylvania; **Marcia Tatroe**, a garden writer in Centennial, Colorado; and **Mary-Kate Mackey**, a garden writer in Portland, Oregon. We've included some of their recommendations here, along with other new introductions that caught our eyes and are worth trying in the garden come spring.

A few plants that performed especially well for our experts include *Heuchera* 'Paprika', *Echinacea* 'Cheyenne Spirit' (this page), Superbells® Lemon Slice hybrid calibrachoa, and Santa Cruz™ Sunset begonia (page 16). Peach Sorbet blueberry got rave reviews as both an ornamental and edible (page 17). And 'Lilac Chip' butterfly bush was lauded by several gardeners for its compact size and floriferousness (page 18).

Look for these and many other new plants this coming spring to give your garden a fresh look for 2013.

Mary Yee is managing editor and art director of *The American Gardener*.

PERENNIALS



TERRA NOVA NURSERIES

Heat-tolerant *Heuchera* 'Paprika' is "destined to become one of the most popular 'orange' coral bells," says Mark Dwyer. Bob Hill notes that the "almost startling orange-peach color of the leaves held up well in the summer heat, even in areas with a little more sun." Plants grow about eight inches tall and spread about 16 inches. Stalks of small white flowers are borne in early summer. Plants do best in part shade, except in the Pacific Northwest. Mary-Kate Mackey, who lives in Oregon, says, "I grew this glowing orange mound of large leaves in full sun, paired with peach-colored roses." USDA Hardiness Zones 4–9, AHS Heat Zones 9–1. Terra Nova Nurseries.



KIEFT SEED

An All-America Selections winner for 2013, *Echinacea* 'Cheyenne Spirit' is a seed-propagated coneflower in a mixture of colors from purple, red, and yellow to cream and white. Allen Owings says 'Cheyenne Spirit' was among "the top 10 new plant performers in the 2012 LSU AgCenter flowering plant trials." Plants grow 18 to 30 inches tall and spread 10 to 20 inches wide. Like other coneflowers, this one tolerates drought. Mark Dwyer adds that it's "perfect for the sunny border or butterfly garden." Zones 3–9, 9–1. Kieft Seed.



Pennisetum setaceum 'Cherry Sparkler' is the latest in the Celebration Series of fountain grass that includes 'Fireworks' and 'Sky Rocket'. It is perennial in warm regions but is often grown as an annual. Plants grow two to three feet tall and bear red flower plumes in late summer. At the Rotary Garden last summer, "this mid-height grass was a nice centerpiece in a container and is equally impressive *en masse*," says Mark Dwyer. "The leaves' subtle pink tones over cream variegation are quite striking when combined with other pastel colors." Zones 9–11, 12–4. ItSaul Plants.



Dark purple-flowered *Salvia* 'Amistad' weathers heat and drought with aplomb. Allen Owings says, "This hybrid salvia excelled in the LSU AgCenter trials. It had an excellent habit and constant blooms from spring till the first killing frost." Plants grow three to four feet tall and spread three feet wide. Zones 9–11, 12–7. Sunset Western Garden Collection.



If your garden is partly shaded and moist, try 'Bottle Rocket' bigleaf ligularia (*Ligularia dentata*), a compact plant with bold, toothed, leathery leaves and showy yellow summer flowers. This selection grows 28 to 34 inches tall and forms dense mounds. Zones 4–8, 8–1. Walters Gardens, Proven Winners, and Monrovia.



Blooms of Bressingham's *Leucanthemum* \times *superbum* 'Freak!' is a double, white daisy with tow-headed charm. Long-lasting two- to two-and-a-half-inch summer flowers top 13-inch-tall plants. Zones 4–8, 8–1.



SUNSPARKLER® *Sedum* 'Blue Pearl' from Great Garden Plants promises sturdy leaves with intense, non-fading color. Plants grow about 20 inches tall and produce pink summer-to-fall flowers. Zones 4–9, 9–4.

Additional new perennials:

- **Scentsational lavender** (*Lavandula* \times *intermedia* 'Phenomenal') retains its full appearance all season, unlike other lavenders. Mary-Kate Mackey lauds it for "not dropping its bottom foliage, even during the Pacific Northwest's hard autumn rains." Plants grow 24 to 32 inches tall and 24 inches wide. Zones 5–8, 8–5. Florigem/VIVA.
- **Geranium 'Azure Rush'** bears large, pale blue, fragrant flowers from summer to fall on compact 18- to 20-inch groundcovering plants. Zones 5–8, 8–5. Blooms of Bressingham.

ANNUALS



PROVEN WINNERS

'Senorita Blanca' spiderflower (*Cleome* hybrid) "is one of our favorite flowers in our trials," says Robert Bowden. "It has many of the traits we have been looking for in a cleome: thornless, odorless foliage and extreme drought resistance. Our plants reached a height of 30 inches with polar white flowers." 'Senorita Blanca' "wins the No-Fuss-Fabulous-Show award in my garden," says Mary-Kate Mackey. "Covered in pale pink flowers in the cool Northwest, this three-foot-tall beauty bloomed from planting until I removed it during winter cleanup—still putting out blossoms. I wouldn't be without it." Proven Winners.



BURPEE

Doubleclick Bicolor Pink cosmos "was one of the most asked-about varieties at our garden," says Mark Dwyer. This is a new color in a series of fully double-flowered cosmos. Robert Bowden says, "The flowers held up all summer long (with deadheading) in full sun on 30-inch plants. This is the most unique cosmos we've seen in the last 10 years. We also used it in the vegetable garden to promote visitation by various pollinators." Burpee and Thompson & Morgan.



PROVEN WINNERS

Superbells® Lemon Slice hybrid calibrachoa from Proven Winners gets Allen Owings's approval. "Calibrachoa do not like the heat and humidity of south Louisiana," he says, "but this new variety held up well with terrific spring bloom and nice fall bloom." Heather Will-Browne "loved the bright yellow star pattern. Even in our warmer temperatures the pattern was very stable." Plants trail to 24 inches and are especially suited for containers.



BENARY

In Colorado, Marcia Tatroe says **Santa Cruz™ Sunset begonia** (*Begonia boliviensis*) "can take full sun in a region notorious for powerful sunlight, and doesn't wilt at the first hint of drought. It shone in last year's record-breaking heat that killed most of my petunias." Plants grow 12 to 16 inches tall and bear red-orange, bell-shaped flowers. Mark Dwyer says plants were "solid blooms from June until frost and were most impressive in hanging baskets." Benary.

Additional new annuals:

- **Serenita™ Lavender Pink angelonia** (*Angelonia angustifolia*) "was certainly one of the lowest maintenance annuals we've grown at the gardens," says Mark Dwyer. "The deep-rose flower spires never lost impact all summer." This selection tolerates heat and humidity. Plants grow 10 to 14 inches tall. PanAmerican Seed/Ball Horticultural Company.
- **Cool Wave pansies** have a true groundcovering habit, grow only six to eight inches tall, and come in a mixture of colors. Heather Will-Browne says, "We were impressed by their heat tolerance, and the blooms' size is nice." PanAmerican Seed/Ball Horticultural Company.
- **BabyWing® white bronze leaf begonia** "did well spring through fall in full sun in the LSU AgCenter landscape trial plantings" says Allen Owings. Heather Will-Browne adds, "Vigorous plants filled the beds. The dark foliage was a nice contrast against the white blooms." Plants grow in upright mounds 12 to 15 inches tall. PanAmerican Seed/Ball Horticultural Company.
- **Blue My Mind™ dwarf morning glory** (*Evolvulus* hybrid) combines a profusion of true blue flowers with silvery-green foliage. Marcia Tatroe says, "Dwarf blue morning glory is one of the best underused annuals for a short-season, hot-summer climate like we experience on the High Plains. Though this plant does survive light frost, covering it prevents damage to flower buds. Mine stayed in bloom through Halloween and survived until temperatures fell into the teens." Plants have a mounding-trailing habit to about two feet, making them ideal for container or hanging basket culture. Proven Winners.

EDIBLES



JOHNNY'S SELECTED SEEDS

'Jasper' cherry tomato "was extremely high-yielding despite challenging weather conditions," reports Mark Dwyer. An All-America Selections winner for 2013, this variety resists early and late blight. Johnny's Selected Seeds.



BURPEE

Broccoli is a cool-weather crop that stops growing as the temperature rises, but a new hybrid called **'Sun King'** tolerates heat, producing blue-green heads six to eight inches across throughout the growing season. Burpee.



THOMPSON & MORGAN

'Tenderstar' hybrid bean combines the best of runner and French beans. Its ornamental pink-and-red flowers yield stringless, meaty pods about seven inches long that can be harvested in mid- to late summer. Thompson & Morgan and Park Seed.



MONROVIA

Patricia A. Taylor says **Peach Sorbet Brazelberries™ blueberry** (*Vaccinium corymbosum* Peach Sorbet™) "is a winner. In November, it is still holding some of its gorgeous, warm red leaves. I highly recommend this as a foliage shrub—perfect for small gardens such as mine—and blueberries would only be a bonus." Mary-Kate Mackey also recommends it: "The new leaf growth appears peachy orange and morphs to emerald green. In spring, white flowers produce summer blueberries, followed by autumn purple foliage. Food and beauty combine brilliantly in one compact plant." Plants, which grow about two feet high and wide, remain evergreen in most regions. Zones 4–8, 8–3. Fall Creek Farm & Nursery and Monrovia.

Additional new edibles:

- **Tasti-Lee® tomato** performed well for Robert Bowden, who explains, "It was developed by the University of Florida after a decade of breeding and has very good disease resistance." Fruits "stay firm and have the sought-after old-fashioned tomato taste." BeJo Seeds.
- **'Patio Snacker' cucumber** is a short-vining variety that Mark Dwyer says "was perfect for the medium container or small trellis where it was easy to access a productive crop." PanAmerican Seed.
- **'Sweet Charlie' strawberry** is bred to produce fruit in humid, warm-weather regions. Burpee.
- **Raspberry Shortcake™ dwarf thornless raspberry** (*Rubus idaeus*) grows two to three feet tall and does not need a companion pollinator to set fruit. Sweet red berries are borne on new canes in midsummer. Zones 5–9, 9–5. Fall Creek Farm & Nursery and Monrovia.
- **'Winter Sweet' squash** bears gray-skinned fruits that weigh four to five pounds and store well, with good black-rot resistance and sweet, flaky flesh. Johnny's Selected Seeds.

TREES, SHRUBS & VINES



PROVEN WINNERS

Lo & Behold® 'Lilac Chip' butterfly bush (*Buddleia* hybrid) is seedless, so it is non-invasive. Marcia Tatroe says, "Buddleias are one of the few woody plants that bloom reliably in summer here when things are toasty. 'Lilac Chip' has frosty lavender flowers and is a good fit for small gardens." Shrubs grow 18 to 24 inches high; the fragrant flowers bloom continuously or repeat during the growing season. Zones 5–9, 9–1. Spring Meadow/Proven Winners.



DAVID AUSTIN ROSES

'Fighting Temeraire' rose (*Rosa* Austrava) from David Austin Roses features fragrant, semi-double, apricot-colored blooms that are four to five inches across and repeat throughout the season. Plants climb to eight feet given support. Zones 5–9, 9–5.



SOUTHERN LIVING PLANT COLLECTION

Purple Pixie® loropetalum (*Loropetalum chinense* 'Peack') is a space-saver that Robert Bowden says "stays low—under 18 inches—and maintains its dark purple leaf color. The flowering is somewhat intermittent, but for a low-growing, groundcover type shrub, it is very nice in the landscape." Ribbonlike, magenta flowers are borne in spring. Zones 7–10, 10–7. Southern Living Plant Collection.



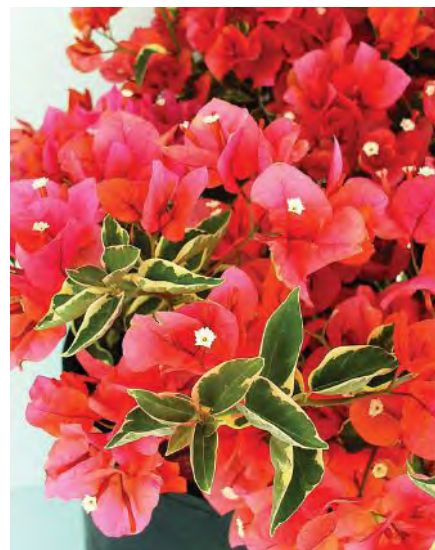
PROVEN WINNERS

'Red Wall' Virginia creeper (*Parthenocissus quinquefolia*) has "terrific vigor and will tolerate shade," says Mary-Kate Mackey. Vines are deciduous and can climb to 30 feet. Phyllis Gricus notes, "The glorious red fall color of the leaves attracts the birds to the underlying fruit, which is an important food source for migrating species." Zones 3–9, 9–1. Spring Meadow/Proven Winners.



J. FRANK SCHMIDT

Most purple-leaved plants don't grow well in summer heat, but **Crimson Sunset® maple** (*Acer truncatum* × *A. platanoides* 'JFS-KW202') tolerates it well. Trees grow to 35 feet tall; fall color is red-brown. Zones 4–8, 8–3. J. Frank Schmidt.



HINES GROWERS

From spring to fall, **Bambino™ Sophia bougainvillea** (*Bougainvillea* hybrid) sports flowers that begin orange and mature to purplish-pink. Ideal for a container, this dwarf vine has variegated foliage and only grows four to five feet high and wide. Zones 10–11, 12–1. Hines Growers.



Variegated box-leaf azara (*Azara microphylla* 'Variegata') is an upright evergreen tree that grows 15 to 25 feet tall at maturity. Native to South America, it features small white-and-green foliage and fragrant spring flowers followed by orange berries in late summer and fall. Paul Lee Cannon says, "I love the elegant, free-form silhouette; the brightness it brings; the manageable size and low maintenance. It contrasts strikingly with darker foliage and adds just the right amount of drama to spaces big or small." Zones 8–10, 11–8. Dan Hinkley Collection/Monrovia.

Additional new trees and shrubs:

- **First Edition® Amber Jubilee™ ninebark** (*Physocarpus opulifolius* 'Jefam') grows well for Marcia Tatroe, who notes that it, like other ninebarks, is "an easy-care, four-season shrub for Colorado with gorgeous foliage, exfoliating bark, pretty flowers that butterflies adore, burgundy fruits, and fiery fall color. Amber Jubilee's copper and lime tones are sumptuous." Shrubs grow to six feet high and four feet wide. Zones 2–7, 8–1. Bailey Nurseries.
- **Love Song™** (*Rosa* 'WEKstameda') is a floribunda rose with lavender flowers that maintain their color better than other lavender varieties. Zones 6–9, 9–6. Weeks Roses.
- **Flower Carpet® Pink Splash rose** grows under three feet tall and four feet wide. Mid-spring flowers feature a mixture of deep and pale pink. Zones 5–10, 10–5. Anthony Tesselaar.
- **Popcorn Drift® rose** (*Rosa* 'Novarospop') is a groundcovering rose that grows only to two feet high and wide. Its deep yellow flowers mature to creamy white. Zones 5–11, 10–5. Conard-Pyle.
- **Encore® Azalea Autumn Sunburst™** (*Azalea* × 'Roblet') is a new color in this line of repeat-blooming shrubs. Growing only three feet tall and wide, it bears coral-pink blossoms with white edging intermittently from spring to fall. Zones 6–9, 9–1. Encore Azalea.
- **'Sweet Summer Love' clematis** starts blooming before most others. Mark Dwyer says, "This strongly fragrant bloomer offers summer color July through September and forms a curtain of purple/red/cranberry flowers." Deciduous vines climb to 15 feet high. Zones 5–9, 9–5. Spring Meadow/Proven Winners.
- **Tiny Tower® Alberta spruce** (*Picea glauca* 'MonRon') is suited for small spaces and container gardens. Growing slowly to four to six feet tall, this cone-shaped evergreen resists deer to boot. Zones 3–7, 7–1. Monrovia.

Wholesale Nurseries/ Marketing Consortiums

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

Anthony Tesselaar International,
www.tesselaar.com.

Bailey Nurseries,
www.baileynurseries.com.

Ball Horticultural Co., www.ballhort.com.

Bejo Seeds, www.bejoseeds.com.

Benary, www.benary.com.

Blooms of Bressingham,
www.bloomsofbressingham.com.

Conard-Pyle, www.conard-pyle.com.

Encore Azalea, www.encoreazalea.com.

Fall Creek Farm & Nursery,
www.fallcreeknursery.com.

Great Garden Plants,
www.greatgardenplants.com.

Hines Growers, www.hinesgrowers.com.

Monrovia, www.monrovia.com.

Proven Winners,
www.provenwinners.com.

Southern Living Plant Collection,
www.southernlivingplants.com.

Sunset Western Garden Collection,
www.sunsetwesterngardencollection.com.

Terra Nova Nurseries,
www.terranovanurseries.com.

Weeks Roses, www.weeksroses.com.

Retail Sources

David Austin Roses, Tyler, TX.
(800) 328-8893.

www.davidaustinroses.com.

Johnny's Selected Seeds, Winslow, ME.
(877) 564-6697.

www.johnnyseeds.com.

J.W. Jung Seed Company, Randolph, WI.
(800) 297-3123.

www.jungseed.com.

Park Seed, Greenwood, SC.
(800) 845-3369. www.parkseed.com.

Thompson & Morgan, Aurora, IN.
(800) 274-7333. www.tmseeds.com.

W. Atlee Burpee & Co., Warminster, PA.
(800) 333-5808.

www.burpee.com.

Kelly Griffin

succulent plant evangelist

You might not recognize Kelly Griffin's name, but if you've purchased a colorful succulent recently, it might well be one he introduced.

BY NAN STERMAN

KELLY GRIFFIN is one busy guy. He recently returned from three weeks in Cuba where he spoke at the International Organization for Succulent Plant Study's meeting and explored the island's flora. After a decade as curator of xerophytic plants at the renowned Rancho Soledad Nursery near San Diego, Griffin is embarking on a new position as plant research and development manager for Altman Plants. Located in Vista, California, Altman is the country's largest producer of succulents. And as if this weren't enough, Griffin co-owns and operates Xeric Growers, a wholesale and mail-order succulent nursery tucked into the hills northeast of San Diego.

Griffin's name might be new to you, but chances are, you know his plants. If your garden features any of the small, rough-surface aloes with names like 'Christmas Carol', 'Coral Edge', 'Angelo', 'Carmine', or 'Vinnie', you can thank Griffin (for a list of well-known Griffin aloes, see the sidebar on page 23). Or if you grow gorgeous variegated agaves such as 'Blue Glow', 'Sun Glow', or *Agave gui-*

Top right: *Aloe* 'Christmas Sleigh' is one of dozens of container-sized aloes hybridized by Kelly Griffin. **Right:** Griffin's seed-grown *Agave* 'Blue Glow' selection features narrow, upright blades edged in burgundy.





Griffin inspects one of the many forms of *Agave* 'Blue Glow' that he evaluates in his home garden.

engola 'Crème Brulee', those are Griffin hybrids, too. In fact, Griffin has introduced more than 100 succulents. Panayoti Kelaidis, senior curator and director of outreach at Denver Botanic Gardens, credits Griffin's hybrids as having "propelled overnight the container succulent craze across the U.S."

Griffin does more than just collect pollen from one flower's stamens and paint it on the pistil of another. He is well known in the cactus and succulent world for being one of the top plant explorers, propagators, photographers, researchers, and speakers.

CACTI INSTEAD OF COMICS

Kelaidis, who is also president of the Colorado Cactus and Succulent Society, refers to Griffin as a child prodigy. Indeed, Griffin has suffered from plant infatuation since age nine or 10, when he spent his days in the Redondo Beach, California, florist shop where his mother worked.

Within a few years, Griffin had discovered *Lithops*, the tiny, hassock-shaped succulents known as elephant toes or living stones. "I read an article on *Lithops* and wrote to Ed Storms, the guy who was the world authority," Griffin says. "I asked if I could get some and he sent me a box." Griffin devoured books about plants and searched out seed. "I was fearless," he says looking back, "I'd or-

der small packages of seed for any weird thing I couldn't find in a nursery."

At 15, he applied to work at a local retail nursery. The minimum hiring age was 16 but a small fib got Griffin his dream job. "They loved me there," he says and adds



Griffin collects pollen from hybrid aloes such as this one and makes crosses in his garden with other aloes that bloom at the same time.

with a chuckle, "I knew more about plants than some of the people in management."

While most 16-year-olds beg their parents for cars, Griffin begged for a greenhouse. He also asked for a book called *Exotica*, which came with a \$165 price tag. "I told my dad, 'Every plant in the world is in there!' It's funny now to think about how naïve I was," Griffin says. "Of course, it's an amazing book and it includes thousands of plants, but eventually I realized it's just the tip of the iceberg."

PRACTICALITY VERSUS PASSION

In college, Griffin majored in applied physics, thinking he needed a "real job." Still, he indulged his passion for plants. Freshman year, he worked as a greenhouse laboratory technician. He remembers being sent to take cuttings from the famous desert garden at the Huntington Library, Art Collections, and Botanical Gardens near Pasadena. He went on a day the Huntington was closed to the public. "I thought I'd just died and gone to heaven," he says, savoring the memory. "The Huntington was one of the most exciting places to me back then—it still is."

After college, Griffin had a string of jobs working in a bike shop, teaching scuba diving, and assembling operating room equipment. The jobs supported his young family, but his heart remained in plants.

While Griffin's three rambunctious little boys and big dog played in the neighborhood park, Griffin filled every inch of the family's tiny backyard with makeshift nursery benches, crammed full of collections. Even two-by-four horizontal wood fence rails were lined with seedlings from his crosses. Tiny sprouts grew in the curved bottoms of cut-down, liter-sized soda bottles. "I would monkey with plants, hybridizing them between trips into the field," Griffin says. Some of his early successes include the well-known *Aloe* 'Pink Blush' and *Aloe* 'Grassy Lassie'.

GATHERING FIELD DATA

Griffin's love of fieldwork started in childhood, when his father worked for United Airlines. Wherever the family traveled, Griffin sought out plants, collected seeds, and visited botanic gardens.

As he got older, Griffin traveled farther and to more remote locations. Eventually,



On a dive trip many years ago to Mexico's Coronado Islands, Kelly Griffin encountered massive colonies of *Dudleya candida* growing in the wild, sparking his fascination with the genus, its varied morphology, habitats, and growing requirements.

he traveled with well-known plant explorers such as Brian Kemble, succulent expert and curator at the Ruth Bancroft Garden in Walnut Creek, California, and cactus expert Wendell "Woody" Minnich, who had mentored Griffin since Griffin was a teenager. "They were the impetus to up my game and my knowledge," Griffin says. Under their influence, he cultivated a voracious appetite to see plants in the wild, to observe their differences and nuances, to understand how they grow and under what conditions.

Griffin recalls teaching a dive class off Baja Mexico's Coronado Islands in the 1980s. He glanced up at a hillside and caught a glimpse of a ghostly white succulent called *Dudleya candida*. After the dive, he put his camera in a drybox and swam to the island in search of what turned out to be a spectacular colony of plants; single plants had close to a hundred rosettes, which, together, measured

five feet across. Each rosette was festooned with long stalks of yellow flowers. It was Griffin's first experience seeing *Dudleya* in a natural habitat and he was hooked.

After that, Griffin searched out *Dudleya* species from coastal Baja to northern California's Sierra Nevada range. He wrote about his observations for the *Cactus and Succulent Journal* in 2004. In the articles, Griffin gently promotes cultivation of *Dudleya* species as he compares their habitats, their morphologies, and speculates on growing requirements. Last fall, Griffin returned to the Coronados to update those original observations.

After each trip, Griffin organizes his photos and notes. He uses them, in part, for talks to cactus and succulent societies. Around 2002, nurseryman Jerry Hunter, owner of Rancho Soledad Nursery in Rancho Santa Fe, California, approached Griffin following a talk. Before you go on your next trip, Hunter told him, come

talk to me. When Griffin did, Hunter said he believed in what Griffin was doing and wanted to support his trip. How much did he need? "Jerry gave me twice the amount I asked for," Griffin recalls. Upon his return, Griffin shared his observations with Hunter, who was so impressed, he offered Griffin a job.

For a decade, Griffin researched, hybridized, and developed new plants at Rancho Soledad. He also continued his travels in search of rare and unusual succulents in places such as Mexico, Cuba, South Africa, Australia, Bolivia, Peru, Madagascar, Chile, and Yemen.

CONSCIENTIOUS COLLECTION

Wherever he visits, Griffin adheres to a strict collecting ethic. His goal is to document plants, particularly those that are little known. "The point is to record and get better knowledge about plants in the wild," he says, "because when plants aren't

known—and aren't protected—they are at risk of being destroyed."

Collecting has its risks, depending on the methodology. Griffin disdains collectors who see dollar signs on a hillside of rare plants rather than seeing how important those plants are for their environment, for local animals, and for the beauty of the natural habitat. "One guy collects two or three plants," he says, "then the next guy comes and does the same thing, and soon there's nothing left."



Kelly Griffin poses next to an enormous *Adenium socotranum* on the island of Socotra.

Griffin explains that he collects seeds so as not to disrupt populations. "In a stable population of plants," he says, "for every plant that lives out its life, one replaces it. If you take that one plant, it's gone, and it makes no seed in the wild ever again. If instead you take 10 or 20 seeds, the plant makes seed again the next year so the population remains stable."

On a 2009 trip to Madagascar, for example, Griffin found three previously unknown aloe species. Two species were growing in the garden of his local guide. When Griffin asked to see the plants in the wild, the guide led him on a 30-mile trek along a footpath. Twelve hours later, they arrived at the aloes' habitat. Griffin marked the location on his GPS, then photographed the plants, took copious notes, and only as many seeds as he need-

A SAMPLING OF GRIFFIN ALOE HYBRIDS

With a few exceptions, aloes require a frost-free climate and sharp drainage for successful outdoor cultivation. But Kelly Griffin says many of the smaller hybrids, including the ones below, are well suited to container culture. "Most will do fine outside on a patio grown in containers with good drainage," he says. In the absence of rain, water once a week in summer. In advance of first frost, containers should be moved to a protected location and watered sparingly over winter. "Ideally a greenhouse is sweet," Griffin says, "but a bright sunny window should suffice. If you keep them under-potted and grow them in bright light, they will obtain the best color."

'Bright Ember' Rosettes less than a foot across with bright green blades, pocked with raised yellow spots; orange flowers in winter.

'Christmas Carol' Less than a foot across, with rough, deep green leaves with raised red dots; leaf margins edged in red serrations.

'Delta Lights' Eighteen-inch-wide rosettes with slightly rough leaves marked in a zigzag pattern of deep and pale green.

'Grassy Lassie' Smooth but narrow and upright, bright green leaves to about one foot tall; bright orange flowers above the foliage much of the year.

'Lavender Star' Tiny rosettes, only six inches tall and a foot across with deep green blades pocked with pale green markings and edged in soft red teeth; orange winter flowers.

'Moondance' Smooth, deep green blades heavily marked with icy, pale green.

'Peppermint' Clustering rosettes with peppermint green blades marked with pale green dashes and bright orange-red, toothed margins; orange flowers in winter.

'Pink Blush' Rosette is only a foot tall and wide with rough, deep green pocked leaves with light green dashes and slight orange blush margins; orange flowers in winter and spring.

'Starfire' Tiny rosettes, one-half to a foot tall, that look like rough-surfaced starfish; blades are very light green with golden markings; orange winter flowers.

'Sunrise' Clumping aloe with individual rosettes less than a foot tall; gray-green leaves with raised, coral to yellow dashes; orange-red flowers in winter.

'Sunset' Rosettes a foot or less across with ice green/lavender blush blades edged in bright red teeth and with the occasional raised red "bump" on the blade; orange flowers in winter.

'Viper' Clusters of tiny rosettes, a foot across or smaller; bright green blades with orange-red raised markings and toothed edges; orange flowers in winter.



ed. The offspring of those seeds are now part of Griffin's breeding program.

Such remote and hard-to-access areas are typical of Griffin's explorations. In Socotra, a tiny archipelago off the coast of Yemen, Griffin had a memorable encounter with a giant *Adenium*. Socotra is designated by UNESCO as a world heri-

tage site, based in part on its unique flora. Griffin and the colleagues he traveled with hired local Socotran guides. Their truck blew a tire, and as the guides fixed it, "Everyone went up a hill," Griffin recalls. "I turned and noticed something across the valley and got out my field glasses. I thought, 'What the heck is that?'"

Sources

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(979) 542-8511.

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(626) 853-8005. www.cssainc.org.

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Griffin set off down the road and across the river, where he found a giant desert rose (*Adenium* spp.) Desert roses are caudiciforms or “fat plants,” which have swollen trunks used for water storage. “It was the biggest one we’d seen,” he says. Griffin wedged his camera between rocks, aimed, and set the timer so he could photograph himself standing next to the *Adenium*. He got three shots before the truck’s horn beckoned him back. “I ran down the road and told everyone about the giant *Adenium* and said they really should see it.” No thanks, they’d seen plenty, they told him. Later, when Griffin shared his photos, his colleagues were amazed to see him dwarfed by a trunk at least 20 feet tall and eight feet wide.

SUCCULENT SHOWCASE

For the last decade, until his recent departure, Griffin planted his discoveries and hybrids on the hillsides of Rancho Soledad Nursery. Kelaidis refers to those hillsides as “a showcase for one of the greatest nurseries of the world.”

Tony Avent, owner and proprietor of the Plant Delights Nursery in Raleigh, North Carolina, remembers his first visit to Ran-



For a decade, Griffin worked at Rancho Soledad Nursery near San Diego, landscaping the nursery’s hillsides with plants grown from seeds he collected on travels around the world.

cho Soledad. “I was wandering through the nursery, seeing incredible agaves and yuccas that no one grows. I saw some of the rarest agaves I’d ever seen; I’m thinking this is not a normal nursery, someone here is a plant geek,” says Avent, who then asked who was behind the collection. “They said ‘That’s Kelly’s’. He is a crazy plant nerd.” It’s a title Griffin wears proudly.

Leaving Rancho Soledad Nursery was not easy for Griffin, who thinks of its owner, Jerry Hunter, as a father figure. “Jerry is an incredible plantsman,” Griffin says. “So much of what I know

is thanks to Jerry. He’s given me a lot of opportunities.”

HYBRID HOMEWORK

At his own nursery, Xeric Growers, Griffin and business partner Allen Repashy are growing their operation one greenhouse and shade house at a time. Nursery benches are filled with odd and unusual aloes, agaves, echeverias, and more. Some of the stock awaits manipulation in Xeric’s tissue culture lab; other plants are the products of tissue culture or traditional hybridization done by Griffin and his associates.

In the tissue culture lab, Griffin sits at a stainless steel laboratory hood. His rough fingers hold a sharp scalpel in one hand. Forceps in his other hand hold a pale green, striated aloe, barely two inches tall. Griffin handles the aloe as delicately as if it were a newborn. In a sense, the aloe *is* a newborn, newly borne from a single cell that gave rise to an entire plant through the magic of tissue culture.

Griffin carefully scrapes away dead cells at the base of the aloe, preparing it for a container of rooting hormone, the next step along its journey to becoming

flowers, and then better flower colors, then for flowering year round. I can never stop. It's like home improvement: You think you are all done when you get the kitchen finished, and then you have to start on the bedroom."

The home improvement analogy is especially apt since much of Griffin's personal hybridizing is done with his home collection. Many a night, his dining room table is covered with notebooks, flowers, a vial or two of frozen pollen, paintbrushes, dental floss, and a flashlight.

is what Griffin did for Rancho Soledad, what he does for Xeric Growers, and what he will do for Altman Plants.

Altman Plants pursued Griffin for his years of success breeding succulents, according to president Ken Altman. "Kelly is such an enthusiastic person, almost an evangelist for succulents. To have his kind of expertise in our company is a great thing. He is going to have a fun time here. We have a lot of plants for Kelly to play with."

Griffin uses his knowledge and the opportunities that have presented themselves well, says Kelaidis. "Kelly is a good



Above: In the tissue culture lab at Xeric Growers, Griffin can clone hundreds of new plants like this young *Aloe* hybrid from tiny pieces of the growing shoot from the mother plant. **Right:** Griffin checks on plants in the tissue culture lab. Once plants are placed on hormone medium, they continue their development under controlled light conditions.

fully rooted and ready to plant in some lucky person's garden.


Much like the pioneer hybridizer Luther Burbank, Griffin's brain is constantly cranking. He wakes up in the middle of the night thinking about plants to cross, maybe freezing the pollen from a winter-blooming aloe to cross months later with a summer-blooming aloe, or how to make another type of variegated agave or a better-blooming echeveria. "The possibilities," he says, "are endless."

So, for example, Griffin is revisiting his small, rough aloe hybrids that fill succulent color bowls from Maine to Modesto. "I'm working on getting to large garden sizes," he says, "and once that's done, I want to breed for better

Griffin makes notes about the evening's crosses before extracting pollen from saved stamens and heading into the garden. He finds the ideal bloom, then uses the paintbrush to gently dust the pollen onto the flower's pistil. After pollinating the flower, he ties a length of dental floss around its pedicel, next to the flower's ovary. The floss remains in place as a marker while the seeds develop in the ovary. Once the seeds ripen, Griffin collects them, sows them into pots or flats, eventually selecting the best of the seedlings from each cross.

THE NEXT STEP

Successful hybridizers are extremely patient people. It can take 10 years to develop a hybrid and bring it to market, which

leader, innovator, and businessman. He is a game changer. He's rewriting the profession." And while the sheer variety of aloes, agaves, hybrids, and crosses that Griffin has collected or bred is staggering, he talks about his work as if it were the most everyday thing in the world. Griffin loves what he does, and there is no mistaking it; it oozes through his pores, it is what he was born to do; and he does it very, very well. 

Garden writer and designer Nan Sterman is author of California Gardener's Guide Vol. II and Water-Wise Plants for the Southwest. Her collection of low-water plants—including some of Kelly Griffin's aloes—overfills her garden in Encinitas, California.

Chelsea *turns 100*



This year, the grand dame of flower shows, located in a trendy neighborhood in central London, celebrates a century of showcasing gardening as only the English can do it. BY MARTY WINGATE

IT'S THE greatest show on earth—for gardeners—but age has nothing on the Chelsea Flower Show. Celebrating its centenary this year, Chelsea continues to command the respect and adoration of gardeners around the world. The Royal Horticultural Society (RHS) runs myriad floral exhibits and shows throughout the year, including the Hampton Court Palace Flower Show in July, a mere babe-in-arms at 23 years old, but Chelsea stands out as the standard to which all others are compared. This year, the invitation is out to gardeners everywhere to join the celebration May 21 to 25.



Above: Queen Mary, center in pale outfit, wife of King George V, tours Chelsea in this early 20th-century photograph. Top: Visitors enjoy a sunny day at last year's flower show.

The event actually began as the Great Spring Show in 1862, before moving to the grounds of the Royal Hospital Chelsea—a home for retired soldiers—in 1913, when it was renamed. Apart from brief interruptions during the two world wars, it has been held there ever since, covering 11 acres each May with gardens outdoors and eye-popping nursery displays in the pavilion.

Chelsea is the gardening equivalent of a Paris runway for fashion. “The designers can be a bit extreme.

It’s the ‘catwalk’ mentality,” says Andrew Wilson, a British garden designer and lecturer who has judged show gardens at Chelsea for 17 years. But just as outlandish fashion



Chelsea Flower Show

May 21–25, 2013

Hours 8 a.m.–8 p.m., Tuesday–Friday (Tuesday and Wednesday are members days); until 5:30 p.m. Saturday; sell-off begins at 4 p.m.

Admissions Ticket prices begin at 25 British pounds for a partial-day (5:30 p.m.–8 p.m.) RHS members ticket. A full-day members ticket is 65 pounds. Once in the show, you cannot leave and return. The number of tickets for each day is capped to prevent overcrowding; even so, be prepared to wait in line to view some gardens.

Location The show takes place on the grounds of the Royal Hospital along the Chelsea Embankment of the Thames.

Getting there Take the Tube, hop on a bus: London’s Underground system makes it easy to get to the grounds of the Royal Hospital—the nearest Tube station is Sloane Square, a 10-minute walk from the show. Plan your visit on the Transport for London website (www.tfl.gov.uk).



The famous British Mini shows off some flower power in this 2012 Chelsea exhibit.

ideas percolate until a particular hemline or cut of jacket makes it into our own closets, the ideas at Chelsea sift down until home gardens make use of architectural stone or perennials in a way never before considered.

The show may take place in London, but it’s an international event. And during build-up, which takes place in the two- and-a-half weeks leading up to opening, the grounds are transformed into all manner of gardens. For those who create the gardens, build-up is—to say the least—fraught with anxiety, but not without glory.

“You’re wearing boots and parkas, and it’s raining and there’s a cold wind,” says Alicia Crawford, one of the members of the Lake Forest Garden Club in Illinois that built a garden for the 2006 Chelsea Flower Show. But even rain and mud can’t dampen the experience. “It’s like walking through the pearly gates—more than a dream come true,” recalls Crawford.

THE MAKING OF A SHOW GARDEN

Flowers bloom, grasses stand tall, hedges of solid green delineate the lines of the gardens—just how the displays look so mature in such a short time is a cause for wonder. Chelsea gardens are completed just before the show opens the third week of May, but their conception—and indeed, much of the work of the garden—starts a year or two earlier.

Even before designs are approved, designers and contractors begin searching for and growing the best plants, often “soft-tagging” trees and shrubs for final decision later. Mark Fane, co-owner with Peter Clay of Crocus Nursery in Surrey, England, supplies and builds for two show gardens, so he understands not just the timing, but also the intensity of the work.

“We start the process a year before Chelsea,” Fane says of working with Ulf Nordfjell, a Swedish designer and land-



The Lake Forest Garden Club in Illinois created the award-winning “Ravine Garden” exhibit, above, at the Chelsea Flower Show in 2006. Left: (left to right) Alicia Crawford, Catherine Denckla, and Robin Stuart were among the club members who helped design and install the garden, which depicted the plant community typically found in ravine ecosystems near the shore of Lake Michigan.

scape architect, on the garden sponsored by French champagne house Laurent-Perrier. “Ulf tells us what he wants to achieve, and we say yes, we can do that, or no, it’s too difficult. We always develop a plan B.”

While home gardeners may begin with widely spaced hedge plants and small shrubs surrounded by expanses of mulch, there is no such luxury at Chelsea. “In your garden,” Fane says, “you may have three to four plants per square meter, but in a show garden, there are 35 plants. And that means we must grow two or three times that number.” No bare soil shows in Chelsea displays, so if one plant does not meet the requirements of perfection, another must be waiting in the wings. “For

COURTESY OF ALICIA CRAWFORD (2)

every square meter of garden space, we have 100 plants growing in the nursery,” Fane says.

AMERICAN GARDENS WELCOME

Sourcing plants from nurseries in the United Kingdom (UK) and European Union makes transportation simple, as far as legalities are concerned, but when those plants come from further afield—such as Illinois—it’s a different story.

The members of the Lake Forest Garden Club, located near Chicago, hold the distinction of being the first Garden Club of America chapter to have a show garden at Chelsea. “Ravine Garden: Gift of a Glacier” was created in a remarkably short time. Whereas some gardens are two years in the making, members of the Lake Forest club devised the idea the summer before, after completing a successful home-and-garden walk fundraiser.

“We thought, what should we do as an encore?” Crawford says. “We could do

a moon landing, but in lieu of that—we could do a garden at Chelsea.” Members quickly committed to the plan, and the entire club moved into high gear.

“We have a strong educational component,” Crawford says. “It was important to us that at Chelsea, the global horticultural stage, we could say there are Americans that do care about climate change,” Crawford says to explain the theme, which highlighted the delicate balance of nature as seen in a landscape the garden club members knew well.

Accompanied by the required phytosanitary certificates, plants were sent to England to be grown on and more North American natives were sourced in the UK.

Chelsea judges are scrupulous, so authenticity is tantamount to success. In order to create the proper Lake Michigan ravine garden, Lake Forest members arrived in London carrying in their luggage at least 30 pebbles each from Lake Michigan. When it came to covering

the ground—no bare soil is allowed at Chelsea—club members found a British source for the necessary half-rotted oak leaves. American red oak (*Quercus rubra*), of course. The judges could tell it was the appropriate species.

The garden, which was designed by Catharina Malmberg-Snodgrass of CMS Design Associates Ltd. and constructed by Mark Gregory of Landform Consultants Ltd. (plus many club members), won a Silver Gilt award and gave the club members great pride in their accomplishment.

Americans made a splash at Chelsea even before 2006, however. In 1929, Minerva Hamilton Hoyt (formally listed as Mrs. Sherman Hoyt and best known for championing the creation of what is now Joshua Tree National Park in Southern California) took it upon herself to create a Chelsea garden. At her own expense, she shipped a load of desert plants to London—many of them, such as ocotillo (*Fouquieria splendens*) with its scarlet blooms, were in flower for the show.



A Royal Chelsea Pensioner takes a break amid American native plants in the Bonterra California Organic Wine Garden at the 2007 show.

Hoyt's display made such an impression that she was awarded the Lawrence Medal from the RHS for the best exhibit, followed the next year by being made an Honorary Fellow—the first woman to be given the award for botanical merit. The Royal Botanic Garden, Kew acquired the plant display, and a few plants still exist in the Princess of Wales Conservatory.

THE GREAT SELL-OFF

These days, most plants don't make it to Kew—instead, they are purchased

ing people hoovering up any plant they can," says Fane.

CHANGING TIMES

Chelsea used to be all about plants. Twenty years ago, rhododendrons and other shrubbery filled displays. "Historically," Wilson says, "the show gardens have been a step up from the nursery displays in the pavilion." He remembers that focus shifting in 2000, when award-winning designer Christopher Bradley-Hole created the "Living Sculpture Garden,"

with Mark Gregory. "It is theatrical—the 'wow' factor that is an acknowledgment that these are not real gardens." Judging guidelines themselves are reevaluated every three to five years, Wilson says. Gardens are judged not against each other, but against themselves—their stated intent—and how well they follow the rules.

The bar, therefore, is set high. "I've been to shows all over the world," says Dan Heims, co-owner of Terra Nova Nurseries in Canby, Oregon. "At Chelsea, perfection is the standard. There's



For maximum impact, typical exhibits, like this Laurent-Perrier garden at the 2001 show, are packed with more than 35 plants per square yard.

straight out of the gardens and carried off by shoppers when the Chelsea sell-off begins in the afternoon on the last day of the show. But not all gardens participate.

"I'm pig-headed," Fane says of not participating in the sell-off. Plants from the gardens that he grows for and constructs are held back for a couple of weeks to recover from their "Chelsea hang-over," after which a sale is held at Crocus, normally a mail-order-only nursery. "You spend a year or a year-and-a-half on something and there's a major emotional investment. I'm not interested in watch-

which consisted of a flooded rectangle, contemporary materials, and minimal use of plants. It won a gold, and Wilson recalls that many people thought it should have received Best in Show.

"Changes have been quite dramatic," Fane says of the current emphasis on design. "It's true, some of the gardens can be fantastically ridiculous, but there is a seed of truth there."

Just as garden styles change, so must the assessment. "Judging concentrates on the display," says Wilson, who co-founded the London College of Garden Design

not a leaf out of place. There's nothing like it in the U.S."

"One thing I've seen a massive change in," Fane says of the shift in gardens, "is the size of the budget. There's been a huge increase in cost." In the past, the cost may have been covered by nurseries, but these days, sponsorship is big business at Chelsea. Financial institutions such as the Royal Bank of Scotland, charity organizations such as World Vision, and special-interest groups such as the Caravan Club sponsor not just the big show gardens, but also other categories



Chelsea's international flavor extends to embracing American natives. Staghorn sumac (*Rhus typhina*) is a repeated element in this Cancer Research UK-sponsored garden at the 2009 show.

of displays, including Artisan Gardens and Generation Gardens, which focus on small-scale landscapes.

Even the venerable British Broadcasting Corporation, which carries no paid advertising, splashes sponsors' names across televisions throughout the country as the network broadcasts the events at Chelsea.

BEYOND THE SHOW GARDENS

Stepping away from the gardens brings the visitor to the Great Pavilion, where nursery displays elicit as many gasps and sighs as any designer's masterpiece. In years past the nurseries put on their lavish



Visitors view displays of roses in the Great Pavilion at the 2012 show.

exhibits to entice head gardeners of large estates to order plants and seeds. Those head gardeners have been replaced these days by regular home gardeners, who still seek to replicate the beauty and perfection.


The pavilion remains steeped in tradition. "You can go to the pavilion," Wilson says, "and know where the lupines are, where the tuberous begonias and the sweet peas are." The nursery displays under cover of the pavilion are seductive enticements to gardeners: delphiniums like a patch of clear blue sky indoors, a field of foxgloves, swathes of Pacific coast irises—yes, the Brits are dab hands, as they would say, at growing our North American natives. Who wouldn't want to place an order and dream of the garden to come?

But even if all an international visitor does is gather up free leaflets, take photos, and jot down plant names, it can be worth it for the ideas and inspiration. New plants are always a draw—Heims, a noted breeder and grower of coral bells and alumroots (*Heuchera* spp.), notices every use of them in the horticultural and artistic displays—even if they are older, more established selections. "It's the acme of horticulture," Heims says.

Despite its age—or perhaps because of it—the Chelsea Flower Show remains a gardening mecca. Just ask the members of the Lake Forest club. Six years later, Crawford, who has attended the show ma-

TIPS FOR AMERICANS VISITING CHELSEA

- Dress in layers and bring a brolly (umbrella): The average temperature in London in May is upper 50s to low 60s degrees Fahrenheit, and it is England, after all, so rain is quite likely.
- Buy a program: You may not use it on the day as much as later to remind yourself of what you've seen. Pick up leaflets at all the gardens and in the pavilion, too.
- Take a break and try a Pimm's: Pimm's No. 1 Cup—a concoction of gin, liqueurs, and fruit extract—has been around since 1823. A Pimm's Original is mixed with fizzy lemonade and comes accompanied by a strawberry, slice of cucumber and orange, and sprig of mint. Buy it by the glass or jug—it's a classic.
- Enjoy the setting: The Royal Chelsea Pensioners, who reside at the hospital, can be seen strolling the grounds in their scarlet coats.
- Make careful purchases: Be tempted by the plants and seed packets, but opt for making a shopping list for home instead of buying. There are too many restrictions on what you can bring back to the United States. If you join the RHS, you can buy from the organization's seed list.
- While you are there: Take advantage of your trip and visit some of the National Trust gardens (www.nationaltrust.org.uk). Schedule a few private garden tours, too. They can be found on the National Garden Scheme website (www.ngs.org.uk).

ny times over the years, believes the hard work her group put in it was all worthwhile. "I've never had more fun and been prouder of the commitment of my garden club members," she says. After all, it *is* Chelsea. "It was one of the greatest experiences of my life." 

Marty Wingate is a garden writer and tour guide based in Seattle, Washington. She will be blogging from the Chelsea show in May; AHS members will be able to read her blog through a link on the AHS website (www.ahs.org).



True to Seed

BY GRAHAM RICE

Growing your own plants from seed is fun (not to mention thrifty), but it's important to understand that not all seeds produce plants that resemble their parents.

Flowers from seedlings of *Helleborus* 'Peggy Ballard' illustrate the variety that results from cross-pollination.

IF YOU COLLECT seeds from a plant in your garden and grow them, will they all retain the same characteristics as the parent plant? As with many things in life, the answer to this seemingly simple question is complicated. Some plants will almost always “come true” from seed—meaning they will have the same characteristics as their parents—others will never come true, and as for the rest, well...maybe.

It turns out there are many impediments to garden plants coming true from seed. In the following pages I’m going to provide some basic guidelines that will not only help you select seeds that reliably reproduce their parents, but may encourage you to experiment with those that don’t.

SEEDS FOR SUCCESS

The good news for seed collectors is that many garden plants—especially annuals, biennials, and vegetables—are developed with the intention that they be grown from seed. Genetically, these plants are fairly uniform, ensuring that when gardeners collect these seeds and sow them, the resulting plants are likely to be the same as the parents. These fall into two primary groups: individual plants or groups of plants of species that have not been “improved” by gardeners or plant breeders; and cultivars of plants that are genetically uniform.

If you collect seeds from plants of, say, our eastern native cardinal flower (*Lobelia cardinalis*), growing either in the wild or in your garden, the resulting seedlings will be identical or almost identical to the parent plants. The same applies to many annuals and biennials in single colors, such as the white-flowered *Cosmos bipinnatus* ‘Purity’, which over many years seed companies have ensured is genetically uniform.

All these, and other plants of this type, will come true from seed—with one proviso: If closely related plants with different characteristics are growing nearby, all bets are off.

So if you happen to grow one of the pink-flowered cultivars of cardinal flower alongside the wild species, hummingbirds will undoubtedly transfer pollen between the two. If you grow different colored *C. bipinnatus* cultivars nearby, bees will do the same. When the resulting seeds grow to maturity, the flower colors—as well as other variable char-



Coral bells (*Heuchera* spp.) are known for their propensity to cross-pollinate. The coral bell seedlings (above) grown from seeds gathered from *Heuchera* ‘Berry Smoothie’, left, show a broad range of foliage colors and patterning.

acteristics such as height or fragrance—will be unpredictable.

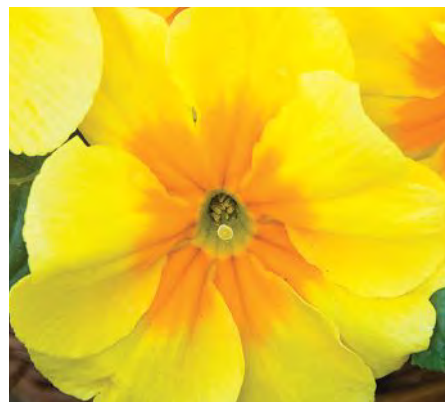
As you may have gathered, isolation is one of the most important factors in determining whether plants come true. If pollen from related plants is not introduced by pollinators—or the wind, in some cases—the chances are far better that plants will produce identical offspring. But think about the range of possible pollinating insects and birds. Foraging honeybees, for instance, may fly up to three miles from the hive. Hummingbirds tend to be territorial and remain more local, but the potential for contamination is clear. This

acteristics such as height or fragrance—will be unpredictable.

PLANTS WITH ASEXUAL REPRODUCTION

Given the variability cross-pollination can introduce, it makes sense that among the most reliable plants for seed savers are those that reproduce without fertilization, a process technically known as apomixis. (Plants with this characteristic are described as apomictic.) Plants that employ this reproductive method include shadbushes (*Amelanchier* spp.), citrus fruits, cotoneasters, avens (*Geum* spp.), lady’s mantles (*Alchemilla* spp.), blackberries and raspberries (*Rubus* spp.), black-eyed Susans (*Rudbeckia* spp.), mountain ashes and whitebeams (*Sorbus* spp.), and some grasses. *Rudbeckia fulgida* ‘Goldsturm’, *Geum* ‘Mrs J. Bradshaw’, and blue hosta (*Hosta ventricosa*) are among the most common examples (see chart, page 35, for more on these and other plants that reliably come true).

A few plants employ a superficially similar mechanism in which flowers self-pollinate without the buds ever opening. Many



Genetically stable species such as cardinal flower (*Lobelia cardinalis*), left, being visited by a hummingbird, will generally come true from seed unless planted near different cardinal flower cultivars. Primrose flowers, like the one above, however, are structured so that cross-pollination—and thus variability—is almost inevitable.

violet species, including the colorful and fragrant *Viola odorata*, produce such flowers at the base of the plant, often unnoticed. This feature is referred to as cleistogamy (literally, “closed marriage”). Plants grown from the resulting seeds will usually come true. Other cleistogamous plants include wood sorrel (*Oxalis acetosella*) and many grasses.

Some plants, such as sweet peas and other *Lathyrus* species, are naturally self-fertile. Flowers may be self-pollinated before they even open or the arrangement of floral parts may be such that insects pollinate the flowers with their own pollen. This feature is also found in other ornamental and edible members of the pea family, including lupines and soybeans. Other plants that self-fertilize include: quinces (*Chaenomeles* spp.), fescues (*Festuca* spp.), lupines (*Lupinus* spp.), mulberries (*Morus* spp.), prickly pear cacti (*Opuntia* spp.), cherries (*Prunus* spp.), pomegranates (*Punica granatum*), and passion flowers (*Passiflora* spp.). Among vegetables, eggplants and tomatoes fall into this category.

What this means for seed savers is that sweet pea cultivars and tomatoes, for example, will usually come true even when grown near other cultivars so individual cultivars of such plants do not generally need to be grown in isolation.

WHY PLANTS DON'T COME TRUE

With the exception of the plants I just described, most plants have built-in

mechanisms that favor cross-pollination. This allows more opportunity for new combinations of genes to be made—the driving force of natural selection.

Primrose flowers, for example, come in two forms. The pistils (female reproductive parts) in pin-eyed flowers are taller than the stamens (male reproductive parts); the reverse is the case on thrum-eyed primroses. As a result, pollen cannot



At Barry Glick's Sunshine Farm in West Virginia, muslin bags have been placed over the flowers of 'Sopron', a cultivar of bear's foot hellebore, to ensure the resulting seeds will retain the cultivar's characteristics.

easily be transferred from the male to the female part of the same flower, so primroses almost invariably cross-pollinate. Because nearly every seed is the product of hybridization between different plants, seedlings may vary greatly in flower color and other features.

The flowers of lungworts (*Pulmonaria* spp.) are structured in a similar way and so cross-pollination is again usual. There are similar features in some borages (*Borago* spp.), hostas, and statice (*Limonium* spp.) plants.

The same result is achieved if flowers are self-sterile. That is, although a flower may pollinate itself, fertilization does not take place. This means viable seeds are not produced. Garden plants that do not self-fertilize include cosmos, coral bells (*Heuchera* spp.), candytufts (*Iberis* spp.), and some mulleins (*Verbascum* spp.). Others that often fail to self-fertilize include some beets, cabbages, barrenworts (*Epimedium* spp.), fragrant tobaccos (*Nicotiana* spp.), poppies (*Papaver* spp.), and petunias.

Another feature that encourages cross-pollination is seen in hellebores. When hellebore flowers are first accessible to bees, the pistils are receptive to pollen, yet it may not be until a few days later that the same flower releases its pollen. So the flowers are much more likely to receive pollen from another flower, often one from a different plant. The same is true of wall-flowers (*Erysimum* spp.), among others.

PLANTS THAT GENERALLY COME TRUE FROM SEED

For the reasons indicated, these individual plants or selections can often be expected to come true from seed.



Rudbeckia fulgida 'Goldsturm'

<i>Alcea rosea</i> 'Chaters Double' Series (hollyhock cultivar)	These fully double hollyhocks tend to come true, even when not grown in isolation.
<i>Aquilegia vulgaris</i> (common columbine)	Will produce similar seedlings if self-pollinated.
<i>Clematis recta</i> 'Purpurea' (clematis)	Every seedling will have purple foliage, although the shade of purple will vary.
<i>Delphinium</i> 'Black Knight' group (delphiniums)	These and others in the Pacific Giants Series generally come true from seed if self-pollinated.
<i>Euphorbia marginata</i> (snow on the mountain)	All will have white-variegated flower bracts, but seedlings may vary in height.
<i>Geum</i> 'Mrs J. Bradshaw' (avens)	Usually apomictic, so all should have double, bright red flowers.
<i>Helleborus argutifolius</i> 'Pacific Frost' (Corsican hellebore)	All seedlings should have white-flecked foliage if self-pollinated.
<i>Lathyrus latifolius</i> cultivars (everlasting or perennial pea)	As with their relatives the sweet peas, all self-pollinate and usually come true.
<i>Potentilla nepalensis</i> 'Miss Willmott' (Himalayan cinquefoil)	Reliably produces plants with bright pink flowers.
<i>Rudbeckia fulgida</i> 'Goldsturm' (black-eyed Susan)	Plants are apomictic so seedlings are usually identical to the parent plant.
<i>Viola soraria</i> 'Freckles' (woolly blue violet)	All have the white flowers with blue or purple speckles.

Some plants bear male and female flowers on different individuals; cross-pollination is therefore guaranteed. Such plants are termed dioecious ("two homes"). Examples include woody plants such as kiwi vines (*Actinidia* spp.), maidenhair tree (*Ginkgo biloba*), hollies (*Ilex* spp.), willows (*Salix* spp.), and yews (*Taxus* spp.). Some perennials also show this feature, including pearly everlasting (*Anaphalis margaritacea*), bear's breeches (*Aruncus dioicus*),ampions (*Silene* spp.), and hops (*Humulus lupulus*), along with edibles such as asparagus and spinach.

The crux of the matter is that all these mechanisms tend to prevent plants coming true from seed; they inhibit self-pollination, promote cross-pollination and, from the gardener's point of view, result in fewer seedlings, or sometimes no seedlings, that resemble the parent plant.

ENJOYING NATURE'S SURPRISES

Depending on your perspective, this can be seen as a shortcoming or as an opportunity to experiment. As home gardeners, we generally want plants to be consistent so that we can be sure of what we are growing, year after year. Plant breeders, on the other hand, value variation be-



Dioecious plants such as hollies—including this Chinese holly (*Ilex cornuta*)—bear male and female flowers on separate plants to ensure cross-pollination.

cause a small change in height or flower color or foliage variegation may lead to the development of a new cultivar for the garden. Breeders grow huge numbers of seedlings, and scrutinize them carefully for those that are slightly different.

A scarlet swathe of annual field poppies (*Papaver rhoeas*) may be genetically alike and look entirely uniform. But the pink-flowered poppy that the Reverend William Wilkes in the parish of Shirley in England first noticed in 1900 and used to develop his multicolored strain of garden poppies was found in a field full of red ones. It led to the many vivid and pastel poppy cultivars, commonly referred to as Shirley poppies, now available. In wild populations, this variation is a natural feature of evolution as plants create variants that may succeed in a changing environment.

At Heucheraholics, a British nursery that, as you may have guessed, specializes in the genus *Heuchera*, horticulturists Jooles Burton and Sean Atkinson have experimented with allowing a number of named cultivars to cross-pollinate freely.

Use Your AHS Benefit!

A good opportunity to experiment with a variety of seeds is through the American Horticultural Society's Seed Exchange (to see this year's seed list, turn to page 57).

Sources

Seed Source Guide, www.howdo-gardener.com. Click on toolshed, then seedsourceguide for a list of numerous sources for ornamental and vegetable seeds.

Resources

The Gardener's A-Z Guide to Growing Flowers from Seed to Bloom by Eileen Powell. Storey Publishing, North Adams, Massachusetts, 2004.

Gardening with Heirloom Seeds by Lynn Coulter. The University of North Carolina Press, Chapel Hill, North Carolina, 2006.

The striking variability in the resulting seedlings is a clear indication that these plants are self-sterile and have been pollinated by a number of other cultivars.

If you grow coral bells in your garden, you can try this yourself by planting different selections close together and then saving the seed capsules, which ripen about three to four weeks after flowering.

SPECIAL CASES

One special category of seed to be aware of is F₁ hybrids. This designation means that the seeds of these plants were created by crossing two different parent plants. The genetically uniform parents are developed so that when crossed with each other they produce seeds that will yield a plant that has the desired qualities.

Many seed-raised impatiens, geraniums, petunias, and other summer annuals—as well as vegetables including broccoli and other brassicas, corn, cucumbers, and tomatoes—are F₁ hybrids.

Because these hybrid plants contain genetic material from two or more parent plants, seed collected from them is likely to produce plants that are quite dissimilar to the hybrid species. Therefore, it is not really worth saving or sharing seeds of hybrid plants, other than for the sheer interest in experimenting to see what you get.

It is also worth keeping in mind that many of the plants we now grow as annuals are in fact frost-tender perennials that are propagated from cuttings. Because these plants tend to be very mixed genetically, seed collected from them will produce vari-

PROTECTING THE PURITY OF HEIRLOOMS

The process of seed saving has particular relevance when it comes to heirloom plants. The existence of heirlooms depends on finding ways to ensure that each generation of plants is almost identical to the one before. And while fruit trees, shrubs, perennials, and many vines can be propagated by cuttings or other vegetative means, for seed-raised annuals and vegetables isolation is key.

Heirloom carrot cultivars for example, pollinated by flies and bees, will hybridize easily with other carrot varieties, so it is recommended that plants for seed production be grown at least half a mile from other carrot cultivars and also from wild carrot (*Daucus carota*), which is a common roadside weed in some parts of North America.

The same is true of annual flowers. Grow those white cosmos 'Purity' more than bee-flight distance from another heirloom cosmos, such as the dark-eyed pink 'Radiance', and the seed of both will generally come true. The closer the two cultivars are grown to each other, the greater the chance that neither will come true.

Although heirlooms kept isolated from other selections will generally come true, it's important to be vigilant. Any seedlings that clearly show different characteristics from the parent, sometimes called rogues or off-types, must be removed immediately so that their pollen does not contaminate the uniformity of the heirloom cultivar. This is done each year to ensure continuing purity. —G.R.



'Cherokee Purple' is a dark-skinned heirloom tomato variety dating to the late 19th century.

able seedlings. These include: snapdragons (*Antirrhinum* spp.), marguerites (*Argyranthemum* spp.), calibrachos, gazanias, impatiens, geraniums (*Pelargonium* spp.), petunias, and coleus (*Solenostemon* spp.).

TAKING THE PLUNGE

Armed with this basic knowledge about what kinds of seeds offer the best chance of providing satisfying results, I recommend you simply go ahead and give it a try; there's nothing quite like the satisfaction of raising plants grown from seed you've collected or had passed along to you. Just remember not to depend on seedlings being the same as the parent

plant unless you've provided the necessary isolated conditions or are growing some of the self-fertile plants I've described.

The potential reward for being an adventurous seed starter is that once in a while a plant raised from seed you collected will turn out to be a selection with new features or characteristics that have never been seen before. That kind of discovery is exciting whether you are a first-time gardener or have years' worth of dirt under your nails.

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a new era for Currants

Attractive and tasty currants are gaining popularity in the edible landscape. BY JO ANN GARDNER

AMERICAN GARDENERS are taking a fresh look at cultivated currants. After years of being considered disease-ridden pariahs, they are beginning to be viewed with favor thanks to the development of improved varieties and changing legal restrictions.

“Ten years ago, if I did a talk and mentioned currants, few people would have had experience or interest,” says Tim Malinich, an educator with the Lorain County Extension Office in Ohio. “Now the picture has changed. In fact, it is becoming almost trendy to grow them.”

Currants are hardy, relatively easy to grow and maintain, and bear bountiful harvests that can be turned into incomparable jams, jellies, sauces, wines, and desserts such as sorbets. As a bonus, currants are a rich source of Vitamin C, potassium, phosphorus, and antioxidants.

Beyond stocking the winter pantry, currants have an important role to play in the edible landscape. These useful and beautiful plants can be grown as informal hedges, featured in beds and borders, and used as striking accents.

ABOUT CURRANTS

Currants are in the genus *Ribes* (pronounced RIBE-eez), the only member of the gooseberry family (Grossulariaceae). About 150 species, which include red and black currants as well as gooseberries, are distributed throughout the cooler regions of Europe, Asia, and North America. All are deciduous, perennial shrubs that grow from three to 10 feet tall with erect to arching branches. Currant plants are easily distinguished from other *Ribes* species by their well-defined musky aroma at all stages of growth.

The foliage of currants ranges from lobed and rounded to more sharply pointed, similar to a maple leaf. In many plants, the leaves turn red or yellow in fall, adding to their ornamental appeal. The flowers—which are



The dangling fruiting clusters of red currants add mouthwatering appeal to the edible landscape.

white, greenish yellow, pink, or deep red, depending on species—bloom in dangling clusters in late spring or early summer. A couple of species have highly fragrant flowers, and all attract a variety of insect pollinators, along with hummingbirds. The fruits, clustered on pendulous stalks that botanists term strigs, start ripening in mid- to late

summer. Red currant berries are about the size of a small pea and translucent; black currants, a little larger in size, range from jet black to bluish. All currants contain between three and 12 tiny seeds.

Nearly half of the 50 native currant species are found in the Pacific Northwest, where moist, cool conditions encourage

their growth, but others are found throughout North America on hillsides, limestone cliffs, at the edges of woods, near swamps, ravines and streams, and plains. Wild currants were used as a source of food, in medicinal preparations, or as dye plants by the Native American tribes who lived among them. Berries of the widely distributed native black currant (*Ribes americanum*) can be used in the same way as the cultivated black currants I'll describe later, although they are smaller.

SHIFTING STATUS

The growing appeal of currants among American gardeners is reflected in the wealth of information about them coming from Cooperative Extension services across the country and in introductions of new varieties.

Breeding programs here and in Europe are continuing to provide gardeners with ever more opportunities to grow larger, juicier, earlier fruits, and sweeter varieties that are good to eat fresh—most currants are too tart or astringent to be eaten out of hand. The beauty of both fruit and shrub has been pushed to the fore as a desirable and achievable trait.

Most importantly, there are more choices among currants that are highly resistant to white pine blister rust, caused by the fungus *Cronartium ribicola*, a disease to which black currants are the most susceptible. This is a concern mainly to growers in the East, where several states maintain restrictions on growing *Ribes* species. Varieties resistant or immune to powdery mildew are a boon for western gardeners.

RUST AND RESTRICTIONS

The fungus that causes white pine blister rust needs both a *Ribes* species and a five-needled pine to complete its life cycle. It was inadvertently introduced to the United States in the late 19th century when millions of infected American white pine seedlings (*Pinus strobus*) were imported from Europe to reforest logged-off areas in the Northeast and Midwest. Although they were raised in Europe for economic reasons, seeds had been gathered from native white pines in the eastern United States. In the first stage of its development, the fungus lives on *Ribes* species, blistering their leaves, petioles, flower bracts, and young stems. Some leaves may drop, but



Red flowering currant, underplanted here with Autumn Joy sedum in the Bainbridge Island, Washington, garden of Carrie West, is a popular ornamental shrub in Western gardens.

little permanent harm is done. Then the fungus completes the second stage of its life cycle inside pine tree stems, causing severe damage or death to the trees.

By 1918, millions of acres of native white pine forests, a valued source of lumber in this country, had been destroyed. A federal ban on growing or selling any *Ribes* went into effect in the United States. European currants had been introduced to the New World in Colonial times and a program of eradi-

cating them was fairly successful, but destroying all *Ribes* was eventually considered to be an impossible task because of the presence of so many wild species. By 1966, due to the varied conditions within each state, the federal ban was lifted and the power to regulate *Ribes* was turned over to individual states (see “*Ribes* and Rust,” next page).

LANDSCAPE APPEAL

Currants are a versatile group of shrubs suit-

RIBES AND RUST

The fungus that causes white pine blister rust (WPBR), a devastating disease of five-needled pines, requires two distinct hosts—a five-needled pine and a susceptible member of the *Ribes* genus—in order to complete its life cycle. In addition to the eastern white pine (*Pinus strobus*), the fungus attacks other commercially important species including western white pine (*P. monticola*) and sugar pine (*P. lambertiana*). Concern over the spread of this disease and the resulting destruction of millions of acres of white pines led to legal restrictions on the sale and cultivation of *Ribes* species in the early 20th century.



This pine branch shows damage caused by white pine blister rust.

Among *Ribes* species, black currants are the most susceptible to the rust, with varying degrees of susceptibility displayed by red, white, and pink currants, and gooseberries. Breeding efforts have produced a number of varieties that have demonstrated resistance to WPBR, which has led to the easing of restrictions on growing *Ribes*. In 1966, the federal restrictions were lifted, and it was left to each state to impose restrictions—or not.

Some states allow only WPBR-resistant cultivars to be imported or grown. Other states restrict cultivation of *Ribes* to specified regions of the state where they are unlikely to cause damage to large stands of pine. And some states, such as North Carolina, prohibit the importation or cultivation of any *Ribes* species.

The following states still have restrictions on the importation and/or cultivation of *Ribes*: Maine, Massachusetts, West Virginia, New Jersey, Rhode Island, New Hampshire, Virginia, Michigan, North Carolina, Ohio, Delaware, and Connecticut. If you live in one of these states, you should check with your state department of agriculture or your local Extension agent before planting currants or gooseberries.

—Rita Pelczar, contributing editor for *The American Gardener*

able for formal or informal plantings. For the integrated landscape, where fruits and flowers mingle companionably, there is much to choose from. The most widely grown wild currant for its beauty alone is red-flowering currant (*Ribes sanguineum*, USDA Hardiness Zones 6–8, AHS Heat Zones 8–6), native from British Columbia’s coastal region to central California. Also known as winter currant, its display of bright red flowers in early spring is spectacular and a big draw for hummingbirds. Blooms vary in color from shades of red and pink to white according to cultivar, of which there are many. Shrubs grow six to 12 feet tall with an equal spread.

Clove currant (*R. odoratum*, Zones 4–8, 8–5), an undervalued native shrub, combines beautiful flowers with delicious black fruit on a loosely graceful form. Discovered during the 1803 Lewis and Clark expedition, it can be found as far north as Saskatchewan and Minnesota, west to the Rockies, and south to Texas. Clove currant adapts to a variety of soils and tolerates heat, drought, and wind. In mid- to late spring, its arching stems, which grow to five feet or more, are smothered with clusters of two- to three-inch-long, narrow, trumpet-shaped flowers, golden yellow with a reddish flush at their base and spicy fragrance. They are very attractive to hummingbirds. Some authorities classify

buffalo or golden currant (*R. aureum*) as synonymous with clove currant.

Bill MacKenty, who has operated St. Lawrence Nurseries in Potsdam, New York, for 40 years, propagates his own clove currant stock, ‘Crandall’, which he says sells out every year (he advises ordering by Janu-

ary), and unlike other nursery stock under this name, it is guaranteed to bear fruit. Once tainted with the stigma of being an alternate host to white pine blister rust, it now appears on the recommended lists of rust-resistant varieties by most Cooperative Extension services in the Northeast.



The spice-scented flowers of golden currant are pure yellow when they open but take on a reddish tint as they age. Its fruits start out translucent and turn black when ripe.

Sources

Forestfarm, Williams, OR. (541) 846-7269. www.forestfarm.com.

Miller Nurseries, Canandaigua, NY. (800) 836-9630.

www.millernurseries.com.

One Green World, Molalla, OR. (877) 353-4028. www.onegreenworld.com.

Raintree Nursery, Morton, WA. (360) 496-6400. www.raintreenursery.com.

St. Lawrence Nurseries, Potsdam, NY. (315) 265-6739. www.sln.potsdam.ny.us.

The alpine currant (*R. alpinum*, Zones 2–6, 6–1) is a European species that makes a great informal hedge or foundation plant—either in a sunny or a partly shady site. An upright, rounded shrub, it usually grows to about six feet tall and wide. Several worthy varieties are available: ‘Spreng’ (Green Jeans™) grows three to five feet tall and wide with foliage that remains clean throughout summer; ‘Aureum’ produces bright yellow-green leaves, especially in a sunny location; and the dwarf ‘Green Mound’ grows only two to three feet tall with a neat, dense habit.



Growing only four or five feet tall, alpine currant can be pruned as a low hedge.

BLACK CURRANTS

Most black currants are derived from *Ribes nigrum* and *R. ussuriensis*, native to Europe and Asia. Depending on the cultivar, they are hardy from Zones 2 or 3 to 8. In Canada, where cultivated black currants have always enjoyed popularity from the English tradition, efforts were devoted to breeding rust-resistant cultivars. By 1952, three had been produced: ‘Consort’, ‘Coronet’, and ‘Crusader’. This, as well as rust-resistant white pines, revived the possibility of growing black currants in the United States. Today, restrictions have been considerably loosened as more resistant varieties become available. ‘Consort’ still sets the standard for rust-resistant black currants despite the introduction of more productive varieties.

In addition to his job as an Extension service educator, Tim Malinich raises rust-resistant black currants on his Ohio farm and sells the fruit. He grows ‘Consort’ and ‘Coronet’, the compact and very productive ‘Ben Sarek’, ‘Titania’, and ‘Wilmington’, which is also resistant to powdery mildew. The California Rare Fruit Growers give high marks to ‘Noire de Bourgogne’ and ‘Boskoop Giant’ for sweeter fruit.

For Jim Gilbert, owner of the wholesale/retail One Green World nursery in



Several rust-resistant black currant cultivars are available, including ‘Consort’, above, which was developed in Canada more than 60 years ago and has remained a reliable choice for gardeners.

Oregon, ‘Blackdown’, an English variety, is his favorite for eating fresh. It bears heavily, and the shrub itself is upright and attractive. His catalog lists the states where *Ribes* cannot be shipped, but he says that restrictions are always shifting, and even within some of these states it is possible to obtain a special certificate for growing them. If in doubt, it is best to consult your local Cooperative Extension office.

Jostaberries, a black currant–gooseberry cross bearing plump black berries that can be eaten fresh, is very hardy and resistant to rust and mildew. According to customer service spokesperson Niky Yothers at Miller Nurseries in Canandaigua, New York, this hybrid, sold under the name ‘Josta’, always sells out. (For more on jostaberries, see the article on them in the September/October 2012 issue.)

RED, WHITE, AND PINK CURRANTS

Cultivated red, white, and pink currants are derived from three European species: *Ribes rubrum*, *R. petraeum*, and *R. vulgare*, and are hardy from Zones 3 to 8. Their beautiful translucent berries hang in long-lasting, tiered clusters. ‘Red Lake’, an old favorite, bears dark red berries. It is very hardy, tol-



Above: A cross between black currants and gooseberries, jostaberries have tasty fruit that can be eaten fresh. **Right:** ‘Red Lake’ is a very hardy, drought-tolerant, and rust-resistant cultivar of red currant.



erant of drought, and is rust-resistant. The Dutch cultivar ‘Rovada’ is very productive; its large red fruit ripens later in the season, and it is sweeter. White and pink currants are naturally sweeter, although a friend of mine describes the flavor as “lacking in depth.” The standard white is ‘White Pearl’, a European classic. The Slovakian cultivar ‘Blanka’ bears larger berries. A cross between red and white currants, ‘Pink Champagne’ is also sweet enough to eat fresh, while maintaining the tartness that gives red currants their fabled flavor in preserves.

GROWING AND CARING FOR CURRANTS

Because currants and pines must be in close proximity for the spores of rust to spread, you should plant currants a minimum of 1,500 feet from any stands of white pines.

While red, white, and pink currants, and most black currants, are self-fertile, they benefit from cross-pollination with other varieties. All prefer the same growing conditions: moist and well-drained soil, protection from wind, and full sun, although they will tolerate part shade where summers are very hot. Plant bushes six feet apart for red currants and nine feet apart for black currants, closer if you are

trying to form a hedge. Feed them with plenty of organic matter (rotted compost or manure) every season and keep them mulched to a depth of three inches.

As Bill MacKently observes, “currants like to renew themselves,” so it is important to prune them annually in spring to maintain fruit production. This will also keep bushes open to air circulation, which discourages foliar disease. Red currants fruit primarily from short spurs on one-, two-, and three-year-old canes. When plants are dormant, remove all older canes at ground level, leaving nine to 12. Black currants produce most fruit on one-, two-, and three-year-old wood (not spurs), so remove older canes, leaving about 10 to 15 per mature bush. Propagation is easy by either cuttings or layering.

EDIBLE LANDSCAPE ASSETS

Anyone who has spent time abroad has probably encountered some of the deli-

cious concoctions made from black currant fruit, including juice drinks such as Ribena (popular in the United Kingdom), liqueurs like *crème de cassis*, not to mention jellies and jams (for the author’s recipe for black currant jam, click on the link to this article on the AHS website). Dried currants are also popular in baked goods such as scones.

If you are not sold on the culinary and nutritive assets of currants, consider the beauty these flowering shrubs can add to the landscape. We are very fortunate to be living at a time when the virtues of these once-banned fruits can be enjoyed to the full. 🍷

The author of several gardening books, most recently Old-Fashioned Fruit Garden: the Best Way to Grow, Preserve, and Bake with Small Fruit (Skyhorse Publishing, 2012), Jo Ann Gardner tends an edible landscape in Westport, New York.

Fresh Figs Can't be Beat

by Lee Reich

ONE TASTE OF a fresh fig (*Ficus carica*) and you'll understand why this fruit has captivated humans for millennia. First mentioned in writing about 5,000 years ago in the Middle East, fig cultivation spread to China over 1,000 years ago, then by the 16th century to Europe, the West Indies, Florida, and Peru.

My first fig languished in a pot in my apartment in Wisconsin in the 1970s. Since then, I have found ways to grow and harvest figs in the various northern locales in which I've lived. While they flourish in USDA Hardiness Zones 7–11, AHS Heat Zones 12–1, be assured that figs can be grown and enjoyed in regions and climates far removed from their native Mediterranean haunts. By selecting cold-tolerant varieties and providing them with a bit of protection, figs can be grown as far north as Philadelphia and Chicago (see “Growing Figs in Cold Climates,” opposite page).

Figs are so tasty that it's easy to overlook the ornamental qualities of the plant itself. Lush, deep green, tropical-looking leaves grace the upright to mounded shrubs all summer; in winter the clustered stems and gray bark provide interest of their own.

GROWING GUIDELINES

Figs need a minimum of six hours of sun and lean soil to ensure good fruit production. Plants are fairly drought tolerant, but will appreciate watering during extended dry periods in summer. And unless you want to grow several selections, one specimen is all you'll need because most backyard varieties are self-fertile.

Train a fig either as a bush with many stems or as a tree with a single trunk. The bush form is more practical for an outdoor specimen where winter cold occasionally kills part or all of the plant back to ground level. A south-facing wall that is protected from prevailing winds often provides a perfect microclimate for



Top: Most figs are ripe enough to eat when their flesh turns pink or red. **Above:** An early “breba” crop forms on one-year-old stems.

growing a fig outdoors in cooler regions. The wall absorbs solar heat during the day and radiates the stored heat at night.

More than 200 fig selections are available and they vary in their fruit-bearing habits, which influences pruning requirements and adaptability to colder climates. Some cultivars bear fruit—the so-called “main” crop—on new shoots, an asset for a tree whose stems might be killed back by winter cold, or a potted plant that needs to fit through doorways. Other cultivars bear what is known as a “breba” crop, which is produced earlier in the season on one-year-old stems. And still other selections bear both the breba and main crops in one season.

Figs fruit fairly well with little or no pruning, but pruning can increase production. Prune selections that bear mostly a main crop fairly severely to stimulate new shoots each year. Thin out stems and cut most of the remaining ones back by three-quarters or more. Prune selections that bear two crops less severely. Do some

GROWING FIGS IN COLD CLIMATES

I have grown and harvested figs outside their typical hardiness range by swaddling their branches (shown in photo) or bending them to the ground, by growing them in large pots moved to a protected location for winter, and by planting them in the ground in a minimally heated greenhouse. Depending on the degree of protection, the degree of cold, and the variety of fig, all these methods can be successful. One selection introduced for its adaptability in cold climates is 'Chicago Hardy'.



Fig plants adapt well to growing in large containers and don't mind having their roots hacked back yearly to make room for fresh soil in a pot. Reduce watering before bringing potted figs into a garage or unheated shed for winter. When leafless, figs don't require light or more than minimal water. Keep them exposed outdoors in autumn as long as possible before protecting them by moving pots, covering plants bent to the ground, or swaddling their branches within a temporary fence filled with leaves (capped to keep out moisture). Expose stems to outdoor conditions as early as possible the next growing season, before new shoots begin to appear. —L.R.

thinning and shortening but leave most stems intact for a good breba crop.

PEST & DISEASES

Figs have few pest or disease problems. Root knot nematodes may infest roots, particularly in sandy soils in the Southeast, causing lack of vigor and poor fruit production. Avoid planting figs where other susceptible crops such as tomatoes and okra have recently been grown, or grow figs in containers where nematodes are a problem.

Dried fruit beetles can enter fruits through the "eye"—a small opening located at the end of the fruit—introducing microorganisms that cause the fruit to ferment or sour. To thwart these insects, grow varieties such as eastern 'Brown Turkey' and 'Celeste', which have small or closed eyes.

Birds, possums, and other animals will want to share your figs; place netting over figs during harvest season to reduce theft.

Wet weather during ripening can cause fruit splitting in some varieties.

RECOMMENDED SELECTIONS

'Adriatic' Small to medium fruit with greenish-yellow skin and strawberry-red pulp; very good flavor; grow mostly for

main crop; adapted to cool, coastal areas.

'Brown Turkey' Two varieties, both with brown skin, pink flesh, and delicious flavor, parade under this name. Eastern 'Brown Turkey', sometimes called 'Everbearing' or 'Texas Everbearing', is a relatively cold-hardy variety with small to medium fruit with a small eye; good for the Southeast. California 'Brown Turkey', which is not very cold-hardy and bears large fruits, is sometimes called 'San Piero'.

'Celeste' Fruits are small, very sweet, and light brown to violet in color; cold-hardy; good for the Southeast; grow mostly for main crop.

'Conadria' Fruit is pale green with strawberry-red flesh; good fresh and excellent dried; small eye; grow mostly for main crop; best in hot climates.

'Green Ischia' ('Verte') Small, green or purplish fruit with pink flesh and relatively closed eye; very good flavor; good breba and main crop; late ripening.

'Kadota' ('Dottato') Fruits are medium size, bright greenish-yellow, and excellent fresh or canned; usually pruned severely for main crop only; fruit has a large eye; needs abundant heat and dry weather.

'LSU Purple' Fruits are medium in size with glossy skin varying from reddish to

Sources

Bay Laurel Nursery, Atascadero, CA. (805) 466-3449.

www.baylaurelnursery.com.

Hidden Springs Nursery, Cookeville, TN. (931) 268-2592.

www.hiddenspringsnursery.com.

Well-Sweep Herb Farm, Port Murray, NJ. (908) 852-5390.

www.wellsweep.com.

Resources

American Horticultural Society Home-grown Harvest: A Season-by-Season Guide to a Sustainable Kitchen Garden by Rita Pelczar. Mitchell Beazley/Octopus Publishing, London, 2011.

Figs, Dates, Laurel, and Myrrh: Plants of the Bible and the Quarm by Lytton John Musselman. Timber Press, Portland, Oregon, 2007.

dark purple; light strawberry flesh with mild, sweet flavor; light breba crop and heavy, long ripening main crop; purple stems; nematode resistant.

'Magnolia' ('Brunswick') Fruit is medium size and has bronze skin and light amber pulp, with large eye and tendency to split; good flavor; grow mostly for main crop.

'Mission' ('Black Mission') Fruit has purple-black skin with amber flesh; breba fruits are larger than main crop fruits; small eye and little tendency to split.

ENJOYING THE HARVEST

Figs do not ripen after being harvested, and they also don't travel or keep well, which is all the more reason for growing your own figs if you want them fresh. Wait until the fruits are fully colored, softening, and beginning to droop before harvesting. They ripen over many weeks, so check regularly.

Figs are a good source of iron, calcium, potassium, and dietary fiber. If you're blessed with more ripe fruits than you can eat and share, dry or can them, poach them in wine, or make fig bars.

An author, lecturer, and consultant, Lee Reich lives in New Paltz, New York. His most recent book is Grow Fruit Naturally (Taunton Press, 2012)

Success with Seeds

by Scott Aker

LIKE MANY gardeners, one of my formative gardening experiences was helping to plant lettuce and carrot seeds outdoors when I was a toddler. As a teenager, I got a fluorescent grow light that allowed me to start a wider variety of seeds indoors, and now I start seeds in a room devoted largely to plants with the help of a high-pressure sodium lamp. Starting your own plants from seeds is rewarding and generally quite easy. But to avoid potential problems, here are some tips for stress-free seed-sowing.

LIGHTING

The most common problem is lack of light. If you are lucky enough to have a south-facing window with a wide windowsill, you may have enough natural light to start seeds there. If you live in the north where days are very short in the winter, or where winters and early spring are very cloudy, natural light may not be adequate.

If you want to start plants like lisianthus (*Eustoma exaltatum* ssp. *russellianum*), and begonias that take a long time to develop into plants large enough to plant in the garden, you will have much better results if you use artificial light. If you choose a fluorescent fixture, it's best to equip it with special bulbs that produce most of their light in the blue and red wavelengths that plants use for photosynthesis.

Because light intensity drops rapidly with distance from light bulbs, keep them no more than six to eight inches above young seedlings, raising the lights as plants grow. To light a larger area, invest in a high-pressure sodium or metal halide lamp. These provide much more intense light and must be kept three or four feet away from foliage. Unlike fluorescent tubes, these high-intensity lights also give off significant heat, so plan for ventilation in warm weather.

A few seeds, including those of cyclamen and pansies, need darkness for good



Strawberry seedlings grown indoors in winter can be transplanted outdoors in spring.

germination. Once germination has begun, the seedlings must be moved into bright light immediately so they don't become leggy. The bottom of a closet or the space under a bed are handy dark places, or you can fit a box over the seedling flat. Check them often—at least three times a week—for signs of germination.

AVOIDING FUNGAL DISEASES

Sanitation is very important in germinating seedlings and growing them on. Most commercial potting mixes are, fortunately, free of fungal diseases. If you reuse germination flats, however, be sure to wash them in a 10 percent bleach solution to kill any pathogens that may be left over from the previous season's use.

Sometimes the potting mix used is a problem. Germination media needs to be free-draining yet deliver consistent moisture. Seeds need ample oxygen to germinate well, and new roots will grow poorly in saturated soil. Wild fluctuations

between soggy and dry will kill most tender seedlings. Most germination mixes contain finely milled coir or peat and finely milled vermiculite to provide both sufficient moisture retention and good drainage. Don't use regular potting soil, as it tends to remain too wet.

TEMPERATURE AND MOISTURE CONTROL

Professional growers use a fibrous mat under seedling trays to both draw away excess moisture after watering and provide moisture by capillary action between watering. You can rig your own capillary mat with cotton quilt batting from a fabric store. Cut a piece that is six inches wider along the longer axis than your germination tray. Place it in the bottom of the tray so the excess hangs out and below one side. Cover the batting with a piece of black plastic film cut from a trash bag, and poke holes in it with the tip of a knife, spacing them every inch or so. The black plastic blocks light and prevents algae

Gardening Q&A with Scott Aker

CONTROLLING DOWNY MILDEW

Downy mildew devastated impatiens (*Impatiens walleriana*) in our area (Wisconsin) last year. I had no flowers and my shady beds were a disaster. I got rid of the plants, but I've seen others that were affected in my neighborhood. Will I have the same problem next year, and if so, what can I do to prevent it from killing my impatiens?

While downy mildew has been reported on impatiens before, it became an epidemic last spring in many locations throughout the country. Early infections of downy mildew don't produce easily recognizable symptoms, so most likely the disease was unwittingly shipped on plugs, and the resulting plants probably carried low-level infections that didn't really get going until they were growing in gardens.



Downy mildew on impatiens

Unfortunately, the fungus (*Plasmopara obducens*) that causes the disease can overwinter in garden soil. It will not cause disease unless cold, wet spring weather conditions exist to start new infections. Fungicides are effective, but must be applied frequently to protect plants from infection.

Overhead watering should be avoided. Unless you are willing to spray the plants every week to 10 days—or bet on drier, warmer weather conditions this coming spring—you might want to use other shade-tolerant annuals such as caladiums, coleus, and begonias for a year or two to prevent perpetuation of the disease in your garden. New Guinea impatiens (*Impatiens xhawkeri*) are resistant to the disease.

NON-BLOOMING COSMOS

This summer we sowed orange cosmos (*Cosmos sulphureus*) seed that we had gathered last summer from our Michigan garden in the same spot. Half the plants were terrific. Half were all foliage, no blooms, with thick woody stems. We gathered seeds again, but will they produce flowers next year?

There could be a genetic basis for the difference you've noted, but I'm doubtful of this since cosmos seed is generally open-pollinated. One likely explanation is that your moisture and fertility were on the high end; orange cosmos is known to be reluctant to bloom if grown with excess nutrients and water. I suggest you plant the seeds you have in lean soil and provide minimal watering; remove any plants that fail to bloom when flowering begins on the other plants. If you save seeds every year, you will be selecting for plants that begin to bloom earlier, an advantage in your northerly location. —S.A.

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

growth on the cotton, the holes allow the bottom of germination flats to make contact with the capillary mat. Place a tray under the exposed edge of the mat to collect water that drips off it.

Many seeds germinate rapidly at room temperature, but some benefit from other treatments. You may find that germina-

tion is more uniform and complete if you provide mild bottom heat (65 to 70 degrees Fahrenheit) with a seed germination heat mat. Clear plastic domes help to trap some heat, and if you don't have these for flats, clear plastic film works fine. Both have the added benefit of maintaining high humidity in the tray. If you are using

a cart equipped with lights, the top shelf is likely right above the ballast for one of the fluorescent fixtures, so use the warmer top shelf for newly seeded trays until they germinate, then move seedlings to a lower position to make way for a new batch of seeded trays.

CONDITIONING REQUIREMENTS

Most trees and shrubs that grow in temperate regions need to experience a few months of cold before they will germinate. You can mimic this by placing seeds in some moist potting media and placing them in a zip-top plastic bag in your refrigerator. Mark the bag with the name of the plant and the date the seeds should be taken out of the refrigerator to germinate. Placing the sown seeds outdoors in a cold frame will achieve the same result.

Other seeds have hard seed coats that must be scratched with a piece of sandpaper, nicked with a nail clipper, or doused with very hot water to create a path for water to reach the embryonic plant inside.

TIMING

You can do everything else right and still fail if you aren't careful about timing. To determine when to start your seeds, use the information on the seed package or consult a good encyclopedia or seed book (you'll find some suggested on page 36). Add a week if your seed-starting location is on the cool side. Deduct a week if you are using artificial light and your germination room is warm.

Some seeds need to be sown very early. Begonias develop very slowly from tiny seeds and need the extra time; leeks should be started early because they need to be hardened off and planted outdoors in very early spring. But tomatoes and peppers started more than a few weeks prior to the arrival of nighttime temperatures that stay above 55 degrees Fahrenheit will become spindly before they can be transplanted outdoors.

A number of common plants such as sunflowers, morning glories, and zinnias grow best when seeds are planted directly in the garden. Again, check the seed package or an encyclopedia for the best timing. 🌱

Scott Aker is a horticulturist in the Washington, D.C., area.

Horticultural News and Research Important to American Gardeners

DOWNY MILDEW EPIDEMIC STRIKES IMPATIENS IN 2012

If you had bedding impatiens (*Impatiens walleriana*) in your garden last year, chances are they didn't do too well. In many regions, these plants, also known as busy lizzies, were struck by a widespread scourge that caused them to drop their leaves and die. The culprit: *Plasmopara obducens*, a funguslike pathogen that causes a disease called downy mildew.



A grayish fuzz on the underside of impatiens leaves is a symptom of downy mildew.

While the disease has made localized appearances in past years, conducive weather conditions at just the right time created a much bigger problem in 2012. Margery Daughtrey, a senior Extension associate at Cornell University in Ithaca, New York, notes that the epidemic was "most severe in areas of the country with plenty of cool, rainy weather during the growing season." Outbreaks occurred across the United States, including Southern California, the Northeast, the Mid-Atlantic, the Midwest, and the Northwest, as well as south Florida.

"Spores produced on the undersides of the leaves are spread by air currents," explains Daughtrey. "The infected plants appear normal for at least a week after infection. Thus the disease

can begin to spread before symptoms announce its arrival." Symptoms include yellowing, curling leaves with grayish fuzz on their undersides. As the disease progresses, leaves and flowers wither, then drop off the stems.

The good news is that this downy mildew is specific to bedding impatiens, so it does not affect other plants. The bad news is it spreads easily, is difficult to control once infection occurs, and is likely to overwinter in the soil and cause problems the following year.

The best advice for avoiding it in your garden this coming summer is to forego bedding impatiens altogether and plant alternative bedding plants such as begonias or coleus to add color to shady spots. New Guinea impatiens (*I. hawkeri*) is resistant to downy mildew, so it is also an option.

RENEWABLE ENERGY FACILITIES MAY THREATEN NATIVE PLANTS

Renewable energy is an industry typically supported by environmental groups across the board. However, that's not the case with the development of solar power

facilities in the Mojave and Sonoran deserts. The National Parks Conservation Association (NPCA), a Washington, D.C.-based advocacy group, released a report in September titled *Solar Energy, National Parks, and Landscape Protection in the Desert Southwest* that warns of the threat these facilities pose to native plants and wildlife. The offenders include the Amargosa Farm Road Solar Project in Nevada, the Ivanpah Solar Electric Generating Station in California, and the Desert Sunlight Solar Farm, also in California.

"The California desert retains a diverse representation of southwestern plant and animal species," says David Lamfrom, California desert senior program manager at the NPCA. "It is internationally renowned for its wildflowers, remarkably dark and starry skies, deep quiet, and is one of the few remaining places with wide-open vistas. Poorly sited renewable energy projects can and have impaired all of these values in specific locations, especially close to our national parks."



The Mojave National Preserve, located in the Mojave Desert. The NPCA warns that new solar power facilities being built in the region threaten native plants and wildlife.

The NPCA is urging relocation of these facilities to areas—such as urban rooftops and vacant lots—less sensitive to industrial impacts. “At the NPCA, we believe in renewable energy, but it must be done in a way that does not jeopardize fragile biological and cultural resources and our national parks,” says Seth Shteir, a California desert field representative for the NPCA. To read the report and the NPCA’s recommendations, visit www.npca.org.

WESTERN WILDFIRE RECOVERY SLOWED BY SEED SHORTAGES

The West experienced an unprecedented season of wildfires and drought last year, affecting millions of acres of land across more than a dozen states. Because of the “risk of increased soil erosion,” says Mark Coca, vegetation-management specialist for the Bureau of Land Management (BLM) in Nevada, re-vegetating the burned land is a priority. Unfortunately, high demand has drastically raised prices and caused a supply shortage of many seeds native to the region, hindering recovery efforts.



Sagebrush is an important component of western ecosystems. Severe seed shortages are hampering its recovery in areas ravaged by wildfire and drought.

Shortages in seeds of sagebrush (*Artemisia* spp.), which dominates the western U.S., have been the biggest concern. “Over the past 100 to 140 years, the pressures on the land have changed and we now have annual grasses invading sage-

brush systems,” explains Lee Turner, a habitat staff specialist for the Nevada Department of Wildlife. “After the fires happen, the annual grasses tend to flourish, and then we have a hard time getting back to our native vegetation communities.”



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So far, land is being prioritized for seed restoration depending on the urgency. According to Coca, the BLM is working with several partners, including the Nevada Department of Wildlife, “in order to get seed as well as do some cooperative projects to get everything on the ground as soon as possible.” In case you missed it, an article about the native seed restoration industry was published in the September/October 2012 issue of *The American Gardener* (you can view the article on the AHS website).

WHY PLANT-EATING INSECTS ARE IMPORTANT

When insects start plaguing our prized plants, the last thing most of us would do is roll out the welcome mat. However, a five-year study funded by the National Science Foundation and published in the October issue of *Science* suggests it may be in our best interest to do just that in our gardens and fields.

A team of researchers led by Anurag Agrawal of Cornell University in Ithaca, New York, found that when primroses were raised in a pest-free environment, the plants lost defensive traits such as the production of insect-detering chemicals. In other words, the plants evolved—in just three to four generations—to lose characteristics that were no longer needed.

“The study shows us how evolution is occurring everyday around us,” says Agrawal. “The rapidity with which we found genetic change in plant populations demonstrates that insects are important in the progression of plant evolution.”

So next time insects start munching on something in your garden, try taking comfort in the thought that it’s for the plants’ own good!



New research from Cornell suggests that when pests like moths lay eggs on primroses, they might actually be contributing to the plants’ improved vigor.

NEW FERN GENUS NAMED FOR POP STAR

Lady Gaga may be best known for her over-the-top fashion sense and energetic music, but now her name is immortalized in the plant world. A new genus of ferns—comprising 19 different species found in Central and South America, Mexico, Arizona, and Texas—has been named in honor of the trend-setting and sometimes scantily clad pop star.



An herbarium specimen of the newly discovered *Gaga germanotta* fern.

Two of the species in the *Gaga* genus are newly discovered: *Gaga germanotta*, from Costa Rica, recognizes Lady Gaga’s given name, Stefani Germanotta. The other species, *Gaga monstraparva* (literally “monster-little”), from Mexico, is named in honor of Gaga’s fans, whom she calls “little monsters.” The other 17 species are being reclassified after being previously assigned to a different genus.

“We wanted to name this genus for Lady Gaga because of her fervent defense of equality and individual expression,” says study leader Kathleen Pryer, a Duke University biology professor and director of the Duke Herbarium in Durham, North Carolina. Her lab also found that a particular DNA base-pair sequence that distinguishes this group of ferns from all others is spelled GAGA. Plus, Pryer adds, at a certain reproductive stage, plants in the new genus *Gaga* bear a resemblance to one of Lady Gaga’s famous costumes.

2013 GREEN THUMB AWARDS FOR PLANTS AND PRODUCTS

The nonprofit Direct Gardening Association has announced the 10 winners of its 2013 Green Thumb Awards. Honored in the Plants, Bulbs and Seeds division were five new plant varieties: ‘On Deck’ sweet corn from Burpee; ‘Heaven Can Wait’ blackberry, plus ‘Caramel Cocktail’ and ‘Sugar Daddy’ American



‘Heaven Can Wait’ blackberry

persimmons from Henry Field’s Seed & Nursery Co.; purple love grass (*Eragrostis spectabilis*) from Prairie Moon Nursery; and PDQ (“Pretty Darn Quick”) Seed Mix from Prairie Moon Nursery.

Honored in the Tools, Supplies and Accessories division were five new gardening products: the Digital 3-Way Soil Analyzer from Charley’s Greenhouse & Garden; Hot Potato! and Garlic Galore! from Ter-



Peel Away™ pots

ritorial Seed Company; Strawberry Pyramid Grow Tub from Gardens Alive!; and Peel Away™ Pots from Gardener’s Supply. The winning products were judged on their unique quality, technological innovation, ability to solve a gardening problem or provide a gardening opportunity, and potential appeal to gardeners.

LEFT: COURTESY OF ANURAG AGRAWAL/CORNELL UNIVERSITY. CENTER: COURTESY OF DUKE UNIVERSITY. TOP RIGHT: COURTESY OF DIRECT GARDENING ASSOCIATION AND HENRY FIELD’S SEED & NURSERY CO.. BOTTOM RIGHT: COURTESY OF DIRECT GARDENING ASSOCIATION AND GARDENER’S SUPPLY

PEOPLE and PLACES in the NEWS

Renowned Nebraska Nurseryman Killed in Explosion

Harlan Hamernik, founder of Bluebird Nursery in Clarkson, Nebraska, died on October 18, 2012, following an accidental explosion at his home in Clarkson. Hamernik, 76, was regarded as one of the most knowledgeable plantsmen in the garden industry. His many projects included traveling across Asia to find new plants to introduce to American gardeners, developing his own cultivars, and providing expertise and advice on native plants from the Great Plains region.

Hamernik's achievements earned him several national awards, including the Award of Merit from the Perennial Plant Association and the American Horticultural Society's Paul Ecke Jr. Award.

New Executive Director for Mt. Cuba Center

In December, Jeffrey Downing became the executive director of the Mt. Cuba Center in Hockessin, Delaware. Previously, Downing served as the vice president for education at the New York Botanical Garden.



Jeffrey Downing

"It's wonderful to be affiliated with a public garden with such a rich tradition," Downing says. To build on that, he is looking forward to "expanding our programming and messaging to help people understand the value of native plants." The goal is to "hopefully encourage them to use native plants in their own gardens and landscapes, as well as think about the other aspects of plant conservation and healthy ecosystems that native plants are a part of," he says. For more information, visit www.mtcubacenter.org.

High Country Gardens Closes

After 19 years in business, mail-order nursery High Country Gardens, based in New Mexico, shut down at the end of the 2012. David Salman and his wife, Ava, began the business in 1993 as a mail-order division of Santa Fe Greenhouses, a local retail nursery they founded in 1984, which also has closed. Both businesses specialized in xeric plants that "need little or no extra water once established," including a diverse array of exclusive or unusual varieties.

In a statement on the company's website, Salman attributed this turn of events to the economic hardships of the past four years, and particularly the extreme drought conditions and forest fires that have hit the West in the past two years.

All winners were selected by an independent panel of garden writers and editors. For more information, visit www.directgardeningassociation.com.

LADY BIRD JOHNSON FEATURED ON FOREVER STAMP

On November 30, 2012, the U.S. Postal Service dedicated the Lady Bird Johnson souvenir Forever stamps sheet, in honor of the late former First Lady, who was a champion for the Highway Beautification Act of 1965 and also founded what is now the Lady Bird Johnson Wildflower Center in Austin, Texas.

"The Postal Service is proud to issue this historic Forever stamp honoring a beloved First Lady who worked

tirelessly to make the United States a more beautiful place," says Postmaster



General Patrick Donahoe. "Lady Bird Johnson's legacy lives on along our nation's roadsides, and urban parks and trails, which she so diligently worked to preserve and beautify, and now on a U.S. postage stamp to commemorate her contributions forever."

To purchase these stamps or for more details, visit www.usps.com.

News written by Editorial Intern Neel Patel.

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GREEN GARAGE® by Rita Pelczar

Contributing editor Rita Pelczar reports on products she has found useful or innovative in her garden, with an emphasis on earth-friendly products and supplies. Here she focuses on products for making the most of the quiet winter season.

LIGHTING THE WAY WITH SUN POWER

An evening walk in the winter garden can highlight aspects of your landscape that may be overlooked in spring and summer, when lush growth and colorful flowers dominate the scene.



The texture of tree bark, shapes of buds, colors of twigs, and subtle shades and heady scents of evergreen foliage are worth noticing. Add some light to the garden in those dark hours and you are likely to take more of these relaxing strolls. The **Solar Wave Path Light** has a sleek design

with a built-in collector; it needs to be placed in a sunny spot to collect a charge that will provide six to eight hours of soft path light. You can set the switch so that when evening falls, the light turns on automatically.

The **Superbright Solar Spotlight** turns on at dusk to shine on a particular area of the garden or to draw attention to a garden feature after dark.



With 16 light-emitting diodes, it is very bright, and is constructed with a durable weatherproof housing that seals out moisture and prevents rust. The solar panel, which collects and stores energy during the day, is connected to the spotlight by a thin 15-foot wire. This means that as long as the solar panel is placed in a sunny location, you can set the spotlight wherever it's needed—in sun or shade. It

comes with options for installing in the ground or mounting on a wall or deck. Both the spotlight and path light are available from Gardener's Supply. www.gardeners.com.

STARTING SEEDS WITHOUT POTS

If you start plants indoors for your garden, you will want to be ready for the seeds when they arrive. **Soil Block Molds** from Lee Valley Garden Tools are a neat innovation that allows you to plant your seeds without pots. The mold compresses your planting medium into blocks that hold their



shape as you plant your seeds. The molds come in two sizes: the smaller mold makes 20 $\frac{3}{4}$ -inch cubes, the larger mold makes four two-inch cubes. To save space, you can start your seedlings in the smaller cubes and transplant them into the larger blocks using a dimple that creates a $\frac{3}{4}$ -inch cavity in the larger block for a snug fit. Once the time is right and your seedlings are of sufficient size to be planted in the garden, there is no pot to remove or roots to disturb; you simply plant the entire soil block. (For advice on starting plants from seed, see "Garden Solutions," page 44.) Lee Valley Garden Tools. www.leevalley.com.

EYE PROTECTION FOR ALL SEASONS

Not all outdoor tasks end when temperatures drop. Whether you are pruning your fruit trees, knocking snow off your shrubs, or turning the compost pile, **Fuel™ Classic Safety Eye-wear** from 3M will protect your eyes from damaging ultra-violet (UV) light as you complete your outdoor chores.



The impact- and scratch-resistant lenses absorb 99.9 percent of UV rays, and they are contoured for good coverage. They come with

a lanyard so it's easy to keep them handy for when you need them. 3M TEKK Protection™ Brand. http://solutions.3m.com/wps/portal/3M/en_US/NATekk.

A contributing editor for The American Gardener, Rita Pelczar lives in North Carolina.



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Recommendations for Your Gardening Library

Beautiful No-Mow Yards

Evelyn J. Hadden. Timber Press, Portland, Oregon, 2013. 252 pages. Publisher's price, softcover: \$24.95.

Lawn Gone!

Pam Penick. Ten Speed Press, Emeryville, California, 2013. 192 pages. Publisher's price, softcover: \$19.99.

DEPENDING ON your perspective, a lawn can be seen either as a time- and resource-sucking waste or as an iconic symbol of the American dream yard. Two new books bridge these polemics, even as both urge reducing the size of lawns in favor of spaces that are more welcoming and less reliant on water, fertilizer, and pesticides.

In *Beautiful No-Mow Yards*, Evelyn J. Hadden presents a well-reasoned argument for lawn reduction. Lawns simply aren't compelling enough to deserve our love and attention, and "Here's why," she writes: "Life is what interests us." The book's first part profiles gardeners and 50 inspirational locations in 11 categories, such as play areas, shade gardens, and stroll gardens. The slim second section talks about how to convert and maintain a former lawn. The third part is an encyclopedia thoughtfully grouped into mounding, mat-forming, filler, or mingler plants, but lacking individual mug shots.

You might assume Pam Penick's book, *Lawn Gone!* would be redundant, but it's actually a boon companion. Penick breezes through the philosophical bits in an introduction, then walks you through the process of deciding what else to do with that space and how to do it. The book includes a section on the politics, health, and safety of going lawnless, including how to deal with a recalcitrant homeowner's association and skeptical neighbors.

The book's strongest feature is its encyclopedia with recommendations from 11 regional gardening experts from around the United States, and each plant earns its own photograph.

There are multiple reasons to change yard practices. If you've recognized that a lawn no longer serves your purposes, it's time to mow into both of these books.

—Deb Wiley

Deb Wiley, a freelance garden writer and editor, is transforming her Des Moines, Iowa, lawn into ever-larger garden beds and patios.

Why Grow That When You Can Grow This?

Andrew Keys. Timber Press, Portland, Oregon, 2012. 336 pages. Publisher's price, paperback: \$24.95.

IF YOU WEREN'T one of the popular kids in school, you'll appreciate Andrew Keys' comparison of high school as a metaphor for life to the world of gardening. In *Why Grow That When You Can Grow This?* Keys features the math club members of the plant world. They may not be showoffs in the nursery, but shine when given the right environment in the garden. Just as the prom queen loses her luster without makeup, the flashy flower in the catalog may disappoint without the help of photo enhancement or pesticides.

An introductory chapter on how to choose top-performing plants provides a framework for avoiding planter's remorse from selecting popular but problematic plants. Keys stresses the importance of matching plants' environmental and maintenance needs to the site. Armed with this knowledge, savvy shoppers can expand planting options beyond overused standbys.

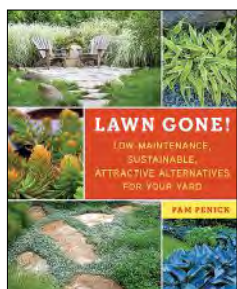
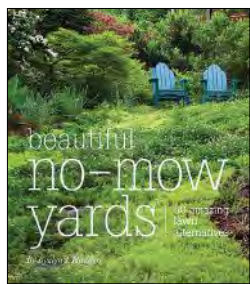
Colorful photographs guide the reader through chapters on trees, shrubs, vines, perennials, grasses, and groundcovers. Color-coded sidebars make it easy to locate the preferred chapter when using the book as a reference. Problem plants get secondary billing, with smaller photos and brief descriptions of the drawbacks associated with them. For each fallen prima donna, Keys provides three alternatives that may perform better because of hardiness, heat tolerance, disease resistance, lack of invasiveness, or relative rarity. Each listing outlines plant features such as shape, color, texture, light exposure, and size.

Alternative plants provide one or more of the characteristics for which the problem plant is desired, but they may vary substantially in other regards. For example, 'Blue Satin' rose of Sharon—a cold-hardy substitute for subtropical jacaranda—has similar flower color, but is much smaller. I would have appreciated a more detailed explanation of the limitations of the alternatives. At times I felt the comparison was a stretch.

Writing a book for a national audience is a challenge. Plants that shine in one region may be problems in another. Nonetheless, Keys has done a remarkable job in spotlighting less common plants that deserve a place in your garden, wherever you live.

—Denny Schrock

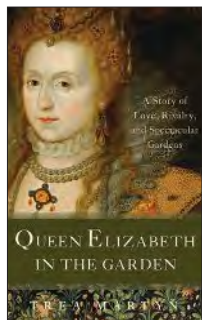
Denny Schrock is Iowa Master Gardener Coordinator and instructor of horticulture at Iowa State University in Ames.



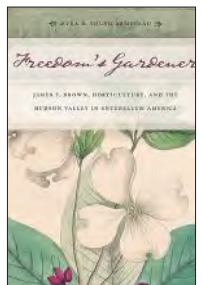
Garden Biographies and Memoirs

WHAT DOES YOUR GARDEN say about you? Gardens can reveal a lot about the people who create or enjoy them. The following collection of books explores the roles gardens played in the lives of six extraordinary people who run the gamut from royalty to runaway slave, from ordinary citizens to international celebrities. Regardless of their backgrounds and the time period during which they lived, what these disparate personalities have in common is an enduring passion for gardens and gardening that became a central part of their lives and legacies.

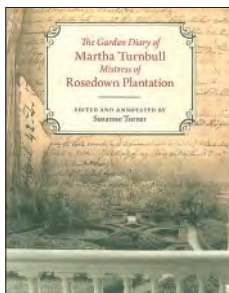
All her life, England's Queen Elizabeth I had an "uncommon love of gardens," so naturally they had a prominent part to play during her reign. In particular, the Queen's penchant for gardens fueled a decades-long horticultural one-upmanship between two of her most trusted courtiers who sought to win her favor. ***Queen Elizabeth in the Garden*** (BlueBridge, 2012, \$22.95) by Trea Martyn recounts this at-times-bitter rivalry, the politicking behind it, and the lavish Renaissance gardens that resulted from it.



Freedom's Gardener (New York University, 2012, \$35) by Myra B. Young Armstead reconstructs the life of James F. Brown, based on a diary he began soon after escaping slavery in Maryland and settling in upstate New York in 1827. Reinforced with careful research into historical records, the book examines the significance of Brown's chosen livelihood—gardening—to establishing himself as an independent citizen. It also presents interesting revelations about the development of horticulture as a profession in pre-Industrial America.



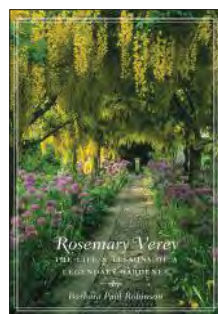
The Garden Diary of Martha Turnbull (Louisiana State University Press, 2012, \$39.95) provides a rare window into a Southern plantation owner's life during the "most significant years of the 19th century—those years leading up to, during, and following the Civil War," writes Suzanne Turner, editor and annotator of the book. The diary chronicles almost 60 years of an avid gardener's experiences and observations, interspersed with Turner's notes to explain some of the terse entries in contemporary terms or to elucidate clues in regards to the impact of the war on the Turnbull family.



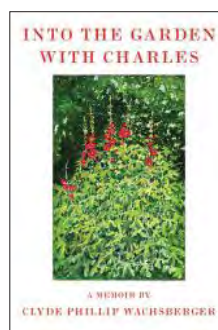
Gertrude Jekyll and the Country House Garden (Rizzoli, 2011, \$45) by Judith B. Tankard celebrates the work of one of England's most influential garden designers and writers. Jekyll was nearly 40 when she "burst upon the scene in the early 1880s" by channeling her training as an artist, innate design sensibilities, and self-taught horticultural knowledge into designing and writing about gardens. The book showcases Jekyll's designs and pioneering ideas, which not only "changed the face of England" but also continue to influence gardens around the world today.



Rosemary Verey (David R. Godine, 2012, \$30) by Barbara Paul Robinson tells the incredible story of an English horticultural dynamo who "took up gardening late in life, and despite being a self-taught amateur, became world famous, an inspiring role model to others." Robinson, who became a friend of Verey's after briefly working in her garden, paints an intimate portrait of this larger-than-life woman, whose garden designs and books shot her to superstardom in England and America in the 1980s and '90s.



By the time I finished reading ***Into the Garden with Charles*** (Farrar, Straus and Giroux, 2012, \$28), I felt like the author of this poignantly written memoir, Clyde Phillip Wachsberger, was an old friend. A plant lover since childhood, Wachsberger finally acquired a garden of his own as he neared middle age, but his joy was tinged with longing for a soul mate to share it with. At last he finds Charles, and together they create a haven in a Long Island village that visitors travel far and wide to see. It's a timeless love story of two devoted gardeners and the magic they create together.



—Viveka Neveln, Associate Editor



REGIONAL HAPPENINGS

Horticultural Events from Around the Country

NORTHEAST

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

RAP JAN. 19–FEB. 17. **Amaryllis & Cymbidiums.** Display. Buffalo and Erie County Botanical Gardens. Buffalo, New York. (716) 827-1584. www.buffalogardens.com.

RAP JAN. 20. **Terrarium Design.** Workshop. Brooklyn Botanic Garden. Brooklyn, New York. (718) 623-7200. www.bbg.org.

RAP FEB. 4. **Native Plants for Four-Season Gardening.** Lecture. Blithewold Mansion, Gardens and Arboretum. Bristol, Rhode Island. (401) 253-2707. www.blithewold.org.

FEB. 21–24. **Connecticut Flower & Garden Show.** Connecticut Convention Center. Hartford, Connecticut. (860) 844-8461. www.ctflowershow.com.

RAP FEB. 25. **Biodiversity 2013: Crisis and Opportunity.** Lecture. Arnold Arboretum of Harvard University. Hunnewell Building. Boston, Massachusetts. (617) 524-1718. www.arboretum.harvard.edu.

RAP FEB. 26. **Residential Landscape Design.** Class. New England Wild Flower Society. Garden in the Woods, Framingham, Massachusetts. (508) 877-7630. www.newenglandwild.org.

Looking ahead

MAR. 16 & 17. **"Come See Our Bloomers!"** Show and sale. Nutmeg State Orchid Society. West Hartford Meeting & Conference Center. West Hartford, Connecticut. (860) 677-5381. www.nutmegorchids.org.

MID-ATLANTIC

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

RAP JAN. 26–APR. 21. **Orchids of Latin American.** Exhibit. Smithsonian Gardens. Washington, DC. (202) 633-2220. www.gardens.si.edu.

RAP JAN. 27. **Maple Sugaring Exploration.** Tour and demonstration. Tyler Arboretum. Media, Pennsylvania. (610) 566-9134. www.tylerarboretum.org.

FEB. 4–7. **Mid-Atlantic Horticulture Short Course.** Workshop. The Virginia Horticultural Foundation. Newport News, Virginia. (757) 523-4734. www.mahsc.org.

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.

RAP FEB. 9. **African-American Garden Traditions in the Early Chesapeake.** Lecture. Annmarie Garden. Solomons, Maryland. (410) 326-4640. www.annmariegarden.org.

RAP FEB. 14–MAR. 31. **Orchids Galore!** Display. Lewis Ginter Botanical Garden. Richmond, Virginia. (804) 262-9887. www.lewisginter.org.

RAP FEB. 23. **EcoSavvy Gardening Symposium.** Green Spring Gardens. Alexandria, Virginia. (703) 642-5173. www.greenspring.org.

FEB. 23. **Winter Tree Tours of the Capitol Grounds.** U.S. Botanic Garden. Washington, DC. (202) 225-8333. www.usbg.gov.

RAP FEB. 23 & MAR. 2. **Holly Collection Tour.** United States National Arboretum. Washington, DC. (202) 544-8733. www.usna.usda.gov.

Looking ahead

MAR. 2–10. **Philadelphia International Flower Show.** Philadelphia Horticultural Society. Philadelphia Convention Center. Philadelphia, Pennsylvania. (215) 988-8800. www.theflowershow.com.

MAR. 14–17. **Springfest Garden Show.** Sussex County Fairgrounds. Augusta. New Jersey. (973) 948-9448. www.springfestgardenshow.org.

MAR. 15. **2013 Longwood Graduate Program Symposium.** Longwood Gardens. Newark, Delaware. (302) 831-2517. www.ag.udel.edu/longwoodgrad.

RAP MAR. 23. **Lahr Native Plant Symposium and Plant Sale.** United State National Arboretum. Washington, DC. (202) 544-8733. www.usna.usda.gov.

SOUTHEAST

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

JAN. 18–20. **Orchid Show & Sale.** Fort Lauderdale Orchid Society. War Memorial Auditorium. Fort Lauderdale, Florida. (954) 564-9594. www.flos.org.

RAP JAN. 19 & 20. **Flamingo Fest 2013.** Festival. Flamingo Gardens. Davie, Florida. (954) 473-2955. www.flamingogardens.org.

FEB. 2. **Camellia Day and Mini Camellia Show.** Bellingrath Gardens and Home. Theodore, Alabama. (251) 973-2217. www.bellingrath.org.

RAP FEB. 9. **Seed Swap.** Harry P. Leu Gardens. Orlando, Florida. (407) 246-2620. www.leugardens.org.

RAP FEB. 15. **Southern Garden Heritage Conference—Heirloom Fruits and Vegetables.** The State Botanical Garden of Georgia. Athens, Georgia. (706) 542-1244. www.botgarden.uga.edu.

RAP FEB. 23. **Gardening 101 for Busy People.** Seminar. Aldridge Botanical Gardens. Hoover, Alabama. (205) 682-8019. www.aldridgegardens.com.

FEB. 28–MAR. 3. **Nashville Lawn & Garden Show.** Tennessee State Fairgrounds. Nashville, Tennessee. (615) 876-7680. www.nashvillelawnandgardenshow.com.

Looking ahead

MAR. 5. **Davidson Horticultural Symposium.** Davidson College. Davidson, North Carolina. E-mail: davidsonsymposium@gmail.com. www.davidsonsymposium.org.

RAP MAR. 8–10. **International Orchid Festival.** Fairchild Tropical Botanic Garden. Coral Gables, Florida. (305) 667-1651. www.fairchildgarden.org.

MAR. 15–17. **Southeastern Flower Show.** Southeastern Horticultural Society. Cobb Galleria Centre. Atlanta, Georgia. (404) 351-4003. www.sehort.org.

NORTH CENTRAL

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

RAP JAN. 25–27. **Bonsai Silhouette Show.** Chicago Botanic Garden. Glencoe, Illinois.

(847) 835-5440. www.chicagobotanic.org.

JAN. 26. **Toward Harmony with Nature Conference.** Wild Ones Fox Valley Area. Oshkosh Convention Center. Oshkosh, Wisconsin. (920) 730-3986. www.wildones.org/charters/foxvalley.

RAP JAN. 26 & 27. **Orchid Show.** Frederik Meijer Gardens & Sculpture Park. Grand Rapids, Michigan. (888) 957-1580. www.meijergardens.org.

FEB. 8-10. **Midwestern Herb & Garden Show.** Times Square Mall. Mt. Vernon, Illinois. (800) 252-5464. www.midwesternherbandgardenshow.com.

RAP FEB. 14. **Horticulture Symposium.** Indianapolis Museum of Art. Indianapolis, Indiana. (317) 923-1331. www.imamuseum.org.

FEB. 16. **Slow Gardening.** Seminar. Men's Garden Club of Youngstown and Fellows Riverside Gardens. Youngstown, Ohio. (330) 545-2266. www.mgcy.org.

RAP FEB. 17. **Bonsai Silhouette Display.** Mitchell Park Conservatory-The Domes. Milwaukee, Wisconsin. (414) 257-5600. www.milwaukeedomes.org.

RAP FEB. 24. **Composting Made Easy.** Class. The Holden Arboretum. Kirtland, Ohio. (440) 946-4400. www.holdenarb.org.

Looking ahead

RAP MAR. 9-24. **Spring Flower Show.** Olbrich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. www.olbrich.org.

RAP MAR. 9-24. **Spring Bulb Show.** Hidden Lake Gardens. Tipton, Michigan. (517) 431-2060. www.hiddenlakegardens.msu.edu.

RAP MAR. 9-17. **Chicago Flower and Garden Show.** Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. www.chicagobotanic.org.

SOUTH CENTRAL

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

RAP JAN. 24. **Designing Themed Gardens.** Workshop. Botanica, The Wichita Gardens. Wichita, Kansas. (316) 264-0448. www.botanica.org.

RAP JAN. 26. **Tree Talk Winter Walk.** Lady Bird Johnson Wildflower Center. Austin, Texas. (512) 232-0200. www.wildflower.org.

RAP JAN. 26. **Travel to the Tropics Family Festival.** Texas Discovery Gardens. Dallas, Texas. (214) 428-7476. www.texasdiscoverygardens.org.

A Garden Conference on the High Seas

RATHER THAN in the usual convention center, the 2013 International Master Gardener's Conference will take place aboard a ship. The University of Arkansas's Division of Agriculture, which is organizing this year's event, has arranged a seven-day Alaskan cruise from September 7 to 14. The ship will depart Seattle, Washington, and sail along the northwest coast of North America.

The first five days of the cruise will feature a keynote address by various renowned Master Gardeners from around the country. Nearly 50 different presentations and seminars will also be offered throughout the voyage. In addition to conference activities, travelers will be able to experience the untouched beauty of coastal Alaska and British Columbia from on board or through optional shore excursions. For more information, visit www.uaex.edu/imgc2013/default.htm.

—Neel Patel, Editorial Intern

RAP FEB. 2-MAR. 31. **Orchid Show.** Missouri Botanical Garden. St. Louis, Missouri. (314) 577-5100. www.mobot.org.

RAP FEB. 9. **Designing Herbal Landscapes.** Workshop. San Antonio Botanical Garden. San Antonio, Texas. (210) 207-3250. www.sabot.org.

RAP FEB. 28. **Soils and Composting.** Workshop. Garvan Woodland Gardens. Hot Springs, Arkansas. (800) 366-4664. www.garvangardens.org.

Looking ahead

RAP MAR. 3-11. **Brush with Burden Exhibition.** Burden Horticulture Society at the Burden Center. Baton Rouge, Louisiana. (225) 766-0921. www.burdenhorticulturesociety.com.

RAP MAR. 16. **Composting Class.** Clark Gardens Botanical Park. Weatherford, Texas. (940) 682-4856. www.clarkgardens.com.

SOUTHWEST

AZ, NM, CO, UT

RAP JAN. 26. **Propagation Made Simple.** Class. The Gardens on Spring Creek. Fort Collins, Colorado. (970) 416-2486. www.fcgov.com/gardens.

RAP FEB. 2. **Water Harvesting.** Class. Tohono Chul Park. Tucson, Arizona. (520) 742-6455. www.tohonochochulpark.org.

RAP FEB. 7. **Greenhouse Tour.** Red Butte Garden and Arboretum at the University of Utah. Salt Lake City, Utah. (501) 585-0556. www.redbuttegardens.org.

RAP FEB. 9 & 16. **Ecology for Gardeners.** Class. Denver Botanic Garden. Denver, Colorado. (720) 865-3500. www.botanicgardens.org.

RAP FEB. 16. **Designing, Building, and Planting Raised Beds for Vegetables.** Class. The Gardens on Spring Creek. Fort Collins, Colorado. (970) 416-2486. www.fcgov.com/gardens.

FEB. 28-MAR. 1. **Water Conservation Conference.** Xeriscape Council of New Mexico. Albuquerque Marriott Pyramid North. Albuquerque, New Mexico. (505) 468-1021. www.xeriscapenm.com.

Looking ahead

RAP MAR. 16 & 17. **Bi-Annual Plant Sale.** Desert Botanical Garden. Phoenix, Arizona. (480) 941-1225. www.dbg.org.

NORTHWEST

AK, ID, MT, OR, WA, WY

RAP JAN. 19. **Vegetable Gardening for Small Spaces.** Lecture. Cheyenne Botanic Gardens. Cheyenne, Wyoming. (307) 637-6458. www.botanic.org.

RAP JAN. 25 & 26. **Stitches in Bloom Quilt Show.** The Oregon Garden. Silverton, Oregon. (503) 874-8100. www.oregongarden.org.

FEB. 3. **Portland Japanese Garden History, Design and Construction.** Lecture. Portland Japanese Garden. Portland, Oregon. (503) 223-1321. www.japanesegarden.com.

FEB. 8-10. **Yard, Garden & Patio Show.** Ore-

2013 Garden Milestones

THIS YEAR MARKS the 50th anniversary of the establishment of the Japanese Garden Society of Oregon, the nonprofit organization responsible for the creation and maintenance of the Portland Japanese Garden.



The Portland Japanese Garden turns 50 in 2013.

In honor of the occasion, the garden will host “Open Pavilion: Celebrating 50 Years” from February 1 to 10. This event will feature lectures and presentations each day about Japanese gardens and culture, such as Ikebana, bonsai, carpentry, and more. For more information, visit www.japanesegarden.com.

On the other side of the country, Norfolk Botanical Garden (NBG) in Norfolk, Virginia, turns 75. In celebration, NBG will be hosting a variety of anniversary-related lectures, exhibits, and other special events all year long. The festivities will culminate in the 75th Anniversary Celebration Gala on October 5. For more information, please visit www.norfolkbotanicalgarden.org.

A Magnolia Spectacle

THE SAN FRANCISCO BOTANICAL GARDEN (SFBG) in Golden Gate Park will ring in the New Year with its “Annual Magnolia Bloom.” From mid-January through March, nearly 100 rare and historic magnolias will produce a fragrant riot of vibrant pink and white flowers. SFBG is currently home to the most significant magnolia collection for conservation purposes outside of China, where the majority of species originated. The garden’s collection currently comprises 51 species and 33 cultivars, including several uncommon gems.



Magnolia campbellii in bloom.

To accompany the display, SFBG will offer docent-led tours, a “Magnolia Mobile Making for Families” activity on January 20, a “Magnolia Mixology” class on January 31, and more. Visit www.sfbotanicalgarden.org for admission prices and other details.

—Neel Patel, Editorial Intern

gon Association of Nurseries. Oregon Convention Center. Portland, Oregon. (503) 682-5089. www.ygshow.com.

FEB. 17. **Camellias.** Lecture. Hardy Plant Society of Oregon. Portland, Oregon. (503) 224-5718. www.hardyplant.society.org.

FEB. 20–24. **Northwest Flower & Garden Show.** Washington State Convention Center. Seattle, Washington. (253) 756-2121. www.gardenshow.com.

RAP FEB. 23. **Naturescaping Workshop.** Leach Botanical Garden. Portland, Oregon. (503) 823-9503. www.leachgarden.org.

Looking ahead

MAR. 22–24. **Boise Flower & Garden Show.** Boise Centre. Boise, Idaho. (503) 335-3336. www.gardenshowboise.com.

WEST COAST

CA, NV, HI

RAP JAN. 19. **Square Foot Gardening Workshop.** Los Angeles County Arboretum & Botanic Garden. Arcadia, California. (626) 821-3222. www.arboretum.org.

RAP JAN. 19–FEB. 8. **Plants Illustrated Exhibition.** University of California Botanical Garden at Berkeley. Berkeley, California. (510) 643-2755. www.botanicalgarden.berkeley.edu.

RAP JAN. 26. **Audacious Aussies and Curious Kiwis.** Guided Tour. UC Davis Arboretum. Davis, California. (540) 752-4880. www.arboretum.ucdavis.edu.

RAP FEB. 9. **Plant Identification I.** Class. Fullerton Arboretum. Fullerton, California. (657) 278-3407. www.fullertonarboretum.org.

RAP FEB. 9 & 10. **Camellia Festival.** Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. www.descansogardens.org.

Looking ahead

RAP MAR. 9. **African Violet Show & Sale.** South Coast Botanic Garden. Palos Verdes Peninsula, California. (310) 544-1948. www.southcoastbotanicgarden.org.

RAP MAR. 16 & 17. **Herb Festival, Spring Plant Sale, and Tomatomania®.** San Diego Botanic Garden. Encinitas, California. (760) 436-3036. www.sdbgarden.org.

RAP MAR. 30 & 31. **Annual Wildflower Festival.** Rancho Santa Ana Botanic Garden. Claremont, California. (909) 625-8767. www.rsabg.org.

CANADA

JAN. 14–MAR. 30. **Floral Showhouse Spring Show.** Niagra Parks. Niagra Falls, Ontario. (905) 356-2241. www.niagraparks.com.

FEB. 26. **Exploring the Wealth of Trees in Vancouver.** Lecture. University of British Columbia Botanical Garden and Centre for Plant Research. Vancouver, British Columbia. (604) 822-3928. www.botanicalgarden.ubc.ca.

RAP MAR. 1–3. **Orchid Society Annual Show.** Royal Botanical Gardens. Hamilton, Ontario. (905) 527-1158. www.rbg.ca

2013 AHS Seed Exchange

More than 180 kinds of seeds are offered in this year's Seed Exchange, available only to American Horticultural Society members. For a quick reference, here is the list of seeds to choose from, with an order form on the back of the following page. To see the catalog with detailed plant descriptions, visit www.ahs.org and click on the Seed Exchange link. 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, 7931 East Boulevard Drive, Alexandria, VA 22308**.

ANNUALS

- | | | | |
|--|--|---|--|
| 1 <i>Abelmoschus manihot</i>
(musk mallow) | 23 <i>Lavatera trimestris</i>
(annual mallow) | 45 <i>Verbascum olympicum</i> ,
syn. <i>V. longifolium</i> var.
<i>pannosum</i> (Greek mullein) | 66 <i>Dianthus plumarius</i>
(pinks cultivar) |
| 2 <i>Ageratum houstonianum</i>
(floss flower) | 24 <i>Leonurus sibiricus</i> (motherwort) | 46 <i>Zinnia elegans</i> 'California
Giants Mix' (zinnia cultivar mix) | 67 <i>Digitalis lutea</i> , syn.
<i>D. eriostachya</i> (straw foxglove) |
| 3 <i>Amaranthus caudatus</i>
'Autumn Touch' (love-lies-
bleeding, tassel flower) | 25 <i>Linaria maroccana</i>
(spurred snapdragon, toadflax) | 47 <i>Zinnia elegans</i> 'Giant Cactus
Mix' (zinnia cultivar mix) | 68 <i>Echinacea purpurea</i>
(purple coneflower) |
| 4 <i>Anagallis arvensis</i>
(scarlet pimpernel) | 26 <i>Linum grandiflorum</i> var.
<i>rubrum</i> (red flax) | 48 <i>Zinnia elegans</i> 'Lilliput Mixed
Colors' (zinnia cultivar mix) | 69 <i>Echinops bannaticus</i>
(globe thistle) |
| 5 <i>Asclepias curassavica</i>
(bloodflower) | 27 <i>Linum usitatissimum</i>
(common flax) | 49 <i>Zinnia elegans</i> 'Thumbelina
Mix' (zinnia cultivar mix) | 70 <i>Erodium manescavii</i> ,
syn. <i>E. manescavii</i>
(Manescav erodium, heron's
bill) |
| 6 <i>Calendula officinalis</i>
(pot marigold) | 28 <i>Lobularia maritima</i> ,
syn. <i>Alyssum maritimum</i>
(sweet alyssum, carpet of snow) | 50 <i>Zinnia peruviana</i> , syn. <i>Z.</i>
<i>pauciflora</i> (Peruvian zinnia) | 71 <i>Gaillardia × grandiflora</i>
(blanket flower) |
| 7 <i>Callistephus chinensis</i>
'Crego Mix' (China aster
variety mix) | 29 <i>Lunaria annua</i>
(honesty, money plant) | | |
| 8 <i>Campanula</i> sp. (great bellflower) | 30 <i>Mirabilis jalapa</i> (four o'clock,
marvel of Peru, mixed colors) | PERENNIALS | 72 <i>Helenium autumnale</i>
(sneezeweed) |
| 9 <i>Capsicum annuum</i>
(ornamental pepper variety) | 31 <i>Myosotis sylvatica</i>
(forget-me-not) | 51 <i>Actaea racemosa</i> , syn.
<i>Cimicifuga racemosa</i>
(black cohosh) | 73 <i>Hemerocallis</i> spp.
(daylily hybrid mix) |
| 10 <i>Celosia argentea</i>
(crested coxcomb mix) | 32 <i>Nicandra physalodes</i>
(apple of Peru, shoo-fly plant) | 52 <i>Agastache aurantiaca</i>
(orange hummingbird mint) | 74 <i>Hosta</i> sp. (hosta selection) |
| 11 <i>Cerintho major</i> (honeywort) | 33 <i>Nicotiana sylvestris</i>
(woodland tobacco) | 53 <i>Alcea rosea</i> (common hollyhock) | 75 <i>Lavatera</i> sp. (mallow) |
| 12 <i>Cleome hassleriana</i> (cleome,
spider flower mix) | 34 <i>Oenothera glazioviana</i> , syn.
<i>O. lamarckiana</i> (magic
evening primrose) | 54 <i>Anemone virginiana</i>
(tall thimbleweed) | 76 <i>Leucanthemum</i> sp.
(Shasta daisy) |
| 13 <i>Consolida ajacis</i> , syn.
<i>C. ambigua</i> (larkspur, mixed
colors) | 35 <i>Papaver somniferum</i>
(breadseed poppy) | 55 <i>Aquilegia alpina</i>
(alpine columbine) | 77 <i>Liatris</i> sp. (blazing star,
gayfeather) |
| 14 <i>Coreopsis grandiflora</i> (tickseed) | 36 <i>Portulaca grandiflora</i> (moss rose) | 56 <i>Aquilegia</i> spp.
(blue columbine species) | 78 <i>Lobelia siphilitica</i>
(blue lobelia) |
| 15 <i>Cosmos bipinnatus</i>
(cosmos mix) | 37 <i>Ricinus communis</i> (castor bean) | 57 <i>Aquilegia</i> spp. (columbine
species, mixed colors) | 79 <i>Lychnis</i> sp.
(rose campion) |
| 16 <i>Cosmos bipinnatus</i> 'Sensation
Mixed Color' (cosmos mix) | 38 <i>Rudbeckia</i> spp. (annual black-
eyed Susan, gloriosa daisy) | 58 <i>Aquilegia</i> spp.
(pink columbine species) | 80 <i>Oenothera elata</i> ssp.
<i>hirsutissima</i> , syn.
<i>O. hookeri</i> (Hooker's evening
primrose) |
| 17 <i>Gilia tricolor</i> (bird's eyes) | 39 <i>Salvia splendens</i> 'St. John's
Fire' (scarlet sage cultivar) | 59 <i>Arisaema triphyllum</i>
(Jack-in-the-pulpit) | 81 <i>Papaver orientale</i>
(Oriental poppy) |
| 18 <i>Gypsophila elegans</i>
(baby's breath) | 40 <i>Silene armeria</i>
(garden catchfly) | 60 <i>Asclepias tuberosa</i>
(butterfly weed) | 82 <i>Penstemon digitalis</i>
(foxglove beardtongue) |
| 19 <i>Helianthus annuus</i> 'Mammoth'
(sunflower cultivar) | 41 <i>Tagetes patula</i> 'Dwarf French
Mix' (French marigold mix) | 61 <i>Baptisia australis</i> (false indigo) | 83 <i>Platycodon grandiflorus</i>
(balloon flower) |
| 20 <i>Helianthus annuus</i> 'The Joker'
(sunflower cultivar) | 42 <i>Tagetes signata</i> 'Red Gem'
(signet marigold cultivar) | 62 <i>Belamcanda chinensis</i>
(blackberry lily) | 84 <i>Rudbeckia maxima</i>
(great coneflower) |
| 21 <i>Ipomopsis rubra</i> , syn.
<i>Gilia rubra</i> (standing cypress) | 43 <i>Talinum paniculatum</i>
(jewels of Opar) | 63 <i>Carex muskingumensis</i>
(palm sedge) | 85 <i>Vernonia</i> sp.
(ironweed species) |
| 22 <i>Lagarus ovatus</i> (hare's tail) | 44 <i>Tropaeolum majus</i> Jewel Series
(Jewel series dwarf nasturtium
mix) | 64 <i>Delphinium</i> Pacific Hybrids
mix (larkspur mix) | 86 <i>Zizia aurea</i>
(golden Alexanders) |

VINES

- 87 *Campsis radicans* (trumpet creeper, trumpet vine)
- 88 *Cardiospermum halicacabum* (balloon vine, love-in-a-puff)
- 89 *Ipomoea purpurea* (morning glory)
- 90 *Lathyrus latifolius* (perennial sweet pea)
- 91 *Lathyrus odoratus* 'Royal Mix' (annual sweet pea cultivar mix)
- 112 *Beta vulgaris* 'Early Wonder GT' (beet cultivar)
- 113 *Beta vulgaris* var. *cicla* 'Fordhook Giant' (Swiss chard cultivar)
- 114 *Beta vulgaris* var. *cicla* 'Green Lucullus' (Swiss chard cultivar)
- 115 *Brassica juncea* 'Florida Broadleaf' (mustard greens cultivar)
- 116 *Brassica juncea* 'Southern Curled' (curly-leaf mustard greens cultivar)

TREES AND SHRUBS

- 92 *Rosa roxburghii* (chestnut rose, burr rose)
- 93 *Styrax japonicus* (Japanese snowbell)

HERBS

- 94 *Allium schoenoprasum* (chives)
- 95 *Allium tuberosum* (garlic chives)
- 96 *Anethum graveolens* (dill)
- 97 *Carum carvi* (caraway)
- 98 *Coriandrum sativum* (cilantro)
- 99 *Foeniculum vulgare* 'Florence' (fennel cultivar)
- 100 *Matricaria recutita* (German chamomile)
- 101 *Ocimum basilicum* (sweet basil)
- 102 *Origanum vulgare* (oregano)
- 103 *Ruta graveolens* (common rue)
- 104 *Salvia officinalis* (common sage, purple sage)
- 105 *Salvia sclarea* (clary sage)
- 106 *Thymus vulgaris* (garden or common thyme)

VEGETABLES AND FRUITS

- 107 *Abelmoschus esculentus* (heirloom okra)
- 108 *Abelmoschus esculentus* 'Burgundy' (heirloom okra cultivar)
- 109 *Allium fistulosum* 'Pacific Pearl' (bunching onion, scallion cultivar)
- 110 *Amaranthus* sp. (garnet red micro greens)
- 111 *Beta vulgaris* 'Chioggia' (heirloom beet cultivar)
- 117 *Brassica oleracea* 'Copenhagen Market' (green cabbage cultivar)
- 118 *Brassica oleracea* 'Purple Sprouting' (broccoli cultivar)
- 119 *Brassica oleracea* 'Purple Vienna' (kohlrabi cultivar)
- 120 *Brassica oleracea* 'Vates' (collard greens cultivar)
- 121 *Brassica rapa* 'Seven Top' (turnip greens cultivar)
- 122 *Capsicum annuum* 'Black Pearl' (hot pepper variety)
- 123 *Capsicum annuum* 'California Wonder' (sweet bell pepper)
- 124 *Capsicum annuum* 'Early Jalapeno' (hot pepper cultivar)
- 125 *Capsicum annuum* 'Long Red Cayenne' (hot chili pepper cultivar)
- 126 *Chenopodium album* var. *album* (common lambsquarters)
- 127 *Cichorium endivia* 'Batavian Full Heart' (endive, escarole cultivar)
- 128 *Citrullus lanatus* var. *lanatus* 'Black Diamond' (watermelon cultivar)
- 129 *Citrullus lanatus* var. *lanatus* 'Sugar Baby' (watermelon cultivar)
- 130 *Citrullus melo* 'Green Nutmeg' (heirloom muskmelon or cantaloupe)
- 131 *Cucumis sativus* 'Homemade Pickles' (cucumber cultivar)
- 132 *Cucumis sativus* 'Marketmore 76' (cucumber cultivar)
- 133 *Cucumis sativus* 'Straight Eight' (cucumber cultivar)
- 134 *Cucumis sativus* 'Wautoma' (cucumber cultivar)

- 135 *Cucurbita pepo* 'Black Beauty' (summer squash cultivar)
- 136 *Cucurbita pepo* 'Buttercup' (winter squash cultivar)
- 137 *Cucurbita pepo* 'Daisy Mae' (summer squash cultivar)
- 138 *Cucurbita pepo* 'Early Prolific Improved' (summer squash cultivar)
- 139 *Cucurbita pepo* 'Jack-o-Lantern' (pumpkin cultivar)
- 140 *Daucus carota* var. *sativus* 'Danvers Half Long' (carrot cultivar)
- 141 *Glycine max* (soybean or edamame)
- 142 *Lactuca sativa* 'Arctic Tundra Blend' (lettuce cultivar mix)
- 143 *Lactuca sativa* 'Oakleaf' (lettuce cultivar)
- 144 *Lactuca sativa* 'Romaine' (lettuce cultivar)
- 145 *Lycopersicon lycopersicum* 'Fireball' (tomato cultivar)
- 146 *Lycopersicon lycopersicum* 'Gills All-Purpose' (tomato cultivar)
- 147 *Lycopersicon lycopersicum* 'Illini Star' (tomato cultivar)
- 148 *Lycopersicon lycopersicum* 'Large Red Cherry' (tomato cultivar)
- 149 *Lycopersicon lycopersicum* 'Long Keeper' (tomato cultivar)
- 150 *Lycopersicon lycopersicum* 'Marmade' (heirloom tomato cultivar)
- 151 *Lycopersicon lycopersicum* 'Rutgers' (tomato cultivar)
- 152 *Pastinaca sativa* 'Hollow Crown' (parsnip)
- 153 *Petroselinum crispum* 'Hamburg Rooted' (Hamburg parsley, parsley root)
- 154 *Phaseolus vulgaris* 'Golden Wax' (bush bean cultivar)
- 155 *Phaseolus vulgaris* 'Kentucky Wonder' (pole bean cultivar)
- 156 *Phaseolus vulgaris* 'Provider' (bush bean cultivar)
- 157 *Phaseolus vulgaris* 'Roma II' (bush bean cultivar)
- 158 *Phaseolus vulgaris* 'Tavera' (French or filet bean cultivar)

- 159 *Pisum sativum* 'Laxton's Progress' (pea cultivar)
- 160 *Pisum sativum* 'Little Marvel' (pea cultivar)
- 161 *Pisum sativum* 'Sugar Snap Pole' (snap pea cultivar)
- 162 *Raphanus sativus* 'Champion' (radish cultivar)
- 163 *Raphanus sativus* 'Cherry Belle' (radish cultivar)
- 164 *Raphanus sativus* 'Sparkler' (radish cultivar)
- 165 *Rheum rhabarbarum* (rhubarb)
- 166 *Spinacia oleracea* 'Bloomsdale' (spinach cultivar)
- 167 Winter Green Salad Blend (mixture of kale, Swiss chard, beets, broccoli raab, collards, and dandelions)

BONUS SEEDS

- A** *Agastache foeniculum*, syn. *A. anethiodora* (anise hyssop)
- B** *Amaranthus tricolor* (amaranth, Chinese spinach)
- C** *Aristolochia fimbriata* (white-veined Dutchman's pipe)
- D** *Collinsia heterophylla* (Chinese houses)
- E** *Cucumis sativa* 'Mexican Sour Gherkin' (heirloom cucumber)
- F** *Cucurbita pepo* 'Yugoslavian Finger Fruit' (heirloom squash)
- G** *Eutrochium dubium*, syn. *Eupatorium dubium* (Joe-Pye weed)
- H** *Gentiana clausa* (bottle gentian)
- I** *Ipomoea purpurea* 'Sunrise Serenade' (heirloom morning glory cultivar)
- J** *Lupinus* spp. (Lupine mix including Texas bluebonnets)
- K** *Ocimum basilicum* var. *purpurascens* (purple sweet basil)
- L** *Phaseolus vulgaris* 'Conover Butterbean' (heirloom butterbean mix)
- M** *Phaseolus vulgaris* 'Purple Podded Pole' (snap pole bean variety)
- N** *Raphanus sativus* 'Red Meat' (heirloom radish cultivar)
- O** *Salvia lyrata* (lyreleaf sage)
- P** *Tropaeolum majus* 'Empress of India' (nasturtium cultivar)

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3. _____

4. _____

5. _____

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7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

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4. _____

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1. _____

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2. _____

3. _____

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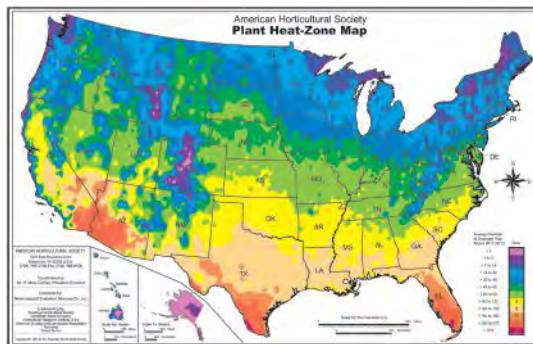
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PRONUNCIATIONS AND PLANTING ZONES

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

Agave guiengola uh-GAH-vee gwee-en-GO-luh
(USDA Hardiness Zones 9-11, AHS Heat Zones 11-7)

Alcea rosea AL-see-uh ro-ZAY-uh (2-9, 9-2)

Anaphalis margaritacea ah-NAF-uh-liss
mar-guh-rih-TAY-see-uh (4-8, 8-1)

Aquilegia vulgaris ah-kwi-LEE-juh vul-GAIR-iss
(3-8, 8-1)

Aruncus dioicus uh-RUN-kus die-o-EE-kus
(3-7, 7-1)

Clematis recta KLEM-uh-tiss REK-tuh
(4-11, 9-1)

Cosmos bipinnatus KOZ-mos by-PIN-nay-tus
(0-0, 11-1)

C. sulphureus C. sul-FYUR-ee-uss (0-0, 12-1)

Dudleya candida DUD-lee-uh KAN-dih-duh
(10-11, 11-9)

Euphorbia marginata yew-FOR-bee-uh
mar-jih-NAY-tuh (0-0, 12-1)

Eustoma exaltatum ssp. russellianum
yew-STOH-muh eks-al-TAY-tum
ruh-sel-ee-AN-um (8-11, 12-1)

Ficus carica FY-kus KAH-ree-kuh (7-11, 12-1)

Fouquieria splendens foo-kee-AIR-ee-uh
SPLEN-denz (7-11, 12-6)

Ginkgo biloba GINK-go by-LO-buh (5-9, 9-5)

Helleborus argutifolius hel-eh-BOR-us
ar-GEW-tih-FO-lee-us (6-9, 9-6)

H. foetidus H. FEE-tih-dus (5-9, 9-5)

Hosta ventricosa HAHS-tuh ven-trih-KO-suh
(3-8, 9-2)

Humulus lupulus HEW-mew-lus LEW-pew-lus
(4-8, 8-1)

Ilex cornuta EYE-leks kor-NEW-tuh (7-9, 9-7)

Impatiens walleriana im-PAY-shenz
wal-ler-ee-AN-uh (10-11, 12-1)

Lathyrus latifolius LATH-ih-rus lat-ih-FO-lee-us
(5-9, 9-5)

Lobelia cardinalis lo-BEEL-yuh kar-dih-NAL-iss
(2-8, 8-1)

Oxalis acetosella auk-SAL-iss uh-set-o-SEL-luh
(3-8, 8-1)

Papaver rhoeas puh-PAH-vur RHO-ays
(0-0, 9-1)

Pinus lambertiana PY-nus lam-bur-TEE-an-uh
(6-9, 9-6)

P. monticola P. mon-tih-KO-luh (4-8, 8-1)

P. strobus P. STRO-bus (3-8, 8-1)

Potentilla nepalensis po-ten-TIL-luh
neh-PAL-en-siss (4-7, 8-4)

Punica granatum PEW-nih-kuh gruh-NAY-tum
(7-10, 12-1)

Quercus rubra KWER-kus ROO-bruh (4-9, 9-3)

Ribes alpinum RY-beez al-PY-num (2-6, 6-1)

R. americanum R. uh-mair-ih-KAN-um
(3-7, 7-1)

R. aureum R. AW-ree-um (5-8, 8-5)

R. nigrum R. NY-grum (3-8, 8-3)

R. odoratum R. o-doh-RAY-tum (5-8, 8-5)

R. petraeum R. pet-RAY-um (3-8, 8-1)

R. rubrum R. ROO-brum (3-8, 8-1)

R. sanguineum R. san-GWIN-ee-um (6-8, 8-6)

R. ussuriensis R. oo-soo-ree-EN-sis (3-8, 8-1)

R. vulgare R. vul-GAH-ree (3-8, 8-1)

Rudbeckia fulgida rood-BEK-ee-uh FUL-jih-duh
(3-9, 10-1)

Viola odorata VY-o-luh o-doh-RAY-tuh
(6-8, 8-6)

V. sororia V. so-ROR-ee-uh (3-9, 9-1)

Flannel Bush: A Beauty to Admire at a Distance

by Maya Moran Manny



Left: ‘California Glory’, a hybrid flannel bush, grows up to 20 feet tall and broader at the base. Above: Flannel bush’s free-blooming yellow flowers attract a wide array of pollinators, including hummingbirds.

SEEN IN FULL bloom, covered with its large, bright yellow flowers, flannel bush (*Fremontodendron californicum*) is a glorious spectacle. A fast-growing evergreen, it begins life as a shrub but may grow into a small, irregularly shaped tree. Mature specimens can grow 20 feet tall and about as broad with a smooth, gray-green trunk and long branches extended as if in an embrace.

Also known as California fremontia, this mallow family (Malvaceae) member is primarily native to California, but its range extends into Arizona and coastal Mexico. Its name honors John Charles Fremont (1813–1890), an explorer and military officer who became a millionaire in the Gold Rush. Later, he became a California senator and a Republican presidential candidate.

Flannel bush is often short-lived but is a worthwhile investment because it is an early and prolific bloomer. Its rich yellow flowers, up to three inches in diameter, swathe the plant from March through June, taking on an orangey hue just before dropping their hairy seed capsules. Scattered blooms continue to open into September.

I inherited some flannel bushes when our family moved to California a decade ago. Being unfamiliar with the plants, I asked my sons to thin out several mature specimens. Later, when I pruned them myself, I realized that I had subjected my boys to a very painful labor of love. The leathery, three-lobed leaves have a gray-green upper surface, but the undersides are coated with a rusty brown residue—which apparently gave rise to the plant’s common name—that irritates skin, eyes, throat, and lungs. The seedpods also bear these irritating hairs. So, goggles, a mask, gloves, and washable clothing are recommended attire for pruning and shaping these plants. I’ve discovered that thoroughly wetting down the tree with a hose before any pruning will

greatly reduce the prickly fallout, making this torturous chore much easier.

Flannel bush thrives in full sun and part shade, but the key requirements are well-drained soil and little or no supplemental water—especially in summer—because it is very susceptible to root rot. Planting it on a slight slope reduces the risk of moisture build-up. Although highly drought tolerant, it has a shallow root system, so young plants should be staked, especially in windy locations. Because of the irritating residue on its leaves, avoid planting it near a patio or seating area; instead place it in a flower bed or open area where its floral display can be admired at a slight distance.

A few selections, mostly hybrids with Mexican flannel bush (*F. mexicana*) are available, including ‘California Glory’, ‘Pacific Sunset’, and compact ‘Dara’s Gold’. Flannel bush is not a shrub you want to get too close to, but it still deserves a place in the dry garden for its prolific, splendiferous, long-lasting blooms.

Sources

J.L. Hudson, Seedsman, La Honda, CA.
www.jlhudsonseeds.net. Seeds only.

San Marcos Growers, Santa Barbara, CA. (805) 683-1561.

www.smgrowers.com. Wholesale only but website lists retail sources.

Maya Moran Manny is a landscape designer and garden writer based in San Rafael, California.



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