

The background of the cover is a close-up photograph of a dark-colored Arisaema flower with prominent light green or yellowish stripes. The flower is in the center, with its hooded structure clearly visible. Large, vibrant green leaves are scattered around the flower, some in the foreground and some in the background. The ground is covered with brown, fallen leaves, suggesting a woodland or garden setting. The overall lighting is bright and natural, highlighting the textures of the plant.

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The Magazine of the American Horticultural Society

September / October 2017

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Photograph by Graham Rice, GardenPhotos.com

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NOTES FROM RIVER FARM

IT HAS BEEN a busy and eventful summer for the American Horticultural Society (AHS). In early July, nearly half of our staff was in the Pacific Northwest, where we participated in the International Master Gardener Conference in Portland, Oregon, and celebrated the AHS's 25th annual National Children & Youth Garden Symposium (NCYGS), in Vancouver, Washington. Both events brought together people from all walks of life who share a passion for gardening and plants. While learning from and networking with each other, participants quickly developed a warm camaraderie that transformed these events into a family reunion of sorts.

This was especially true of the NCYGS. Many familiar faces helped us mark its silver anniversary with fond reminiscences about past symposiums. It became abundantly clear what a profound effect this annual event has had on our attendees and the students they serve. Again and again we heard from participants about how the symposium re-affirms that the work they are doing to connect kids to plants is important, powerful, and making a difference in myriad ways. We couldn't agree more! Amazing things happen when the next generation gets involved in caring for the planet through gardening.

Summer was equally eventful at our River Farm headquarters in Virginia. One highlight was having our 25-acre property designated as a Certified Wildlife Habitat by the National Wildlife Federation. Supporting pollinators, birds, and other beneficial creatures is a key part of River Farm's purpose, so we're thrilled to have this recognition, which will in turn help us increase awareness among our visitors. This also ties into our national efforts on behalf of pollinators, given their alarming decline in recent years. For example, River Farm is also a registered garden for the Million Pollinator Garden Challenge, a campaign of the National Pollinator Garden Network (NPGN). This group of organizations and businesses—including the AHS—are working together to encourage creation of gardens that support pollinators.

We are about a third of the way to the goal of one million registered gardens, and we know there are plenty of gardens out there yet to be registered. Please take a moment to visit www.millionpollinatorgardens.org and add your garden to the count! You can learn more about the AHS's involvement with the NPGN on page 10 of this magazine.

You'll also find information in this issue about plants that can increase the wildlife value of your garden. For instance, consider growing a few of the native woody species that have dense, suckering growth habits (page 14). These ground-covering plants help create essential habitat for a variety of creatures. For shady spots, try some of the arisaemas described in our article about this genus, starting on page 30. Their unique blooms attract the not-so-flashy yet important pollinators such as beetles and flies. These pieces and much more await you, so turn the page and dig in.

Happy gardening,

Holly H. Shimizu
Interim Executive Director



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- Find seasonal gardening tips, beautiful gardens around the world, photos of native plants blooming in our members' gardens, and more. Message us with photos of your home garden.



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- Follow @AHS_Gardening for breaking garden news and eye-catching photos. Join us here once a month for #plantchat, when we host a one-hour open discussion with an expert garden guest, along with our corporate member, **Corona Tools**. If you miss a #plantchat, read the transcripts on our website at www.ahsgardening.org/plantchat.



INSTAGRAM:

www.instagram.com/am_hort_society

- Enjoy photos from our travels around the U.S., along with year-round views of the gardens at River Farm, our headquarters in Virginia.



PINTEREST:

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- We're always creating new boards with images and information to supplement our articles in *The American Gardener*. Check out the boards to see what we're highlighting in this issue! Other popular boards include Container Gardening, Gardens to Visit, and Upcycling.



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- View images from our national events and get a look at River Farm's grounds through the seasons.



Join the Conversation!

MEMBERS' FORUM

BIG FOLIAGE SUGGESTION

After reading Cole Burrell's article on plants with bold foliage (July/August 2017), I wanted to mention that a worthy alternative to bear's breeches (*Acanthus mollis*) is *Acanthus hungaricus* (aka *A. balcanicus*), which is quite hardy in my USDA Zone 5b garden in Lexington, Massachusetts [shown in the photo, right]. I started it some 25 years ago with seed from the Denver Botanic Garden and it has gone from strength to strength since. It is a robust plant, reaching two or three feet across in time, which should be taken into account when choosing a site. It divides readily and is easy to grow from seed, however, and critters don't seem to bother it.

Jim Jones
Lexington, MA



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Bellingrath Gardens and Home, Theodore, Alabama
hosted by William E. Barrick, Executive Director

Biltmore Estate & Gardens, Asheville, North Carolina
hosted by Parker Andes, Director of Horticulture

Coastal Maine Botanical Garden, Boothbay, Maine
hosted by William Cullina, President & CEO

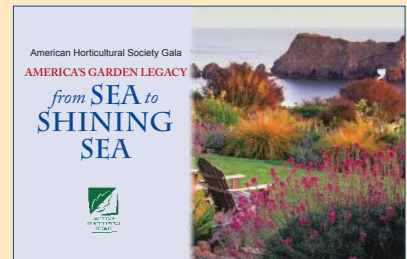
Quarryhill Botanical Garden, Glen Ellen, California
hosted by Bill McNamara, Executive Director

Sarah P. Duke Gardens, Durham, North Carolina
hosted by Bill LeFevre, Executive Director

PHOTO COURTESY OF THE BILTMORE COMPANY

Look for more tour packages and information on accessing the auction at

www.ahsgardening.org/online-auction



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INTERNSHIP PROGRAM The AHS offers internships in communications, horticulture, and membership. For information, send an e-mail to internships@ahsgardening.org. Information and application forms can also be found in the Gardening Programs area of www.ahsgardening.org.

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

RECIPROCAL ADMISSIONS PROGRAM The AHS Reciprocal Admissions Program offers members free admission and other discounts to 300 botanical gardens and other horticultural destinations throughout North America. A list of participating gardens can be found on www.ahsgardening.org/rap. For more information, call (703) 768-5700 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 About River Farm section of www.ahsgardening.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. 127, e-mail development@ahsgardening.org, or visit the Gardening Programs section of www.ahsgardening.org.

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

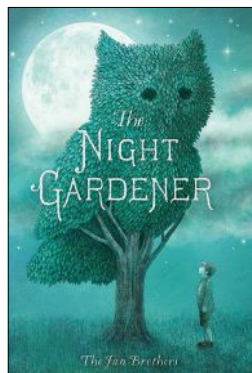
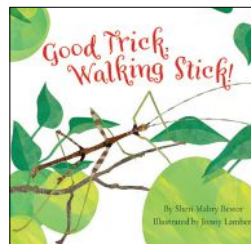
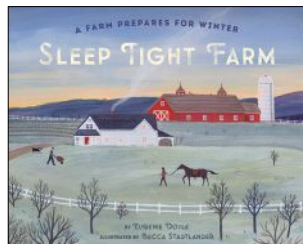
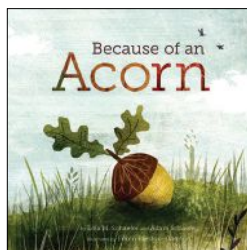
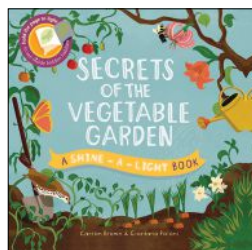
News from the AHS

September / October 2017

PROGRAMS • EVENTS • ANNOUNCEMENTS

GROWING GOOD KIDS CHILDREN'S BOOK AWARDS

SINCE 2005, the Junior Master Gardener Program and the American Horticultural Society (AHS) have honored engaging, inspiring works of plant, garden and ecology-themed children's literature through the annual "Growing Good Kids—Excellence in Children's Literature Awards." The awards selection committee includes AHS staff members, Junior Master Gardener specialists and coordinators, teachers, youth leaders,



and kids. The committee's goal is to recognize children's books that are especially effective at promoting an understanding of, and appreciation for, gardening, nature, and the environment.

The 2017 winners of the Growing Good Kids Book awards are: **Secrets of The Vegetable Garden**, by Carron Brown, illustrated by Giordano Poloni; **Because of an Acorn**, by Lola M. Schaefer and Adam Schaefer, illustrated by Fran Preston-Gannon; **Sleep Tight Farm**, by Eugenie Doyle, illustrated by Becca Stadtlander; **Good Trick, Walking Stick!**, by Sheri Mabry Bestor, illustrated by Jonny Lambert; and **The Night Gardener**, by Terry Fan and Eric Fan.

This year's winners received their awards in July during the AHS's National Children & Youth Gardening Symposium in the greater Portland, Oregon, and Vancouver, Washington, area. To learn more about the Growing Good

Kids awards and view previous winners, visit www.jmgkids.us/bookawards.

AHS JOINS OUTDOORS ALLIANCE FOR KIDS

THE AHS recently joined Outdoors Alliance for Kids (OAK), a national partnership of organizations and businesses that share a common interest in connecting children, youth, and families with the outdoors. "We are excited to be a part of this diverse coalition, whose goals dovetail so closely with our own focus on getting kids involved with plants and gardening," says **Nora MacDonald**, AHS's Associate Director of Membership and Member Programs.

OAK's mission is to advocate for equitable and readily available opportunities to connect with the outdoors. The coalition's 100 member organizations—which include the Sierra Club, the American Heart Association, Seed Your Future, and the Children & Nature Network—are brought together by the belief that the wellness of current and future generations, the health of our planet and communities, and the economy of the future are all reliant on ensuring that people have a personal,

Seed-Saving Time

Remember to submit your seeds for the 2018 AHS Seed Exchange. Turn to page 61 to find a submission form and information on how to participate in this popular annual AHS member program.

direct, and life-long relationship with nature and the outdoors.

One of OAK's signature initiatives is the Every Kid in a Park program, in which every fourth grader in America can obtain a pass for free entry into more than 2,000 federally managed sites nationwide for an entire year. The program's goal is to inspire a new generation to become stewards of our nation's cultural and natural heritage.

To learn more about OAK and how to become involved, visit www.outdoorsallianceforkids.org.

ONLINE AUCTION IN OCTOBER

THROUGH AN annual online auction, the AHS offers personal tours of some of the finest gardens in America, led by notable horticulturists and other experts. This year, bidding on auction items begins on October 12 and runs through October 26.

Among the destinations for this year's tour packages are the Coastal Maine Botanical Garden in Boothbay, Maine (led by President and CEO **William Cullina**); Bellevue Botanical Garden in Bellevue, Washington (led by Garden Manager **Nancy Kartes**); the Biltmore Estate & Gardens in Asheville, North Carolina (led



Sarah P. Duke Gardens



Bellevue Botanical Garden

Gifts of Note

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by Director of Horticulture **Parker Andes**); Quarryhill Botanical Garden in Glen Ellen (led by Executive Director **Bill McNamara**), California; and the Sarah P. Duke Gardens in Durham, North Carolina (led by Executive Director **Bill LeFevre**).

Each unique auction package is for four guests and includes a personal tour of the garden guided by a horticulturist or garden director, lunch at the garden (usually with the guide), and additional items such as access to behind-the-scenes areas, gift-shop discounts, and more.

Proceeds of the auction will support the Society's national education and outreach programs and the stewardship of River Farm. More details about the individual auction destinations are available at www.ahsgardening.org/online-auction.

NATIONAL POLLINATOR GARDEN NETWORK MEETING AT RIVER FARM

THE AHS will host the third annual meeting of the National Pollinator Garden Network (NPGN) at its River Farm headquarters in Virginia on October 14. Along with the AHS, more than 50



partnership organizations belong to NPGN, which is a collaborative effort to inspire the creation of pollinator habitat through sustainable gardening practices and habitat conservation.

One major focus for the group is its Million Pollinator Garden Challenge, a campaign that encourages people to create and register gardens that support pollinators. At the annual meeting, representatives from participating organizations will strategize about expanding awareness of this effort and other promotional initiatives.

Visit www.millionpollinatorgardens.org for more information about NPGN and registering a garden.

RIVER FARM BECOMES CERTIFIED WILDLIFE HABITAT

IN AUGUST, the National Wildlife Federation officially granted the status of Certified Wildlife Habitat to River Farm, the AHS's 25-acre headquarters in Virginia along the banks of the Potomac River. To achieve this designation, a space must meet a set of criteria such as employing sustainable practices and providing sources of water, food, and shelter to wildlife.



Associate Director of Gardens and Facilities Dan Scott poses by a sign identifying River Farm as a certified wildlife habitat.

“This certification reflects the AHS’s commitment to encouraging environmentally-friendly gardening practices on a national scale,” says Associate Director of Gardens and Facilities Dan Scott. “River Farm models how gardeners can attract and support wildlife through its four-acre meadow, wildlife garden, and diverse mix of plants.”

For more information about this certification program, visit www.nwf.org/Garden-For-Wildlife.aspx.



AMERICAN
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AHS NATIONAL EVENTS CALENDAR

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

OCT. 5–7. **America in Bloom Symposium and Awards Program.**

Holliston, MA. (AHS partner event.)

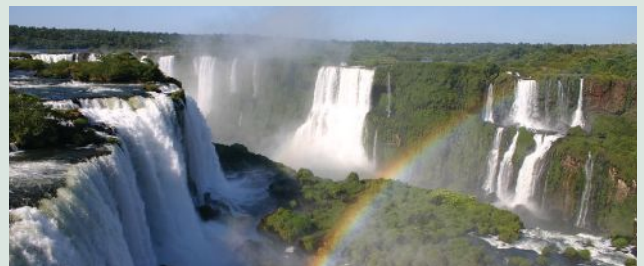
OCT. 6. **Great Plants Symposium.** Sturbridge, MA.

(AHS partner event.)

OCT. 12–26. **9th Annual AHS Online Auction.** National.

OCT. 30–NOV. 8. **Gardens of Argentina: Buenos Aires, Mendoza & Salta** (with optional post-tour to Iguaza Falls, Nov. 8–10).

AHS Travel Study Program.



DEC. 1–22. **Indoor Holiday Display.** River Farm, Alexandria, VA.

DEC. 9. **Holiday Open House.** River Farm, Alexandria, VA.

2018

JAN. 6–28. **Gardens, Wine & Wilderness: A Tour of New Zealand.**

AHS Travel Study Program. (*Wait list only.*)

APR. 13 & 14. **Spring Garden Market.** River Farm, Alexandria, VA.

AHS MEMBERS ELIGIBLE FOR TGOA/MGCA PHOTOGRAPHY CONTEST

THROUGH A special partnership with the Gardeners of America/Men’s Garden Clubs of America (TGOA/MGCA), the AHS’s members are eligible to participate in the group’s annual photography contest. The winning images from each year’s competition are featured in calendars produced by TGOA/MGCA. Visit www.tgoa-mgca.org to find out how to enter.

THREE BOARD MEMBERS RECENTLY PASS AWAY

THREE PAST and present AHS Board of Directors members passed away this summer. **Charles Henry (Bee) Smith, Jr.**, who was a Board member from 1996 to 2001 and then served on the AHS Advisory Council for many years, died on July 24 at age 96. Another former Board member, **Gerald T. Halpin**, passed away on August 14 at age 94. A well-known Washington, D.C.-area developer, he served on the Board from 1990 to 1996 and was also a longtime River Farm neighbor. Also on August 14, AHS Board member **Thomas E. Johnson** died at age 62. A prominent Washington D.C.-area architect specializing in the preservation of historic buildings, Johnson had been on the Board since 2014.

News written by AHS staff.



AMERICAN HORTICULTURAL SOCIETY TRAVEL STUDY PROGRAM UPCOMING TOURS

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**GARDENS, WINE & WILDERNESS:
A TOUR OF NEW ZEALAND** **WAIT LIST ONLY**
January 6–28, 2018
hosted by Panayoti Kelaidis

GREECE: ANTIQUITY, CULTURE & GARDENS
April 23–May 4, 2018
hosted by Jane and George Diamantis

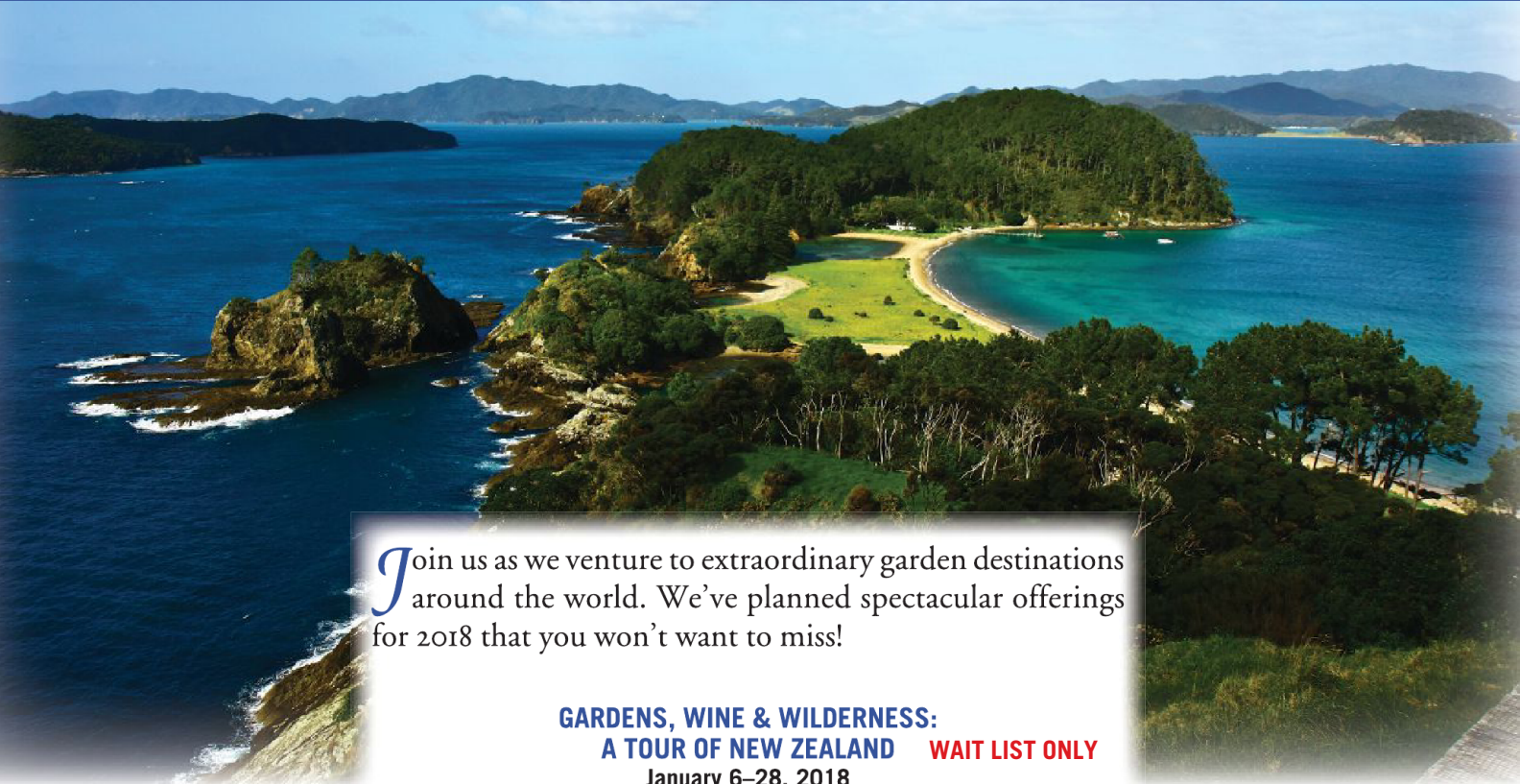
**ENGLAND, GARDENS OF THE WEST COUNTRY:
CORNWALL, DEVON, SOMERSET & WILTSHIRE**
June 10–18, 2018
hosted by Holly and Osamu Shimizu

**CASTLES & GARDENS OF THE CZECH REPUBLIC:
PRAGUE, BOHEMIA AND MORAVIA**
September 5–15, 2018
hosted by Shirley and Frank Nicolai

Find out more at www.ahsgardening.org/travel.

For more information about the AHS Travel Study Program visit www.ahsgardening.org/travel, e-mail development@ahsgardening.org, or contact Susan Klejst at (703) 768-5700 ext. 127.

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



AHS MEMBERS MAKING A DIFFERENCE: Susan Yoder

by Stephanie George



Aspiring horticulturists participate in hands-on activities such as thinning tomato seedlings during a Seed Your Future-sponsored event at North Carolina State University in Raleigh.

PEOPLE WHO work with plants tend to be pretty passionate about their jobs, but putting the idea of a career involving horticulture in people's minds in the first place can be quite challenging. This is reflected in the fact that around 40 percent of currently available horticulture positions remain unfilled.

"There's a huge demand that's just not being met," says Susan Yoder, executive director of Seed Your Future, a national organization that promotes horticulture as a career. There simply aren't enough people, she explains, who can grow food, conserve plant species, and create engaging green spaces. "The bottom line is that in this changing world we've got to have people who can ensure the future of our environment," says Yoder, an American Horticultural Society (AHS) member who lives in Indianapolis, Indiana.

SPREADING THE WORD

Some of the problem appears to stem from a lack of awareness about the opportunities in horticulture. According to a phone

survey carried out by Seed Your Future in 2016, just 48 percent of Americans between the ages of 18 and 35 are familiar with the term "horticulture," while about 72 percent of those over 35 are more likely to recognize the word. Among the respondents who were familiar with horticulture, only 26 percent saw it as a viable, fulfilling, and respected career path.



Susan Yoder

Reflecting on her own career path, Yoder says that it was influenced by her affinity for the outdoors and shaped with the help of people who encouraged her to pave her own way. She started out sharing her love of nature with kids at the camps and after school programs where she worked. "After college," she says, "I discovered that a career in nonprofit

management blended my commitment to youth development with organizations focused on causes I cared about."

Yoder is also a longtime home gardener who is particularly fond of native plants and edibles. When she joined Seed Your Future last summer, her passion for working with youth and her interest in gardening finally merged. One of the parts of her job she enjoys most is crisscrossing the country promoting the goals of Seed Your Future.

Among Yoder's recent stops was the AHS's National Children & Youth Garden Symposium in the Pacific Northwest this past summer. In her presentation there to teachers, garden designers, and others that work with school-aged kids, she emphasized the importance of letting their young audiences know that horticultural jobs are an option. "What we hear from talking to kids is that they are actually thinking a lot about what kind of job they want," says Yoder. "They say they want to make a difference, be creative, and have flexibility—all things careers in horticulture can offer."

A TEAM EFFORT

In addition to reaching out to educators and others who guide career-seekers, Seed Your Future encourages those already working in the field to use the hashtag #ILoveMyPlantJob on social media. This campaign is helping to change the "pervasive negative perception of horticulture jobs," Yoder says. A glance through a few of these tagged images yields smiling faces in settings from fields and greenhouses to laboratories and classrooms. "When kids see people loving what they do for a living, it helps open their minds to considering those careers," Yoder says.

Yoder feels optimistic about the collective impact her work is having. "Attitudes towards gardening and other plant-related professions are changing, and it's exciting to work with organizations like Seed Your Future and the AHS that are leading the way," Yoder says.

Stephanie George is an editorial intern for The American Gardener.

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a Sucker for Natives



COMMON staghorn sumac (*Rhus typhina*) may get short shrift from gardeners because it tends to be rather nondescript in spring and summer. But once cooler weather arrives in fall, this native shrub stands out along the roadways of the Northeast, Mid-Atlantic, and Upper Midwest when dense colonies of it are cloaked in bright red to orange foliage.

Aside from its stunning fall color, I mention this sumac because it's a familiar example of a stoloniferous, or "suckering," shrub that spreads slowly via underground stems—known as stolons—to eventually form fairly dense masses. Some may view species that have this growth habit in a negative light, but in my experience these plants offer a number of benefits in the

Native shrubs that slowly spread to form small colonies offer a variety of landscape benefits.

BY ANDREW BUNTING

right site. Many make excellent groundcovers, others are useful for erosion control on slopes and hillsides, and several will thrive in challenging conditions like seasonally moist soil or heavy shade. They also tend to work well in informal gardens, and many—particularly regional natives—offer nectar, food, or cover that supports a wide variety of wildlife.

Shrubs with this growth habit range in size from those that essentially serve as low groundcovers to larger ones growing six to 10 feet tall. Their spread is similarly vari-

able, often depending on the type of site in which they are growing and competition from other plants.

GREAT GROUNDCOVERS

One of my favorite suckering shrubs is yellowroot (*Xanthorrhiza simplicissima*, USDA Hardiness Zones 3–9, AHS Heat Zones 9–3), which only reaches about 18 inches tall and forms dense clumps under the right conditions. Native to the Appalachians from New York to Alabama and Florida, yellowroot is grown primarily



Above, left: In this low-water New Mexico garden, a mass of drought-tolerant 'Gro-Low' sumac shows off fall color in tandem with the flower spikes of dotted blazing star (*Liatris punctata*). **Above right:** Shown here growing in a Pennsylvania garden with *Penstemon digitalis* 'Husker Red' is Virginia sweetspire 'Henry's Garnet', right, which forms dense colonies to three feet tall.

for its finely dissected leaves, which turn a striking burgundy to gold color in fall before dropping. The drooping clusters of reddish-purple flowers that bloom in early spring are interesting, but relatively inconspicuous. I have seen yellowroot growing successfully in both sun and shade, but it will develop the most dense masses in part shade, especially in warmer regions. During a seed-collecting trip in Kentucky last year, I came across yellowroot growing in tough rocky conditions, indicating its exceptional drought tolerance.

Staghorn sumac, which I mentioned earlier, and some of the other native sumacs are too tall and spread too aggressively for use in smaller gardens. A better choice is 'Gro-Low', a selection of fragrant sumac (*Rhus aromatica*, Zones 3–9, 9–3). It reaches only two feet tall at maturity but spreads into a dense mass six to eight feet in diameter. It is quick to establish, and at the Chicago Botanic Garden in Illinois, where I work, it has proven to be one of the best native groundcovers for tough environments, tolerating heat,

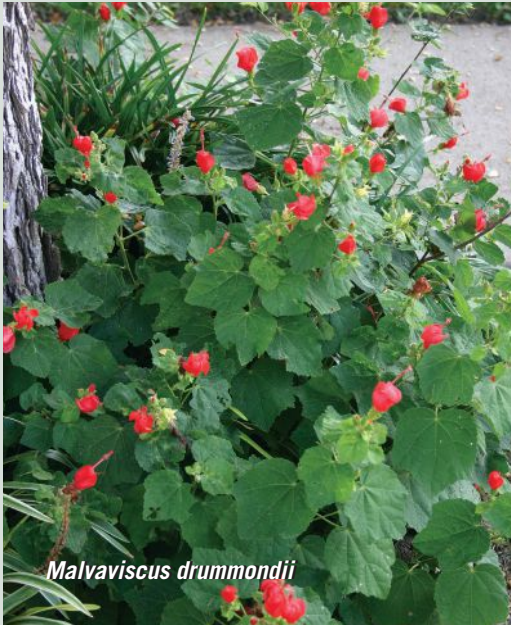
drought, and poor soils. The tiny yellow late-spring flowers are inconspicuous, but in the fall, the small scalloped leaves turn brilliant shades of orange, red, and yellow, especially in full sun.

At the Scott Arboretum of Swarthmore College in Pennsylvania, where I worked prior to the Chicago Botanic Garden, massed shrubs are an important element in the design of large-scale landscaping projects. One of the stoloniferous plants that has functioned extremely well there is 'Henry's Garnet', a selection of Virginia sweetspire (*Itea virginica*, Zones 5–9, 9–4). Reaching four feet tall at maturity, this multi-stemmed shrub is adorned with fragrant, goosenecklike spikes of white flowers in early June. The narrow leaves turn plum-purple in the fall and even the red-

REGIONAL SUGGESTIONS

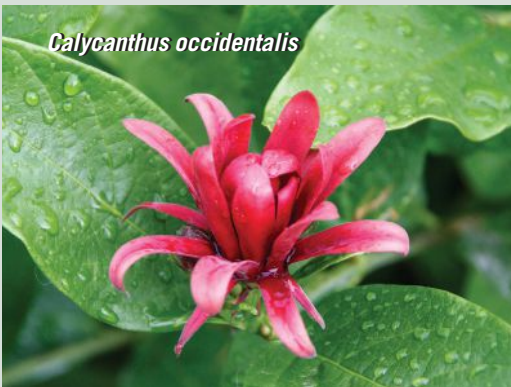
The suckering native shrubs included in this article are ones that I've had experience with while working at the Scott Arboretum in suburban Philadelphia for many years and, more recently, at the Chicago Botanic Garden in Glencoe, Illinois. For choices suited to regions of the country I'm not as familiar with, such as the Deep South and West, here are recommendations from colleagues in these areas.

Adam Black, horticulturist at Peckerwood Gardens near Houston, Texas, recommends **Texas mallow** (*Malvaviscus drummondii*, Zones 7b–10b, 11–6). This hibiscus



relative, which reaches five feet tall at maturity, will grow in a variety of soils. The species is covered in small, scarlet, hibiscuslike flowers, but selections with white and pink flowers are available as well. It is evergreen in southern regions and will bloom off and on throughout the year, while in the more northerly extent of its hardiness range it will perform like a herbaceous perennial, dropping its leaves in winter and sending out fresh stems in late spring.

For California gardeners, Evan Meyer at the Mildred E. Mathias Botanical Garden at the University of California's Los Angeles campus, suggests **toyon** (*Heteromeles arbutifolia*, Zones 8–10, 10–8). Native to California, this evergreen shrub reaches six to 10 feet tall at maturity. A drought-tolerant member of the rose family, it bears clusters of shiny red fruits in the winter. Meyer also recommends **western spice bush** (*Calycanthus occidentalis*, Zones 7–10, 10–7), which is native to the mountains of central and northern California. It is covered with fragrant



burgundy flowers from April to August. Its flowers and habit are similar to that of its eastern relation Carolina allspice (*Calycanthus floridus*, Zones 5–9, 9–4), which is another excellent stoloniferous shrub.

In the Pacific Northwest, **salal** (*Gaultheria shallon*, Zones 7–9, 9–7) serves as a good colonizing groundcover, according to Richie Steffen, horticulturist at the Elisabeth C. Miller Botanical Garden in Seattle, Washington. Native along the Pacific Coast from British Columbia to California, it grows four to eight feet tall with equal spread and has attractive shiny evergreen foliage. Clusters of white to pale pink flowers bloom in spring, followed in summer by edible black berries. While salal is adaptable in sites ranging from full shade to some sun, Steffen says it tends to do best “when grown in part shade, with a light clipping in late spring after bloom to help keep it dense.”

—A.B.

dish to purplish stems are somewhat decorative in the winter. Virginia sweetspire is native to much of the Mid-Atlantic and Southeast; hardy selections are available for the Midwest. It thrives in full sun, but tolerates part shade and is adaptable to a wide range of soils, including poorly drained sites. Other desirable selections include compact Little Henry® ('Sprich'); 'Merlot', which has dark red to purple fall color; and Scarlet Beauty™ ('Morton'), a particularly hardy (to USDA Zone 4) selection with orange to red fall foliage released through the Chicagoland Grows® plant introduction program.



In addition to suckering, summersweet has fragrant flowers that attract pollinators.

Another good shrub for massing is summersweet (*Clethra alnifolia*, Zones 4–9, 9–1), native to the Eastern Seaboard from Maine to Texas. Its sweetly-scented, erect, bottlebrush flowers open in August, adding late-summer color and fragrance. These blooms are also pollinator magnets, making this plant an excellent choice for wildlife gardens. Most cultivars have white flowers, including the diminutive 'Hummingbird' and the floriferous selection 'Sixteen Candles', but 'Ruby Spice' and 'Hokie Pink' offer deep-pink flower options. Like Virginia sweetspire, summersweet thrives in full sun and is a good option for sites with moist soil.



Black chokeberry extends its appeal late into fall with its dark fruits and brilliant foliage.

Southern bush honeysuckle (*Diervilla sessilifolia*, Zones 4–8, 8–3) is a wonderful deciduous shrub for creating large masses and helping stabilize hillsides and slopes. Native to the southeastern United States, it reaches three to five feet tall with a similar spread and bears star-shaped, yellow flowers from mid- to late summer. It is adaptable to a fairly wide range of soil moisture and is happiest in full sun but will tolerate a bit of shade. Cool Splash® is a selection

with white-and-green foliage variegation.

The closely related mountain or hairy bush honeysuckle (*D. rivularis*, Zones 5–7, 7–4) has a similar appearance, habit, and cultural requirements. Among the selections is Summer Stars® ('Morton'), which only reaches three feet tall at maturity. Slightly larger, at three to four feet, are Kodiak®Black, which has burgundy-black foliage, and Kodiak®Orange, which has pinkish-orange foliage.

MID-SIZE SHRUBS

Among slightly larger stoloniferous shrubs are a number of hydrangeas native to North America. One is smooth hydrangea (*Hydrangea arborescens*, Zones 4–9, 9–1), which grows up to five feet tall with an equal spread. Native to much of the eastern United States, it has gray-green leaves and dome-shaped flowers starting in July. Many selections are available, including the well-known 'Annabelle', which bears large mophead flowers that start out green, turn pure white, and then fade back to green and eventually a tawny color in winter. Invincibelle®Spirit is a pink-flowered version of 'Annabelle' and Invincibelle®Ruby has flowers in an even darker shade of pink. 'Haas Halo' is a larger—up to seven feet tall—robust selection with flat-topped clusters of flowers.

A suckering shrub that offers multi-season interest is black chokeberry (*Aronia melanocarpa*, Zones 3–8, 8–2), native to much of the Northeast and Mid-Atlantic south to Georgia. A mounding shrub that grows up to six feet tall at maturity with an equal spread, it is covered in a profusion of white flowers in May. Dark black berries ripen in the fall, accompanied by striking red-purple fall foliage color. This tough shrub adapts to poor soils and its fruits provide a food source for wild birds. Compact selections include Iroquois Beauty™, which reaches three feet tall at maturity, and Low Scape® Mound, which peaks at two feet.

Slightly larger in stature, up to eight feet tall, is 'Brilliantissima', a wonderful selection of the red chokeberry (*A. arbutifolia*, Zones 4–9, 9–4). In spring, this upright, multi-stemmed shrub is cloaked in white flowers, while fall brings on a fantastic display of glossy-red fruits and bright red foliage color that lives up to the promise of its cultivar name.

Smooth witherod (*Viburnum nudum*, Zones 4–9, 9–4) is another multi-season winner, starting in April to May when it is covered with flat-topped clusters of white flowers. These are followed by clusters of fruit that can ripen from light pink to darker pink to blue and then purple. In the fall, the shiny leaves turn a striking maroon-purple. Smooth witherod is one of the few viburnums that thrives in poorly-drained soils. It tolerates part shade, but flowering, fruiting,

and fall color will be optimal in full sun. Be sure to plant at least one different selection to provide cross-pollination and ensure good fruit set. A good planting combination is 'Winterthur', a six-foot-tall selection, along with 'Brandywine'.

If you're looking for something out of the ordinary, try Alabama snow wreath (*Neviusia alabamensis*, Zones 5–8, 8–4), an underused native of the South that grows to six feet tall at maturity. It is covered with delicate frothy white flowers in April and May, and the serrated leaves add a nice textural effect in the garden.

Another suckering shrub that offers a fine-textured look in the landscape is prairie willow (*Salix humilis*, Zones 3–8, 8–1). As its common name implies, it is native to prairie and savannah habitats in the central and Midwest regions of the United States. Like its relative the pussy willow, its fuzzy flowers—technically catkins—emerge on the wiry, four-foot stems between March and May, depending on the location. The linear leaves, which arrive after the flowers, provide the classic willow-like look.

WINTER INTEREST

Several of the suckering shrubs I've described provide multi-season interest, but be sure to also include plants with win-

Top, right: A little-known Southern native, Alabama snow wreath produces arching sprays of white flowers in spring. Bottom, right: Among colonizing shrubs, red-twig dogwood offers perhaps the strongest winter appeal thanks to its brightly-colored stems.

ter appeal. One good option is red-twig dogwood (*Cornus sericea*, Zones 3–8, 8–1), prized for its red stems that grow six to eight feet tall. These stand out in the winter landscape, especially against a backdrop of snow. This dogwood is adaptable to a wide range of soil, including wet or poorly drained sites. 'Baileyi' has fire-engine-red winter stems, while 'Cardinal' turns a stunning salmon-orange. For best vigor and stem color, cut the stems back nearly to the ground at the end of the winter every other year.

A shrubby evergreen native holly known as inkberry (*Ilex glabra*, Zones 5–9, 9–3) tolerates similar conditions to red-twig dogwood. 'Densa', which lives up to its name, is one of the most pop-





Among taller suckering shrubs, winterberry hollies such as 'Winter Red', above, have many outstanding qualities, including bright red berries, tolerance for moist sites, and wildlife appeal.

ular selections, but over time it can easily reach eight feet tall. 'Shamrock' stays much more compact and Gem Box® only reaches three feet tall and can be used as a small informal hedge or in mass plantings.

Winterberry holly (*Ilex verticillata*, Zones 3–9, 9–1) is one of the very best colonizing shrubs for winter interest. Native to swampy areas and along water bodies throughout the eastern United States and in large parts of the Midwest, this deciduous holly grows to 10 feet tall in the wild, but there are lots of smaller cultivars available. 'Winter Red' reaches eight feet tall and sets an abundance of shiny red fruits

along the stems in the fall, which are revealed as the leaves turn yellow and drop. These often persist well into the following spring, because birds generally don't eat the berries. A male selection called 'Southern Gentleman' will pollinate the aforementioned cultivar and guarantee good fruit set. 'Golden Verboom' bears golden yellow fruits (an ideal pollinator partner is 'Golden Verboom Male').

MAINTENANCE CONSIDERATIONS

Suckering plants will continue to expand in the width of the shrub mass as they grow. There are some measures whereby

Sources

- Forestfarm at Pacifica**, Williams, OR.
www.forestfarm.com.
- Lazy S'S Farm and Nursery**, Barboursville, VA. www.lasysfarm.com.
- Mail-Order Natives**, Lee, FL.
www.mailordernatives.com.
- Pine Ridge Gardens**, London, AR.
www.pineridgegardens.com.
- Woodlanders, Inc.**, Aiken, SC.
www.woodlanders.net.

Resources

- Manual of Woody Landscape Plants** (6th ed.) by Michael A. Dirr, Stipes Publishing, Champaign, IL, 2009.
- Native Trees, Shrubs & Vines** by William Cullina, Houghton Mifflin, Boston, MA, 2002.

you can help manage this growth and keep them vibrant and healthy.

I recommend the practice of thinning the stems on a yearly basis to remove old or damaged ones. These can be cut to the ground with either pruners or a hand saw. I suggest doing this work in the winter when it is easier to see the structure of the plant, and therefore easier to see which stems should be cut back. This process should be very selective. To manage the spreading nature of these plants, some comparable pruning around the perimeter of the shrub can happen.

FINDING THE RIGHT FIT


Several areas of the garden are well suited to suckering shrubs like the ones I've discussed that readily spread to fill in open space. Most of them are excellent choices for wildlife habitat, which is an important consideration for many gardeners these days. Take a fresh look at your landscape this fall or winter and think about where these plants might help you solve problems or reduce maintenance. In the right situation, these shrubs can be combined in naturalistic masses that are as attractive as they are utilitarian. The key is to turn their stoloniferous tendencies to your garden's advantage. 🌿

Andrew Bunting is assistant director of the garden and director of collections at the Chicago Botanic Garden in Glencoe, Illinois.



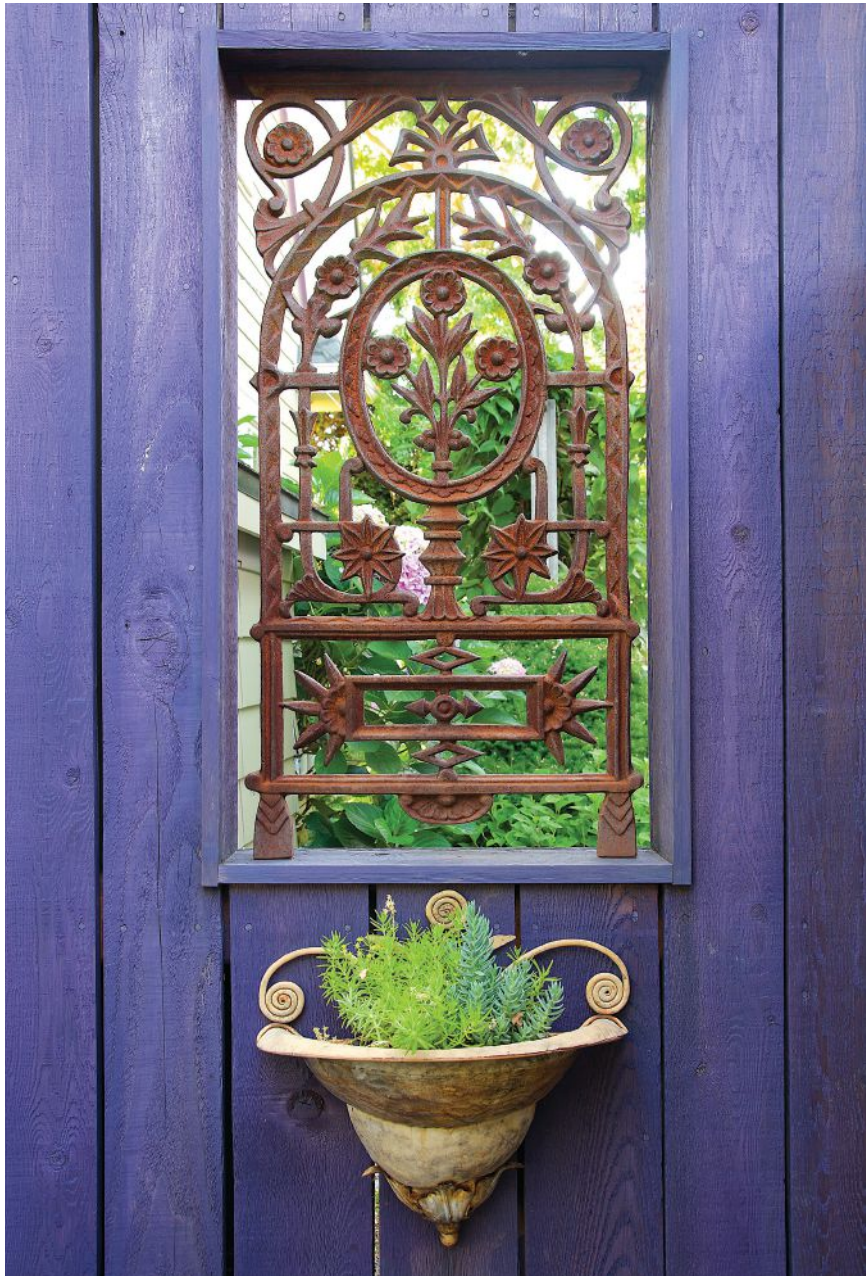
glorious gates

BY MARY YEE

ANY GARDEN that is enclosed by a fence or some type of wall needs a gate for access. Gates are primarily made of wood or metal, and for pure functionality, you can find a number of options at the local home improvement center, but why not use this opportunity to also make a statement about you and your garden? Of all the elements in an average garden, a gate is perhaps the easiest to customize to make an instant impact. By simply choosing the right gate, you can turn your garden from drab to vibrant or ordinary to full of personality. On the following pages you'll see examples of how some gardeners across the country have done just that. 

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

Including an arbor over a gate allows it to do double duty. This cottage-style garden in the coastal town of Mendocino, California, features a classic white picket fence with a matching gate and arbor over which roses have been trained.



Left: In addition to providing privacy and adding a burst of color, this purple gate leading to the backyard of Connie and Dennis Schweppe's home serves as a showcase for a decorative iron grille the couple found years ago in what Connie calls a "junk" shop. "We knew we'd find a use for it sometime," says the Portland, Oregon, gardener. Dennis, a skilled woodworker, made the gate with an opening to display the grille and also let visitors catch a glimpse of the garden. Plants growing in the fanciful container hanging below the grille help soften the look of the gate. "I change the plants in the planter from time to time," says Connie, "but tend to use succulents because they require little water."



Above: With its strong contrasts in color and material from the walls of gray stone, the eye-catching bamboo gate in this tropical garden in Kona, Hawaii, adds a touch of drama to an otherwise bland vignette.



Left: Rustic gates open to a gravel path in Carole and Jim McWilliams's garden near Atlanta, Georgia. Constructed by a local craftsman, the gates have an organic feel that matches the woodland ambiance of the property, which covers several acres and includes a creek.



Portland, Oregon, garden designer Darcy Daniels needed a gate for this passageway between her back and front yards that was low-cost and easy to install, provided a sense of transparency, and also kept in her small dogs. A salvaged glass-paned window sash was the ideal solution. “I wanted to maintain an open look between the two spaces,” Daniels says. “Being able to see through the gate sends a very clear invitation to experience both gardens.” Additionally, the gate’s resemblance to a trellis contributes to the informal, floriferous feel of the garden.

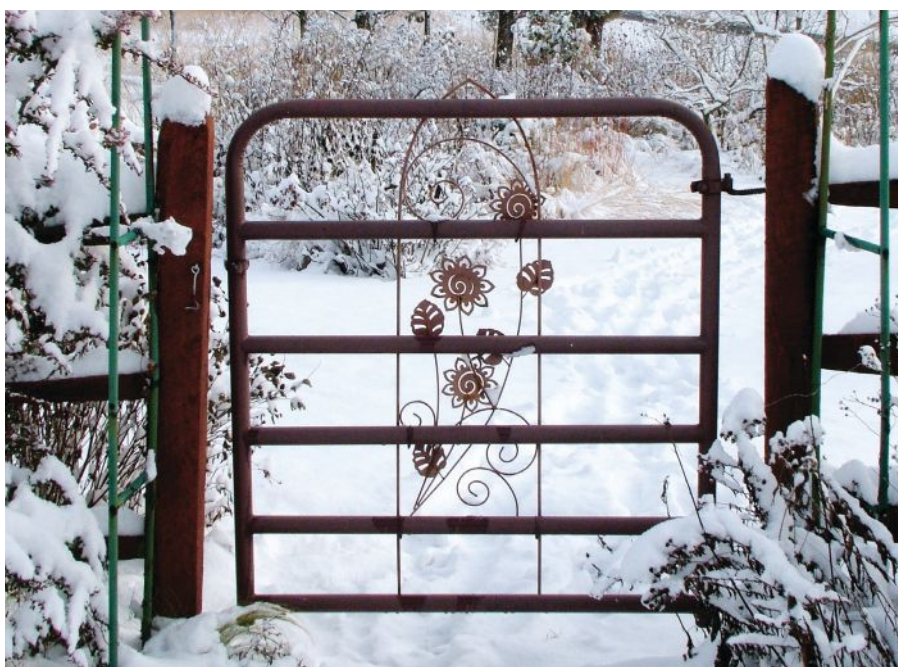


Aside from style and color, another consideration for a gate is its suitability to a region’s climate. This turquoise gate to the back patio of Ann Butler’s house in Tucson, Arizona, contrasts with the pink adobe walls in a color combination popular in the Southwest. Butler, who wanted something low maintenance, chose wrought iron for the gate. “We have a lot of sun and heat in Tucson,” she says, “and, unlike wood, wrought iron stands up to both.” For privacy, a wire screen that has been spray-painted to match is riveted to the back of the gate. The gate’s sharp-angled lines complement the lines of the walls as well as the plantings of Mexican fence-post cactus (*Pachycereus marginatus*).

LEFT: JANET LOUGHREY. RIGHT: MARK TURNER.



In the Portland, Oregon, garden of Jose and JJ De Sousa, quirkiness rules. JJ, who is an interior and garden designer, loves color—especially orange—and she also has a taste for the eclectic, so this bright metal gate with a cut-out carrot motif is a perfect expression of her personality. The unique gate, which was custom-fabricated by a local artist, goes well with the many other orange objects in the De Sousa garden, including bowling balls, salvaged wall art, lounge chairs, and plant containers. “Orange is such a cheerful, happy color,” says JJ. “I’m surprised people don’t use it more.” As for a carrot gate, she knows it may not be for everyone. “The character of the garden usually gives you hints of what type of gate to use,” she says.



A simple, functional gate can be embellished to add personality. For her homestead in rural Bucks County, Pennsylvania, Nancy Ondra used a metal tubing gate from a farm supply store and painted it red to match the wood fencing. Then she introduced some whimsy by attaching a decorative metal trellis, also painted red, to the gate with wire. “It would be easy to attach other sorts of accessories, such as old garden tools, for a different look,” says Ondra. “The whole thing is relatively lightweight and is almost no maintenance: just occasional painting.” She adds, “Another advantage is, because the gate is metal, it will never sag. That’s a big problem I have with my wooden gates.”



Dan Heims

a growing passion

This Oregon nurseryman started with a 29-cent houseplant—and became one of the country's top plant breeders.

BY AMY CAMPION

PHOTOGRAPHS BY JOSH MCCULLOUGH



Among the many introductions from Dan Heims are, clockwise from top left: *Heuchera* 'Peach Crisp', *Actaea* 'Black Negligee', \times *Heucherella* 'Solar Power', and *Tiarella* 'Sugar and Spice'.



TOURING THE Terra Nova Nurseries display gardens in Canby, Oregon, with president and plant breeder Dan Heims, we pass by a bugbane (*Actaea simplex*) called ‘Black Negligee’. “They said I name too many plants after food,” Heims explains with a sly smile. Indeed, the borders are filled with varieties such as ‘Cherry Truffle’, ‘Macaroon’, ‘Key Lime Pie’, and ‘Sugar Plum’. The colors are as tantalizing as the names, and flowers and foliage of every hue make a dazzling show.

Terra Nova has been breeding and introducing new plants for decades, including its renowned selections of *Heuchera*. Once a year, its wholesale-only property opens to the Hardy Plant Society of Oregon, allowing its members—of which I am one—the chance to get an up-close view of the extraordinary collection Heims has developed.

With 965 introductions, Heims has shattered the record held by his horticultural hero, Luther Burbank (800), gifting gardeners with a phenomenal palette of delightful plants. Richard Hawke, plant evaluation manager at the Chicago Botanic Garden in Glencoe, Illinois, describes Heims’s impact this way: “Dan’s sky’s-the-limit approach to plant breeding has opened our eyes to a bounty of possibilities for heucheras, coneflowers, and much more. How drab the world seemed before Dan brought us along on his fantastical technicolored journey!”

At his home in Portland, Oregon, a shady retreat planted with 65 Japanese maples sheltering countless woodland treasures, I set out to learn what motivates Heims—from his earliest years through the building of a wholesale nursery giant whose products are respected and coveted worldwide.

EARLY INFLUENCES

Heims is a big man with a big personality. He has wavy silver hair, a neat white goatee, and a mischievous smile. He also has a fondness for terrible puns: When I mention patio furniture, he says, “She’s Irish, right?” I don’t even see it coming.

Heims is an outgoing person who lectures around the world and enjoys performing on stage with his jam band, the Bloopers, on blues harp, but, surprisingly, he was shy as a kid and would have “palpitations” when he had to speak in front



Dan Heims shows off a tray of *Heuchera* ‘Southern Comfort’ plugs in one of Terra Nova’s greenhouses. This popular hybrid was bred from *H. villosa*, *H. micrantha*, and *H. americana*.

of a class. One thing Heims did enjoy in school was drawing cartoons in the library at lunchtime with a group of boys—one of whom, incidentally, was Matt Groening, creator of “The Simpsons.”

Heims grew up in Portland not far from his current home. His father was an ad man, which may be where he got his flair for marketing. (Is there a more seductive plant catalog than Terra Nova’s?) His mother tended a big perennial

garden, but Heims, the youngest of four children, didn’t appreciate the garden at the time, though he was curious about plants and the world around him. He enjoyed exploring the neighborhood and the valley below his home, and he’d intensively study what he found. “I’d be into ants,” he says, “and the library would have eleven books on ants—I’d read them all.” Science and experimentation was always an interest. When he was 13, he tried to

distill the scent of daphne flowers using his chemistry set, but the result ended up smelling only of alcohol.

BITTEN BY THE HORTICULTURE BUG

After graduating from high school in 1971, Heims headed to the University of Oregon in Eugene. There the horticulture bug bit. It began innocently, with a 29-cent velvet plant (*Gynura aurantiaca*) from Hiron's Drug Store. Then, a book: *All About House*

was an inventor, artist, and anthropologist who worked nine months in Oregon followed by three months in Papua New Guinea. He planted in Heims the dream of visiting that remote land himself one day.

After college, Heims moved back to Portland with the 1,200 houseplants he'd accrued and started a business called Exotic Plants Unlimited. He sold his wares at the Portland Saturday Market and, he jokes, "almost made a living." Eventually,

learned which plants were hardy, disease resistant, self-supporting, compact, and long-blooming—and which ones were not.

Heims would later use that knowledge in developing plants of his own. His breeding goals would be based upon practical experience. "I think there are a lot of people involved in plant breeding who don't put their hands in the dirt," says garden designer Lucy Hardiman of Perennial Partners in Portland, Oregon.



The landscape at Terra Nova, shown here in early summer, features a colorful mix of the nursery's wide variety of introductions.

Plants by Montague Free. Soon, he became hooked on plants. In the duplex he rented with five roommates, he installed racks of fluorescent lights in the basement to grow hundreds of houseplants.

Although Heims majored in broadcast communications, it was his minor in botany that truly excited him. His horticultural mentor, McAllister Ruff, had a profound impact on his career path. "I loved that man," he tells me unabashedly. "He was sweet, generous—the kindest man you ever met." Besides being a horticulturist, Ruff

the early '80s gave us the Me Generation. "It was go, go, go," he sighs. "People didn't have time for nurturing. The houseplant business dissolved."

He fell back on a summer landscaping job with the county park district and later started his own design-build-maintenance company. In all, he landscaped for 20 years. Landscaping taught him lessons that would serve him well in the next phase of his career. Most importantly, he learned what made a good landscape plant and where improvements in plants were needed. He

"Dan is a *gardener*, and that makes a huge difference."

TERRA NOVA IS BORN

Heims had been breeding plants on the side for a while, but in 1992, he officially launched Terra Nova Nurseries with his business partner, Ken Brown. The company's goal was to generate new plants using conventional breeding methods and propagate them via tissue culture. With tissue culture, they could rapidly produce plants that were slow to multiply by traditional means.



Early on, Heims saw the potential of coralbells, as plants in the genus *Heuchera* are commonly known, and they have become one of Terra Nova's staples. Here was a group of plants that was hardy from Saskatchewan to the Gulf of Mexico, that was adaptable to containers and many applications, and that little breeding work had been done on. When he introduced ruffled leaves and gold tones into the gene pool, things began to get really exciting.



Kniphofia 'Mango Popsicle', left, and *Heuchera* 'Key Lime Pie', above, illustrate the brilliant colors Terra Nova is known for.

Kathy Brenzel, former editor of *The Sunset Western Garden Book*, surely speaks for many when she says, "Dan Heims made me fall in love with heucheras, as he kept introducing new varieties in gorgeous colors, with delicious names such as 'Chocolate Ruffles', 'Georgia Peach', and 'Lime Rickey'." He also crossed *Heuchera* with the related foamy bells (*Tiarella* spp.), creating a wealth of colorful intergeneric hybrids under the name \times *Heucherella*.

Coneflowers (*Echinacea* hybrids) became another Terra Nova specialty, with novel colors, double flowers, and compact forms soon gracing the pages of his catalog. Heims also expanded the offerings of red hot poker (*Kniphofia* spp.), Shasta daisies (*Leucanthemum* spp.), *Agastache*, *Penstemon*, and sedums. His company even created a fun new hybrid for stumping your gardening friends: \times *Mukgenia*—a cross between *Mukdenia* and *Bergenia*.

The newest Terra Nova introductions include cold-hardy and rust-resistant cor-



Terra Nova's begonia breeding program has produced cultivars with spectacular foliage such as 'Garden Angel Plum', above left. Thanks to tissue culture, the nursery can quickly propagate a large supply of it and other cultivars, above right.

albells (Northern Exposure™), selections of pyrethrum or painted daisy (*Tanacetum coccineum*) that don't flop (Radiant™), and meadow rue (*Thalictrum aquilegifolium*) cultivars with smoky gray stems (Nimbus™). Begonia breeding for both flower and foliage effect has been intense, and naturally compact coleus selections featuring spectacular patterns is another focus. Improved *Plectranthus* is in the pipeline, too.

FORMULA FOR SUCCESS

How does Heims go about developing a new plant? He often starts with the plant's worst problem—powdery mildew on lungworts (*Pulmonaria* spp.), for instance. He'll breed for resistance and

raise thousands of seedlings, seeking a plant that's naturally problem-free. In this way, mildew-resistant *Pulmonaria* 'Trevi Fountain' came to be. Other times, he'll simply notice an intriguing mutation that has occurred. "Sport fishing" is the term he coined to describe the search for these chance mutations. He then sends new selections to trial gardens around the country to determine their performance in various climates. It takes about three years, along with a consid-

To find retail sources for Terra Nova plants near you, visit its website at www.terrannotnurseries.com/gardeners/retail_sources.php.

erable outlay of money, to introduce a Terra Nova plant. "We spend easily a million dollars a year on research and development," Heims says.

When he gets it right, he feels it. "I know I have a great plant when I fall in love with it every time I see it," he says. "Like [*Heuchera*] 'Champagne'—every time I see that plant I just go, 'Ahh.' Those colors she pulled out!"

She is Janet Egger, from the Terra Nova breeding team. Heims frequently expresses his appreciation for the members of this team—Egger, Chuck Pavlich, and Harini Korlipara—and he's also thankful for the more than 100 workers—from propagators to salespeople—who keep things running smoothly at the nursery.



After decades building the business at Terra Nova, Heims is now taking more time to relax, including sharing his love of plants with his young grandson, Liam, in his home garden.

FAMILY AND FRIENDS

Knowing that the business is in capable hands leaves Heims free to spend more time with family and friends. He whispers, “Don’t tell my partner [Ken Brown], but I consider myself semi-retired.” He delights in his relatively new role as grandfather and loves spending time with his four-year-old grandson, Liam. “It’s fun to share nature with him, as I did with both my kids,” he says.

Next year, Heims and his wife, Lynne Bartenstein, will celebrate their 40th wedding anniversary with a trip to Japan, one of Heims’s favorite places. He loves the Japanese garden aesthetic and has made several good friends there through a shared infatuation with plants.

Travelling is a passion for Heims; he’s had his passport stamped in 39 countries. Last fall, he had one of his biggest adventures when he visited Papua New Guinea. He stayed with locals in their homes, ate crocodile one night (“nicely done—they cook it in bamboo with coconut milk”), and reveled in the exotic plant life. It was also an emotional journey. Heims’s mentor, McAllister Ruff, died in that South Pacific country, and one of Heims’s reasons for going was to honor the memory of the man who had meant so much to him.

A HORTICULTURAL TREASURE

The horticultural community understands the important role Heims has played in the

DAN HEIMS’S TIPS FOR HEALTHY HEUCHERAS

Dan Heims is responsible for getting many gardeners hooked on heucheras, so he knows a thing or two about how to best grow them. Here are few of his tips for success:

- Heucheras that develop a “neck” (a stem that’s bare at the base) benefit from being lifted and reset a little deeper every two to three years. Apply a low dose of slow-release fertilizer at this time.
- Vine weevil grubs are fond of heuchera roots. Control grubs organically with a product containing beneficial nematodes. Spread it in early September; be sure to water the ground both before and after applying the product.
- If the top of the plant comes off from vine weevil feeding, replant it elsewhere. It will make new roots.
- Pour boiling water over the spot where the plant was growing to kill vine weevil grubs, which would otherwise lay more eggs. —A.C.

industry. “Dan is one of the major leaders in American horticulture, and we’re all benefiting from his expertise and passion,” says Allan Armitage, professor emeritus of horticulture at the University of Georgia, Athens. “He’s willing to talk, he’s willing to share. There’s no one he’s above.”

James Baggett, garden editor for *Better Homes & Gardens*, reflects on Heims’s deep knowledge of and love for plants. “For most people,” says Baggett, “plants are simple commodities or ‘live goods’ that provide color and excitement. But not for Dan Heims. He knows the growing plant—in the wild and in cultivation—first-hand. The horticultural landscape has changed thanks to Dan’s 30 years of collecting and researching and breeding plants. His legacy will live on deep in the roots of home gardens across the globe.”

A garden writer and blogger, Amy Champion is co-author with Paul Bonine of Gardening in the Pacific Northwest: The Complete Homeowner’s Guide to be published in December 2017 by Timber Press. She lives in Portland, Oregon.



intriguing
Arisaemas

Once mainly the province of collectors, these fascinating aroids—the most widely known of which is Jack-in-the-pulpit—are now popular shade garden plants.

BY GENE E. BUSH

OF ALL THE plants I have grown over my many years as a gardener, arisaemas (*Arisaema* spp.) are undoubtedly the most fascinating. These mysterious and captivating plants look exotic but are hardy and easy to grow. I can't imagine my southern Indiana shade garden without them.

When I first began collecting arisaemas some 25 years ago, only a couple of the 150 or so species in the genus were readily available. But, thanks to the efforts of plant fanatics such as Tony Avent of Plant Delights Nursery and Barry Yinger of the former Asiatica Nursery, dozens of exotic species are now relatively easy to obtain from popular garden catalogs. The Internet and specialty plant exchanges are providing further sources of previously hard-to-find selections.

If you haven't already succumbed to the temptation to try arisaemas in your garden, there's no time like the present. But I offer fair warning, once you've started, it's hard to stop at just one or two!

BACKGROUND AND BOTANY

Arisaemas are the third largest genus, after anthuriums and philodendrons, in the arum family (Araceae). The center of diversity for arisaemas is in Asia—particularly the Himalayan region, China, and Japan—but they also range into the Middle East, Africa, and North America. They are primarily found in seasonally

Named for its flower's fancied resemblance to a preacher in an ornate covered pulpit, Jack-in-the-pulpit is widely native in moist woodlands east of the Rocky Mountains.

MARK TURNER



In late summer to fall, the clustered berries of arisaemas turn from green to red or orange. Here the berries of *Arisaema tortuosum*, a tall Himalayan species, create a spectacle above the bold foliage in a mixed border at the Bellevue Botanical Garden in Washington.

moist, woodland habitats, and most are native to temperate zones, which makes them adaptable to a wide range of gardens in the United States.

Arisaemas are herbaceous plants that grow from—depending on species—tubers or rhizomes. Despite what you might assume after seeing them in “bloom,” arisaemas are really mostly about foliage. In addition to one to three “true” leaves that develop on each plant, what is generally thought of as the flower is actually a modified leaf that curls into a tube, broadening at the tip to form a hood called a spathe.

Inside the spathe, the inconspicuous true flowers form on a slender club called a spadix. In some species, a band of male flowers forms near the top of the spadix, followed by a sterile band and then a band of female flowers. If pollen from the male flowers reaches the female flowers—and sufficient energy is available in the tuber—seeds will form inside fleshy berries. Most plants are pollinated by flies and beetles. Berries are produced in tight clusters, usually turning a brilliant waxy red by fall.

When it comes to reproduction, some arisaemas behave in rather unusual ways. Plants can be monoecious as previously

described, having both male and female flowers at maturity. Some species are dioecious—the male and female flowers are on separate plants. And some change their gender from one year to another in response to environmental conditions. (For instructions on propagating arisaemas, see the box on page 32.)

GROWING ARISAEMAS

Among species, there is a broad range of winter hardiness; most do well in USDA Hardiness Zones 4 to 9 and AHS Heat Zones 9 to 1. But hardiness and heat tolerance are not the only considerations in choosing a species. Before selecting an arisaema for your garden, determine whether it emerges early, mid-season, or late. Species break dormancy at varying times in spring through summer, and although a species may be hardy, if it begins growth too early, it can be injured by a late freeze. In southern Indiana, we often get a warm spell during February that lasts seven to 10 days, and then it’s back to winter. Arisaemas that emerge during those mild days are often damaged.

The best time to plant new arisaemas is while the rhizome or tuber is dormant. I have found over the years that arisaemas are quite tolerant of transplanting. Plant tubers four to six inches deep in free-draining organic soil.

Because arisaemas are sensitive to fertilizers, caution is advised. A light annual dressing of compost, composted manure, or a balanced fertilizer is sufficient. Each fall, I mulch with chopped leaves that break down to provide additional nutrients and organic matter.

NORTH AMERICAN SPECIES

Three arisaema species are found in North America, but one (*A. macrospathum*) is endemic to the highlands of central Mexico and is not hardy enough for me to cover here.

The arisaema most familiar to American gardeners is Jack-in-the-pulpit (*A. triphyllum*, USDA Hardiness Zones 4–9, AHS Heat Zones 9–1). Native to moist woodlands in most states east of the Rocky Mountains, this was the first arisaema in my collection. Its common name stems from the fancied resemblance of its inflorescence to a preacher (the spadix) standing in a covered pulpit (the spathe).

Not surprisingly, given its wide native range, Jack-in-the-pulpit is quite variable in appearance, and botanists recognize several subspecies. You can find local populations that have green stems and inflorescences, dark or spotted stems and dark chocolate blooms, or any combination between the two. Mature plants vary considerably in size—some grow almost four feet tall, others never exceed 18 inches.

Jack is very adaptable and can live well over 25 years in suitable environments. Following an especially favorable year, its tuber can increase 200 percent in size.

Normally, a mature Jack has two leaf stems that arise from the main stalk. Each leaf has three leaflets except for a subspecies, *A. triphyllum* ssp. *quinatum*, which

has five leaflets. The inflorescence arises on a stem of its own between the two leaves. The plant emerges in late April in my garden, unfurling like an umbrella.

Green dragon (*A. draconium*, Zones 4–9, 9–4) shares much the same range as Jack in the eastern United States, but is considered endangered or threatened in some areas of New England. It is often found growing in moist drainage ditches or swampy areas where it typically reaches two to three feet tall.

Green dragon will grow happily in normal garden soil, but without extra moisture tends to max out at about two feet. The long stalked leaf is shaped like an open half circle at the end of a stick. Around the outside of that circle are five to 15 individual leaflets.

The imaginative common name derives from the shape of the sheath that is found about a third of the way up the stem. The inflorescence is long and slender, like a tube with a tongue sticking out, running up and around the main stalk.

I have a form in my garden that reliably reaches six feet. All parts are bulked up to match the height, making for a formidable-looking plant.

FOREIGN RELATIONS

One of the most colorful Asian arisaemas is the snow rice cake plant (*A. sikokianum*, Zones 4–9, 9–3), native to China and Japan. This species stands 14 to 18 inches tall and has two leaves at maturity. Each leaflet has varying degrees of

PROPAGATING ARISAEMAS

If you intend to collect seeds from your arisaemas, it is best to have three or more plants of each species in your garden. This is especially true for dioecious types because both mature male and female plants must bloom at the same time for pollination to occur. It may take some years for the plants to establish a cycle where one remains male and the others become female.

Harvest berries once they are mature, then clean them by squeezing the pulp from the seeds and washing them in a container of water to which a few drops of dishwashing liquid has been added. Be sure to wear a pair of rubber gloves while doing this, because the pulp can stain fingers and some people experience skin irritation.

Sow seeds outdoors in fall where you want them to grow and cover them lightly. Or sow them in containers and set them outside in a shaded spot to ride with the local weather over winter. Most of the seed will germinate the following spring, but it can take up to five years before the first blooms appear. And remember that seed-propagated plants may display some variation from the parent.

In many cases, offsets form on the mother tuber. If these small tuberlets develop roots or detach themselves from the main tuber, they can be carefully transplant-

Seeds of arisaemas such as Jack-in-the-pulpit are not ripe until the berries have turned red or orange.

ed into containers or to other locations in the garden. A few arisaemas, including *A. concinnum*, are stoloniferous, sending out underground stems that may produce a new plant several feet from the parent.

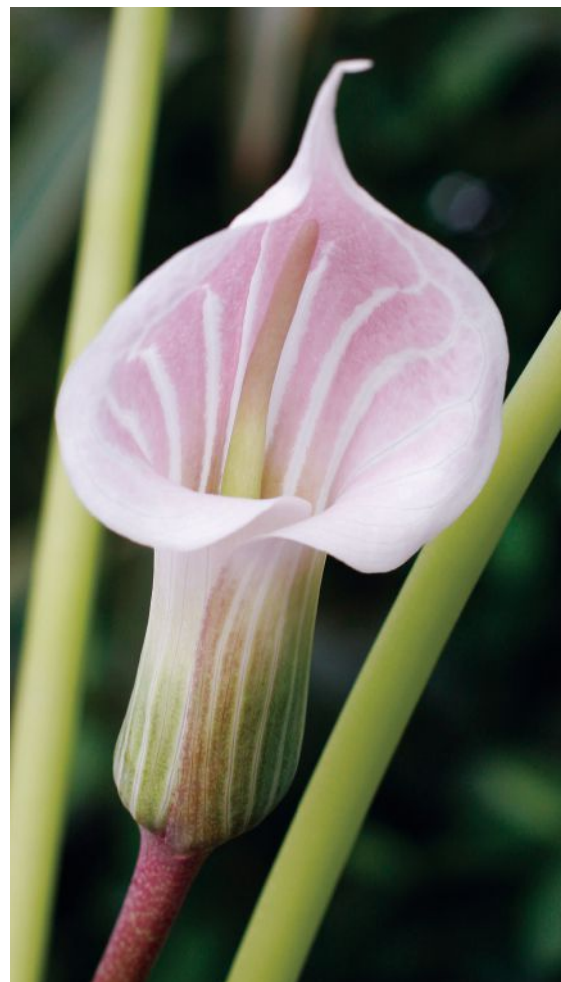
—G.E.B.



Another fancifully named arisaema, green dragon has a long spadix that extends well out of the spathe.

serration along the edges and is mottled whitish-green to silver at the center.

The variegated foliage forms a background for the spellbinding inflorescence. The spathe is large in relation to the plant, with an outside color that is very deep and lustrous, black-burgundy ribbed with purple and white stripes. The inside of the spathe is pure white with a snow-white spadix that has a large knob at the top.



For attractive flowers, consider snow rice cake plant (*A. sikokianum*), left, and candy Jack (*A. candidissimum*), above. Both are Asian species with strikingly colored and patterned inflorescences.

It is an early riser for me and it took a while to find a location where it performed well. I now protect it from early winter sun in a northeast location under mature cedars, so it does not warm up too early. I also find that this species is relatively short-lived, fading away after five years or so in my garden.

Another colorful Asian species is candy Jack (*A. candidissimum*, Zones 5–9, 9–5). It grows just a bit over two feet tall in my garden. Its single leaf has three ovate leaflets that are about eight inches across by nine inches long. The plant has a solid look about it and the foliage has a clean appearance until mid-September. The inflorescence comes up just before, or in tandem with, the foliage. The spathe hood is tilted back for an open appearance that shows off the inner colors of white and mauve-pink.

MORE HARDY ARISAEMAS

The following descriptions are based on my observations of plant performance in southern Indiana (USDA Hardiness Zone 6, AHS Heat Zone 5). All these species have survived through temperatures 20 degrees below zero Fahrenheit more than one winter in my garden. The heights and colors given are typical of the species in cultivation, although there is considerable variability in nature. —G.E.B.

Species	Height (ft.)	Origin	Season of Bloom	Remarks
<i>Arisaema concinnum</i> (syn. <i>A. affine</i>)	1½	Himalayas, India	late May	Single leaf divided into many heavily veined leaflets, spathe tips straight out or downward; purple-brown to dark green with light green stripes
<i>A. heterophyllum</i>	6	East Asia	mid-May	Large leaflets arranged in open horseshoe; spathes large and green, large clusters of bright red berries for late-season color
<i>A. intermedium</i>	2	Himalayas, N. India	late May	Leaf composed of three large dull green leaflets with white stripe or purple-brown; threadlike two-foot spadix coils down and around leaflets
<i>A. sazensoo</i>	1	Japan	mid-May	Short and stocky appearance; green leaves with golden sheen are over 14 inches across; brown-black spathe with red stripes emerges before leaves
<i>A. serratum</i> (syn. <i>A. japonicum</i>)	2	China, Japan, Korea	mid-April	Leaves can reach two feet across, some have silver markings; spathe is brown-red with white stripes
<i>A. ternatipartitum</i>	1	Japan	mid-April	Three-part leaves on slender stem; the brown-and-whitish-striped blooms; forms tight colony
<i>A. tortuosum</i> (syn. <i>A. helleborifolium</i>)	3	Himalayas	late May	Mine has green stems and blooms, but others can be marked or mottled; slender, snakelike spadix extends out and up from the tube, twisting downward as it matures
<i>A. urashima</i> (syn. <i>A. thunbergii</i> ssp. <i>urashima</i>)	1½–2	Japan	early May	Highly variable; single leaf with 11 to 15 leaflets; spathe has almost black hood, tube is purple-brown and red-brown with white markings; whiplike spadix

Native to China, Japan, and Korea, *A. ringens* (Zones 5–9, 9–6) produces blooms that resemble a miniature cobra pulled back to strike. The inflorescence is short and full, dressed on the outside with white and purple stripes, forming a tightly curved hood. The form I grow has a deep, waxy, dark purple spadix; it resembles a small snake with its tongue sticking out. The two leaf stems divide just above soil level with three leaflets at the top of each. The bloom emerges between them, and is eventually hidden by the foliage. Stems are only 10 to 12 inches tall with individual leaflets eight to nine inches long, so the plant has a short stocky appearance.

This is an early riser that has adapted to my garden. It emerges in very early March, and usually gets hit by a frost, but it proceeds undamaged to bloom and unfurl its foliage. For a small garden, this would be my choice.

For small gardens, try diminutive *Arisaema ringens* for its handsome striped flowers.



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The International Aroid Society,
www.aroid.org.

Arisaema fargesii (Zones 5–8, 8–1) is a very late riser, emerging in late June. Even if it never bloomed, I would still find a place for its marvelous foliage in my garden. This tropical-looking Chinese species produces a single leaf stem that reaches about 20 inches in height, topped with three leaflets. Two upper leaflets are about 12 to 14 inches each, and the third is closer to the length of the leaf stem, by about 15 inches wide.

The curved, pointed hood has a waxy sheen outside; its color resembles a white-and-brown seersucker shirt. This species forms offsets at a reasonable age and sets abundant seed for a colorful show in my garden into December. I placed three tubers in a raised bed some years ago and now seedlings and offsets almost fill the bed.

The owl-faced arisaema (*A. flavum*, Zones 5–9, 9–1), native from Yemen to western China, produces two leaves, each with five to 11 leaflets. The spathe is short and rounded, its hood strongly reflexed over the tube with a point that resembles a beak. The hood bends to form “ears” on each side, hence the common name. It does somewhat resemble a yellow owl sitting on a branch. The plant is tall and thin, with narrow, skeletonlike leaves.



Arisaema flavum, above, is unique for its yellow inflorescences, while *A. fargesii*, left, has attractively striped cream-and-brown spathes that curl over to completely conceal the spadix within.



Although the usual height described for this species is a bit less than a foot, I have a form in my garden that grows about three feet tall. This is not too surprising; the longer one talks and trades with other collectors, the more one realizes how incredibly variable *Arisaema* species can be.

My own fascination for these strange beauties continues to grow. Each year, I find more arisaemas that I must have, and the hunt is on to expand my collection.

Gene E. Bush is a shade garden correspondent, writer, consultant, and speaker who can be found at www.shadegardenexpert.com. This is an updated version of an article that was published in the November/December 2005 issue of this magazine.

a Children's Garden *for* Health *and* Healing

An Oregon garden celebrates 20 years of bringing the therapeutic power of nature to pediatric patients, their families, and hospital staff at Legacy Emanuel Medical Center. BY VIVEKA NEVELN



Left and above: A children's garden tucked into a courtyard at Legacy Emanuel Medical Center provides young visitors with an outdoor space to learn, play, and heal.

IN 1997, a children's garden at the Legacy Emanuel Medical Center in Portland, Oregon, opened to patients, visitors, and hospital staff. It was one of Legacy's first therapeutic gardens, and among the earliest garden of its kind in the United States, and even the world. Today, it is an integral part of Legacy's Therapeutic Gardens Program, which comprises 12 gardens around eight medical center campuses in the Pacific Northwest.

Each one of Legacy's gardens is "intended to offer therapeutic benefit to all," explains Teresia Hazen, coordinator of the Legacy Therapeutic Gardens Program. This includes patients of varying ages and degrees of ability, their visitors, medical personnel, and the general public.

MULTI-FACETED DESIGN

To ensure that the children's garden could appropriately serve pediatric patients in

addition to everyone else, Legacy took a team approach to its planning and design. Clinicians and other hospital staff, current and former patients, horticultural therapy volunteers, and school teachers were all involved. They worked with landscape architects to identify features to include or modify for the purposes of offering children opportunities for rehabilitation, education, play, and restoration. "This collaboration and cooperative work is es-



Left: Splashes of color from containers in vibrant hues, a section of path painted like a yellow brick road, and a pair of mosaic-shelled turtles near the orange pavilion complement the profusion of plants in the children's garden. **Above:** A collection of birdhouses made from recycled material adds an element of whimsy.

essential to develop gardens that serve special needs populations," says Hazen, "as well as promote wellbeing for everyone."

The design also incorporated characteristics identified by the American Horticultural Therapy Association as fundamental to therapeutic gardens (see box on page 38 for more about these guidelines). The resulting 9,000-square-foot children's garden has become a powerful tool for assisting the healing process and coping with stressful medical situations. Accessible around the clock, it provides a safe place for independent exploration and for families to interact

in a more relaxed setting than a hospital room. It supports a variety of therapeutic activities, from cognitive exercises to helping patients regain motor skills. It also offers a pleasant respite from the more sterile hospital environment for doctors, nurses, and other staff, who often take breaks in the garden. Through all four seasons, this outdoor haven seamlessly meets these diverse needs by leveraging nature's positive effects upon human health.

A GARDEN FOR ALL

From inside the medical center, three doors

provide access to the garden tucked into a courtyard. These entrances lead to a circuitous pathway that allows visitors to navigate the garden in their own way. A sign encourages walking laps around the path for exercise and relaxation, noting that 16 laps equals one mile. Wide and level enough to accommodate comfortable wheelchair and stroller access, the path runs past several raised beds and containers that bring colorful plants within easier reach.

Encouraging people to interact with nature through touch and their other senses is an important element of this garden, so the plant palette is carefully selected with this in mind. Signage points out particular plants visitors can touch or smell or sometimes even taste. Scheduled activities such as a monthly "nature station" engage youngsters in hands-on exploration of the natural world. A fountain sculpture of children appearing to play with an old-fashioned pump irresistibly draws kids of all ages to the splashing water, and a small lawn in the middle of the garden is a favorite spot for rolling and lolling in the soft grass.

Several whimsical touches, such as a rabbit-shaped topiary poised in mid-hop and a collection of jaunty birdhouses, also contribute to the playful atmosphere. One section of the path features a yellow brick design and a smiling tin woodsman sculpture nearby. Next to a large orange-and-blue pavilion, two turtle sculptures invite kids to clamber over their mosaic shells.

While the garden does impart a sense of fun, "it does not try to be a playground to entertain children. Rather, it's a place



While visitors may partake in self-guided exploration anytime, regularly scheduled programs like this nature station help to engage children and families in hands-on experiences in the garden.

CHARACTERISTICS OF THERAPEUTIC GARDENS

The American Horticultural Therapy Association (AHTA) has defined a set of characteristics that therapeutic gardens should possess. The children's garden at Legacy Emanuel Medical Center used these principles to guide its planning and design process, and the completed garden even earned a design award from the AHTA in 2000. But because these characteristics help to further inclusion and equity, "they should be addressed in all gardens for children," says Teresia Hazen, coordinator of Legacy's Therapeutic Garden Program. "We need to design for the widest range of users, including their families," she adds. Here are the characteristics and the ways that Legacy's children's garden interprets them.

1. Scheduled and programmed activities.

Events that encourage people to experience the garden include monthly "nature stations" for children and their families, rehabilitation therapy sessions that meet patient goals in the garden, and even botanical- and wildlife-themed art exhibits in the bordering hallways that complement the views into the garden.

2. Features modified to improve accessibility.

Wide, smooth walking surfaces with gentle inclines can be used for rehabilitation therapies. Raised beds accommodate wheelchair users and those unable to bend to the ground. Seating walls and plenty of other places to sit support patients with decreased balance and endurance.

3. A profusion of plants and people/plant interactions. Simple patterns of paths allow patients and visitors unhindered access to the lush botanical collection. Plants and other



A shady seating wall beside a garden bed provides a comfortable spot for Teresia Hazen, who coordinates the Legacy Therapeutic Gardens Program, to converse with a visitor in the children's garden.

features are selected to provide sensory stimulation in all four seasons. Signage, plant placement, and regularly scheduled activities encourage visitors to interact with and learn from the garden.

4. Benign and supportive conditions.

The space is designed as a safe, secure, and comfortable setting for patients and visitors. Sheltered nooks offer some privacy, while more central areas accommodate social interaction. The pavilion and numerous trees provide shade. Pesticide use is avoided.

5. Universal design.

Features and programming accommodate the widest possible range of needs, from ambulatory children and their families to wheelchair-bound patients of all ages.

6. Recognizable placemaking. A simple, unified, and easily comprehended setting allows patients and other visitors to focus on plant-related restoration of body and mind. —V.N.

that they can feel at home in," says Brian Bainson, a landscape architect with Portland-based design firm Quatrefoil that has worked on the garden.


That homey, welcoming feeling also comes across through the benches and other seating options around the garden. Those unable to explore quite so actively may choose to rest in a chair under the pavilion. And those wishing to simply decompress for a few moments may sit in a quiet nook off the main pathway. In 2014, a terrace garden overlooking the children's garden was added, providing even more access to the lush scenery. The views can be enjoyed from the inside, too, thanks to corridors filled with large windows that surround the courtyard. And "patients do request a room with a garden view," says Hazen.

BETTER HEALTH THROUGH GARDENS


In the 20 years since the children's garden at Legacy Emanuel opened, awareness of nature's beneficial impact on human health has grown exponentially. Reams of research confirm that interacting with the natural world is good for us in myriad ways. In tandem with this, the relatively young field of horticultural therapy has also become more widely recognized for its contributions to health and wellbeing.

Perhaps because of all these developments, "the movement for therapeutic gardens seems to have reached a tipping point," says Hazen. Many health care facilities now have such gardens on their campuses, including green spaces specifically for children. And because of Legacy's longtime success in serving a diverse hospital population, Hazen says, "we receive


regular calls for consultation from across the country." Receiving well-deserved recognition for the garden's therapeutic efficacy is no doubt gratifying, but far more significant is the appreciation from the people who directly benefit.

"One physician told me that while he is at work, he goes out of his way to walk through the garden as often as possible," says Bainson. "It is one of the things that keeps him going even on tough days. I think that says a lot about why this garden and others like it are so important." Hazen agrees, noting that "something magical happens when people spend time in well-designed therapeutic gardens." 

Viveka Neveln is associate editor of The American Gardener.



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End-of-Season Garden Maintenance

by Scott Aker

IN MANY PARTS of the country the growing season is starting to wind down, but there's still plenty of work to do before we hang up our tools for the winter. The following is a list of tasks that should be accomplished now to help ensure your garden is healthy and ready to go when spring arrives.

VEGETABLES, ANNUALS, AND FRUIT TREES

Get all the debris out of the vegetable garden as soon as you can in the autumn. Allow the sun to dry the garden, which will deter pests such as slugs that thrive with excess moisture. Sow a cover crop such as crimson clover to prevent the growth of winter annual weeds such as henbit and chickweed and replenish organic matter in the soil before really cold weather arrives. Carrots, leeks, parsnips, and cole crops can be left in the garden until hard frost; simply mulch the area with four to six inches of fresh straw or leaves.

Bedding annuals that have succumbed to frost should be removed from the garden and composted. If you leave them in place, eggs of insect pests and spores of diseases can remain to cause problems next year.

For the same reason, remove from the ground any fruits that have dropped from fruit trees. Resist the urge to do any pruning until later in the winter, since it may compromise the development of dormancy and winter hardiness in the trees.

HERBACEOUS PERENNIALS

Some perennials should be cut back, and others should not. Those that are less hardy, such as chrysanthemum (*Dendranthemum* spp. and cultivars) and red hot poker (*Kniphofia* spp. and cultivars) will have a better chance of making it through winter if you leave the foliage intact to protect their crowns. Some perennials such as narrowleaf ironweed (*Vernonia lettermannii*), stonecrop or



Many herbaceous perennials can be left in place well past fall. The coneflower seedheads, far left, provide food for wild birds, and the sedums, far right, contribute welcome winter interest.

sedum (*Hylotelephium spectabile*), and all of the ornamental grasses look great throughout winter and should be left intact. A few—hostas, peonies, and Arkansas bluestar (*Amsonia hubrichtii*), for instance—have good fall color, so delay cutting them back until the color has faded later in the season. Leave purple coneflower (*Echinacea purpurea*) and coreopsis (*Coreopsis* spp.) intact because their seeds are an important food source for birds and won't self-sow aggressively.

On the other hand, diseased perennials should be cut back now. Phlox and beebalm (*Monarda* spp.) that have developed

powdery mildew, and hollyhocks (*Alcea* spp.) that have been ravaged by rust, for example, should be cut back to the ground. All their leaves should be removed, even if new ones have started to grow. Pull the leaves off irises as they wither to control iris borers and foliar diseases.

Perennials that are naturally evergreen, such as hellebores (*Helleborus* spp.), barrenwort (*Epimedium* spp. and cultivars) and some daylilies (*Hemerocallis* spp), should not be cut back until spring arrives—and only do so if they have been significantly damaged over the winter.

TENDER BULBS

Don't forget to dig up tender bulbous plants such as gladioli, caladiums, dahlias, and cannas if you want to grow them again next year. Allow them to dry for a day or two after digging before you cut the foliage



Be sure to identify your tender bulbs—such as these dahlia tubers—before storing them.

off and store them in a cool basement or root cellar in paper or mesh bags. To keep the tubers of dahlias, caladiums, and cannas viable, store them in damp sawdust and check them periodically during winter for rot and to ensure adequate moisture; the corms of gladiolus should be stored dry.

LAWN AREAS

Raking leaves is often a mandatory part of fall lawn care, but you may be able to skip at least some of it by using smart mowing practices. I increase the frequency of mowing on



Use a mower to collect both leaves and grass clippings for the compost pile.

the areas of my lawn where leaves collect, so the leaves end up shredded enough to sift into the turf. Their decay helps to improve the soil and provides a slow-release source of nutrients for the lawn and nearby trees. Or you can collect the shredded leaves with grass clippings to add to compost piles.

CONTAINER GARDEN

Consider the soil in your containers after the annuals, vegetables, or herbs that have been growing in them have gone into the compost pile. If you've been reusing the soil for many years, give it new life by dumping it on a tarp and mixing it with pine fines, perlite, and vermiculite in equal parts—or just start with a fresh container soil mix next spring.

A GOOD TIME TO WEED THOROUGHLY

As the weather cools, winter annual weeds germinate. Getting to them now means less weeding when spring comes. If you have areas that are carpeted with them, consider treating them with herbicidal soap, which kills newly germinated seedlings but won't harm existing turf, perennials, or shrubs.

If you have a meadow or wooded area, fall is a great time to get a handle on any invasive plants that might be creeping in. Cut invasive vines, shrubs, or trees to the ground and paint the freshly cut stumps with an herbicide containing triclopyr. At this time of the year, carbohydrates are being stored in the roots and the chemical will also be translocated to the roots, killing them.

You can spot-treat the foliage of invasive broadleaf perennials such as Japanese knotweed (*Polygonum cuspidatum*), giant knotweed (*Polygonum sachalinense*), leafy spurge (*Euphorbia esula*) and toadflax (*Linaría dalmatica* and *L. vulgaris*) now. As with the woody plants, the systemic herbicide will be carried into the underground parts of these perennials, resulting in much better control than would be achieved with treatment earlier in the season.

Proper fall garden cleanup and maintenance will give you a big advantage next season. Instead of battling pests, diseases, and weeds, you can spend more time planting and enjoying your garden when it starts growing again.

Scott Aker is head of horticulture and education at the U.S. National Arboretum in Washington, D.C.

Gardening Q&A with Scott Aker

RAIN-DISTRESSED LAVENDER

I bought a lavender plant two years ago and it has grown beautifully. This year, though, half of died. It just wilted suddenly and turned dry and crispy, which is odd, since we've had lots of rain. What could have done this, and how can I keep the rest of the plant alive?

It sounds like your plant has been struck by blight, most likely caused by *Phytophthora*, which are water molds. The warm, rainy weather undoubtedly allowed the disease to thrive. Carefully remove the dead portion of the plant. Don't irrigate your lavender, and mulch it with a one-inch layer of pea gravel to promote rapid drying after rain. Regularly remove leaves and other debris that lodge in the middle of the plant.

STORING HARVESTED PUMPKINS

My bumper crop of sugar pumpkins is currently stored in a cool basement that stays at about 65 degrees Fahrenheit. A couple of them rotted, however, so how can I be sure that the others stay in good shape?

Check the pumpkins for scratches or abrasions on the skin. Those showing damage should be used immediately. To maximize the storage time of the unblemished pumpkins, wipe off any loose dirt and wash them in a solution of one tablespoon of bleach per gallon of water to kill any surface bacteria. Allow the pumpkins to air dry before storing them in a cool, dark place. To enable air to circulate around them, make sure the pumpkins don't touch. Most should last until late winter. If you still have pumpkins left at that time, cut them in half, scrape out the seeds, and roast them. Then freeze the cooked flesh in sealable plastic bags. —S.A.

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

Cilantro/Coriander: A Versatile Herb

By Michelle Z. Donahue

FEW CULINARY herbs elicit as strong opinions as cilantro (*Coriandrum sativum*). Described by detractors as soapy, bitter, and stinky, and by fans as fresh, crisp, and clean, cilantro's characteristic flavor derives from a class of organic compounds, known as aldehydes, that is also responsible for some of our most-beloved aromas and flavors, such as vanilla, fresh-cut grass, and citrus. If you are among those unconvinced of cilantro's flavorful attributes, perhaps its designation as the 2017 Herb of the Year by the International Herb Association may prompt you to give it another try.

Savor cilantro leaves for long enough and hints of its family tree creep through: Exhaling through my nose after nibbling on a leaf brings flashes of celery, carrot, and parsley. I once belonged to the hate-it club, but then, I also used to detest coffee, dark chocolate, and grapefruit. If I may say, I'm much wiser now.

GROWING GUIDELINES

Considered rather exotic until the last few decades, cilantro is a common ingredient

PLANTING BASICS

Getting Started Germination ranges from 10 days at 70 degrees Fahrenheit, to 21 days in cooler temperatures. If collecting your own seed, remove seeds from the pod to increase germination rates. In cooler climates, sow seeds in full sun; in warmer climates, provide afternoon shade to prolong the harvest.

Spacing Sow seeds one-quarter to one-half inch deep and an inch apart, thinning to about four inches apart for foliage, or eight inches apart for seed.

Days to Harvest Leaves are ready to harvest 40 to 55 days after planting; seeds ripen in 90 to 150 days, depending on growing conditions and variety.



Cilantro lends its unmistakable, assertive flavor to many international cuisines. Here it is both an integral ingredient in a Mexican-inspired rice dish as well as an attractive garnish.

in Mexican, Caribbean, and Asian cuisine. Fresh cilantro is now widely available in the produce sections of most food stores. If you enjoy this annual herb, however, it is effortless to grow in your garden.

Like many culinary herbs, cilantro grows best in slightly acidic, well-drained soil in a sunny location, although in warm regions a bit of afternoon shade is helpful. In areas with long, cold winters, seeds can be started indoors a few weeks prior to the last frost, but don't wait too long to plant outdoors, because cilantro develops a taproot that can make successful transplanting difficult. In most areas, seeds can be sown directly outdoors in spring about the time of your last frost date.

Cilantro thrives in cool weather and also has a short life cycle, so to extend your harvest, make additional sowings every two to three weeks until day temperatures are regularly above 75 degrees Fahrenheit. Sow again in late summer for a fall crop. Plants also self-sow—in my Maryland garden, I always get plenty of volunteers for a fall crop from my spring sowing, with some left over to germinate the following spring.

Once summer heat arrives, cilantro begins bolting—getting ready to go to seed. Clusters of small, frothy, white-to-pale lilac flowers bloom in umbels on stalks clad in finely textured foliage. These are succeeded by development of round seedpods. Bolting affects the eat-



Cilantro's edible white flowers set seeds that become the spice known as coriander.

ing quality of the leaves, so if you are only growing cilantro for its leaves, choose heat-tolerant varieties and protect plants from afternoon sun to prolong foliage production as long as possible.

Like many culinary gardeners, I grow cilantro both for foliage and for its seeds—the sweet, lemony alter-ego that is known as coriander. Harvest seeds once the seedheads have mostly dried and turned brown by cutting and inverting the mature umbels in a paper bag to allow the seeds to fall as each pod dries and splits open.

PESTS AND DISEASES

Though they don't bother my cilantro, insects such as aphid and whiteflies may occasionally appear. Use insecticidal soap to remove them.

Bacterial leaf spot from infected seeds can afflict some crops. Initial symptoms appear as dark, soggy spots on foliage, which turn dark brown and eventually merge into larger patches. Disease advances more rapidly during wet weather and can persist in the soil for several years. Because the responsible pathogen is specific to cilantro, the best way to avoid the disease is crop rotation.

Powdery mildew is occasionally a problem, but proper spacing that promotes good airflow helps to minimize its occurrence.

RECOMMENDED VARIETIES

'Calypso' High-yielding and one of the slowest-to-bolt selections; well suited for hot-weather regions; open-pollinated.

'Confetti' An award-winning variety with milder-tasting feathery leaves that is slow to bolt and has high yields.

'Cruiser' Bolt-resistant and compact.

'Leisure' Good choice for hot-weather regions; has large leaves and high yields.

'Pokey Joe' Slow to bolt, with mild leaf flavor; also produces well-formed roots.

'Santo' Fast-growing variety, cultivated primarily for its dark green leaves.



'Confetti' features finely-cut leaves.

ENJOYING THE HARVEST

Cilantro's leaves are best used fresh; they do not retain flavor when dried. For extending the leaf harvest, clip only the rosette's outer leaves after they've reached several inches in length. Alternatively, the entire plant can be gathered and clipped off an inch above the soil line. Plants will re-grow in a fashion similar to parsley.

Store thoroughly dried coriander seeds in airtight jars. Seeds can be used whole or ground into powder. One of my favorite uses for ground coriander is in apple pie along with nutmeg and cinnamon; it imparts a fresh, fruity essence.

"We grow cilantro mainly for the flowers and seeds," says Chris Weber, head chef of the celebrated farm-to-table restaurant, The Herbfarm, in Wood-

Sources

Harris Seeds, Rochester, NY.
www.harriseseeds.com

Johnny's Selected Seeds, Winslow, ME.
www.johnnyseeds.com

Nichols Garden Nursery, Albany, OR.
www.nicholsgardennursery.com

Richters Herbs, Goodwood, ON, Canada.
www.richters.com

inville, Washington. "The flowers are incredible and don't taste either like cilantro or coriander. And the seeds, when they're green, are intensely citrusy." Weber encrusts tuna loins in freshly ground seed before searing them.

Cilantro's long taproots are a staple of Thai cuisine, so don't toss them when you pull your plants. Whether ground into paste as part of a curry, or chopped together with garlic and white peppercorns before being whisked into fish sauce for a marinade, the roots bring an earthy flavor to recipes.

Weber says it's hard to break people's preconceived notions about how cilantro should be used, but he suggests experimenting. Adding it to unexpected dishes often yields pleasing results—and may even convert the most stubborn disbeliever.

Michelle Z. Donahue is a freelance garden and science writer who lives and gardens in Frederick, Maryland.

Tulsa Botanic Garden

by Stephanie George



AS OKLAHOMA'S second-largest city, Tulsa has everything a bustling metropolis can offer, from art to music and sports. But until the cusp of the 21st century, it lacked a major public garden. This began to change in 1999, when University of Oklahoma professor and student duo Barry Fugus and Pat Woodrum came up with the idea of creating a garden as a space in which the community could enjoy nature. Within a year they recruited nearly 800 members to a formative board, and soon after, this group raised more than \$10 million for initial development of what became the Tulsa Botanic Garden.

In 2004, a 170-acre plot of land surrounded by dense woodland was donated

to the project. Located approximately eight miles northwest of downtown Tulsa, the garden has developed into a serene place for urbanites and other visitors to enjoy its natural beauty and cultivated collections.

GETTING ESTABLISHED

Although the garden officially opened in 2009, it did not truly get on its feet until 2012, when a master plan for its development was implemented. "It's a relatively young institution, and people are still discovering it," notes Lori Hutson, communications and outreach director, who remembers the early days when there was no electricity or running water on the property, and all the plants had to be watered by hand.

The garden's first major installation was the **A.R. and Marylouise Tandy Floral Terraces**, built in 2015 and named in recognition of the locally-based foundation that funded it. Each of the four terraces is themed and packed with vibrant plantings. At the ground level is the **Lawn Terrace**, followed by the **Rose Terrace**, the **Perennial Terrace**, and the **Mediterranean Terrace**. These display over 8,000 permanent plants and several seasonal installations, such as plantings of 10,000 bulbs that creates a riot of spring color.

A six-foot-wide cascade of water runs through the terraces down a chader—a series of small stone steps—creating a shimmering effect. "It's a compelling de-

The vibrant spring bulb display at the A.R. and Marylouise Tandy Floral Terraces is one of the largest in the country.



A water source for the Stream Valley, the Spring Giant is also a seasonal planter that brings a fairytale-like feeling to the Children's Discovery Garden.

sign that's made completely from Oklahoma stone and takes inspiration from the Art Deco heritage in Tulsa," says Todd Lasseigne, president and CEO of the garden.

Just west of the Terraces is the **Cross Timbers Trail**. The cross timbers is an ecosystem particular to Oklahoma where the tallgrass prairies of the west converge with the deciduous forests of the east. This trail allows visitors to have an immersive experience in this unique habitat. There's also the **Lakeside Promenade**,

which encircles the seven-acre lake in the center of the gardens, winding through various collections with ever-changing palettes of color and texture.

Younger visitors, particularly, will enjoy the **Children's Discovery Garden**. Opened just last year, it is a colorful space for learning and exploration. The focal point of the garden is the **Stream Valley**. Its water source emanates from a 15-foot stone face sculpture, titled **Spring Giant**, that Hutson calls "truly one of a kind." The garden also includes

a sensory walk, a tree fort, and a rolling meadow, complete with trails that wind through grasses, flowering perennials, and larger-than-life insect whirligigs.

PART OF THE COMMUNITY

In addition to the diverse gardens already in place, several more are in the works, including a **Japanese Garden**, an **Indigenous Garden**, and an **Edibles and Natives Garden**. Regular community programs such as gardening talks, plant walks, and drop-in activities for families encourage visitor engagement with these spaces. Partnerships with several local universities and allied nonprofit organizations have made the gardens a valuable resource for research and conservation efforts, such as a recent study on lichens. And students of all ages often come to the gardens for class assignments, field trips, or just to experience nature.

In a relatively short span of time, the garden is well on its way to becoming the go-to green space for the community its founders envisioned it would. "It's been a robust past five years," Lasseigne says, "and I think we have a bright future." 🌱

Stephanie George is an editorial intern for The American Gardener.

Additional Information

Tulsa Botanic Garden, 3900 Tulsa Botanic Drive, Tulsa, OK, 74127. (918) 289-0330. www.tulsabotanic.org.

- Hours: Year round from 10 a.m. to 5 p.m., Tuesday through Sunday.
- Admission: Members free. General admissions for non-members (13+) \$8, Children (3–12) \$4, no charge for children under three.
- Tulsa Botanic Garden participates in the American Horticultural Society Reciprocal Admissions Program. AHS members showing a current AHS membership card receive free admission and discounts on educational programs or events.

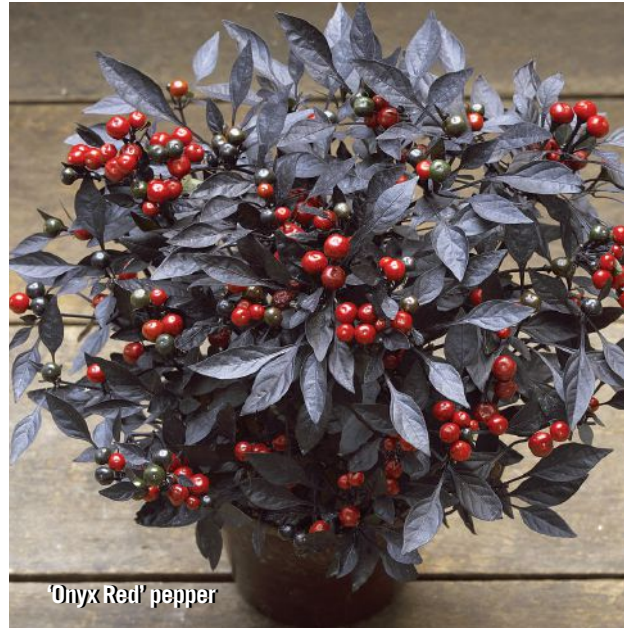
Other nearby sites to explore in Tulsa:

Gilcrease Museum of American History & Art, www.gilcrease.org.

River Parks, www.riverparks.org.

Tulsa Zoo, www.tulsazoo.org.

Horticultural News and Research Important to American Gardeners



2018 ALL-AMERICA SELECTIONS WINNERS

All-America Selections (AAS), a non-profit organization dedicated to testing new cultivars of vegetables and ornamental annuals, has announced the first round of winners for the 2018 judging season. In the edibles category, judges selected 'American Dream' corn as the top national trial choice. This new selection from Illinois Foundation Seeds, Inc., is quick to germinate and produces yellow and white kernels on the seven-inch-long cobs in 77 days. The six- to seven-foot-tall plants don't require staking, and are resistant to northern corn leaf blight.

Another winner is the ornamental pepper, 'Onyx Red'. This cultivar, bred by Takii & Co., Ltd., grows only six to 10 inches tall and maintains a neat, rounded shape throughout the growing season. Its striking black foliage, purple flowers, and contrasting bright red fruits add splashes of color to beds, borders, and containers. It blooms from late spring to frost and sets fruit prolifically.

The third winner in the national ranking is a cocktail tomato named 'Red Racer' that is resistant to several common

tomato diseases. A determinate type, it grows only three feet tall and two feet wide, making it a good choice for containers. It produces abundant clusters of fruits in 90 days from seed. The fruits are slightly bigger than cherry or grape tomatoes and have a balanced acidity-to-sweetness ratio that reportedly gives them a pleasing flavor whether eaten fresh, canned, or cooked. 'Red Racer' is bred by Earth-Work Seeds and distributed by Garden Trends Wholesale.

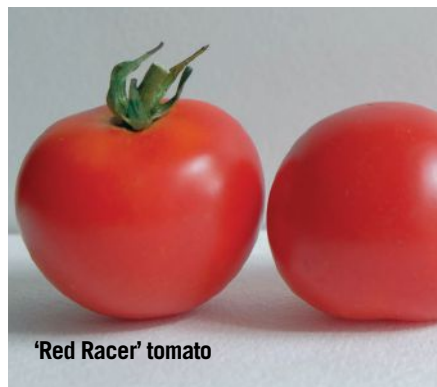
New plant submissions to AAS are evaluated by nearly 100 independent

experts at some 80 trial sites located throughout the United States and Canada. Entries are judged based on factors such as earliness of bloom, and harvest, disease and pest tolerance, superior color or flavor, flower form, and overall performance. For more information about AAS, visit www.all-americaelections.org.

NATURAL PLANT DEFENSE SYSTEM COULD LEAD TO SAFER PEST CONTROL

Plants turning insects into cannibals might sound like something you'd encounter in a science fiction story, but it's actually an everyday occurrence in the plant world. This is the essence of a common plant defense mechanism that researchers are now looking to as inspiration for safe and effective pest control methods.

When physically damaged, some plants will release methyl jasmonate, a volatile organic compound that is bitter and unpleasant to herbivorous insects, such as caterpillars. Their aversion to this compound is so strong that once a plant releases it, caterpillars will begin to eat each other rather than the plant. Not only does this protect



the plant from being damaged further, it also decreases the insect population, reducing the plant's overall risk.

A team of researchers at the University of Wisconsin, Madison, tested this defense mechanism by spraying tomato plants with methyl jasmonate and then placing caterpillars on the plants. According to the study published online in July by *Nature Ecology & Evolution*, not only did the presence of the compound induce cannibalistic behavior in the caterpillars, but it also caused surrounding plants that had not been sprayed to release the compound themselves. This may explain why the caterpillars continued to eat each other even when given the choice to move to nearby unsprayed plants.

With further research and testing in the works, this natural defense mechanism may yield new pesticides that won't harm non-target species. To learn more about the original study's results, visit www.nature.com.

FOREVER STAMPS CELEBRATE POLLINATORS

In August, the U.S. Postal Service



New pollinator stamp designs include a honeybee on an aster, top, and a monarch butterfly on a goldenrod, above.

(USPS) unveiled the theme of five new Forever Stamp designs, named "Protect Pollinators" in tribute to the importance of America's diverse plant pollinators, which in many regions are threatened by a combination of habitat loss, overuse of

pesticides, and climate change. Each individual stamp features a photograph of either the common honeybee (*Apis mellifera*) or a monarch butterfly (*Danaus plexippus*) atop a brightly colored native flower. The collection was compiled by USPS art director Derry Noyes.

According to the USPS, the stamps were created to "exemplify the ecological service provided by all pollinators." The horizontally oriented stamps are available in sheets of 20, with four of each design included. More information about the "Protect Pollinators" Forever Stamp collection is at www.usps.com.

COCKROACHES PLAY UNEXPECTED ROLE IN SEED DISPERSAL

While we tend to think of cockroaches as indoor pests, some species of this insect are an integral part of forest ecosystems, where they feed on dead and decomposing plants. Researchers have recently discovered a previously unknown function roaches play as important seed dispersers.

While investigating how the seeds of a forest-floor plant called *Monotropastrum*



2018 "Gardeners" Calendar

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

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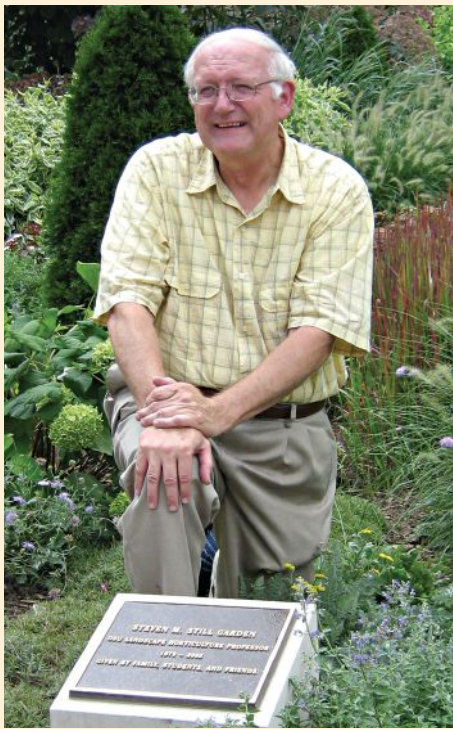
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HEAD OF PERENNIAL PLANT ASSOCIATION RETIRES

Steven M. Still, the longtime executive director of the Perennial Plant Association (PPA), has announced his retirement, effective September 30. Still, along with three colleagues, founded the PPA in 1984 as a way for people involved with the production of herbaceous perennial plants to network and share best growing and marketing practices. Over the years, the trade organization, which is headquartered in Hilliard, Ohio, has expanded its membership and programs, which now include national and regional educational symposia, the Perennial Plant of the Year, and an award program.



Steven Still at the dedication of a perennial garden named in his honor at the Ohio State University's Chadwick Arboretum & Learning Gardens.

In 1980. Still served on the American Horticultural Society (AHS) Board of Directors from 2003 to 2009 and continues to serve on the AHS's Awards Committee.

Among the many awards Still has received during his career are the Medal of Honor from the Garden Club of America, the Gold Medal Award from the Massachusetts Horticultural Society, the Liberty Hyde Bailey Award from the AHS, and the PPA's Award of Merit. In 2007, a garden area named in his honor opened at the Chadwick Arboretum & Learning Gardens at the Ohio State University. ☺

—David J. Ellis, Editor

“No one in the last 35 years has been more devoted to educating North American gardeners about perennials than the humble and hardworking Steve Still,” says Allen Bush, a friend and colleague who offered a tribute to Still and his family during the PPA's July symposium in Denver, Colorado.

An internationally recognized expert and leader in the field of herbaceous perennial plants, Still is an emeritus professor at the Ohio State University in Columbus, where he taught horticulture and mentored countless horticulture students for 25 years. Prior to that, he taught at Kansas State University. He is the author of *Manual of Herbaceous Perennial Plants*, first published

in 1980. Still served on the American Horticultural Society (AHS) Board of Directors from 2003 to 2009 and continues to serve on the AHS's Awards Committee.

bringing dinosaurs back to earth, they have recently discovered in Myanmar resin-preserved prehistoric flowers that led to the identification of a new tree species. The tiny flowers, which are no larger than five millimeters in diameter, are all nearly 100 million years old.

According to George Poinar Jr., professor emeritus at Oregon State University (OSU) in Corvallis, who led the research on the ancient flowers, it's the first time seven complete specimens of this age have been reported in a single study. Poinar theorizes that dinosaurs may have bumped into the tree, causing the flowers to fall and become stuck in gummy resin deposits on the bark of a neighboring conifer. The deciduous



A recently discovered 100-million-year-old flower preserved in amber helped identify a new prehistoric tree species.

tree is named *Tropidogyne pentaptera*. Its species name—composed from the Greek words *penta*, meaning “five,” and *pteron*, meaning “wing”—reflects that each flower is composed of five winglike petals.

The discovery, initially reported by Poinar and colleague Kenton Chambers in the journal *Paleodiversity* in July, builds on earlier research into amber-preserved flowers that led to the identification of a tree named *Tropidogyne pikei*. The genus has been assigned to the Cunoniaceae, a family of trees that is common throughout the Southern Hemisphere.

To learn more, visit www.bioone.org/doi/10.18476/pale.v10.a10. ☺

News written by Editorial Intern Stephanie George with Associate Editor Viveka Neveln.

humile are spread, scientists at Kumamoto University in Japan observed that birds and mammals seemed uninterested in the seed-laden fruits, but that the fruits attracted a variety of invertebrates. Among the invertebrates, Japanese forest cockroaches (*Blattella nipponica*) were the most frequent consumers of the fruits, feeding primarily at night. Through painstaking inspection of the roaches' feces, the researchers found viable seeds of *M. humile*.

Considering that there are over 4,600 known cockroach species, the researchers

conclude it is likely that cockroach-aided seed dispersal is a more common phenomenon than previously realized. For more on this study, originally published in the *Botanical Journal of the Linnean Society*, read the summary by *Science Daily* in August at www.sciencedaily.com/releases/2017/08/170803091907.htm.

NEW TREE SPECIES IS 100 MILLION YEARS OLD

In the 1993 movie, *Jurassic Park*, dinosaur DNA preserved in amber is used to revive the giant prehistoric beasts. While scientists are nowhere near



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A Rake for Every Reason

by Rita Pelczar



Groundskeeper II Rake



Wizard Rake

AT THIS TIME of year, autumn leaves are beginning to add their brilliant colors to my North Carolina garden. This seasonal display is always a joy to behold, but it is also a reminder that I'll be needing a rake before long. There are other uses for rakes besides leaf collection, of course—from grading a new bed to spreading mulch or gravel and leveling soil to sow grass seed. And there are different types of rakes suited to each job. The following are a few that have come in handy around my garden.

The **Groundskeeper II Rake** from Gardener's Edge (www.gardenersedge.com) is a sturdy, lightweight option for both raking leaves and spreading mulch. The wire tines are very flexible because each one is spring-loaded and connected individually to the head. This is particularly useful on uneven ground—for example, when removing leaves from drainage culverts. The 55-inch fiberglass handle is available with either a nine-inch head—good for narrow spaces—or a 21-inch head for covering larger areas.

When leaves collect on patios, decks, or stone paths, a traditional leaf rake can leave damaging marks or deeply disturb gravel. English toolmaker Bulldog offers two good choices with flexible rubber tines for these surfaces. The **Wizard Rake** has a 20-inch-wide rubber tine head that is a cross between a rake and a broom; it's also handy for raking up grass clippings or wet, matted leaves. The **Merlin Rake** has a smaller, 10-inch head, good for tighter spaces such as the steps of a deck. Both come with a 54-inch ash handle and are available from Clarington Forge (www.claringtonforge.com).

Made in Germany, the **WOLF-Garten® Adjustable Garden & Shrub Rake** from BlueStone Garden (www.bluestonegarden.com) allows you to adjust the width of your rake—from 14 to 22 inches—with



WOLF-Garten Adjustable Garden & Shrub Rake

a simple sliding mechanism. The narrow width works well to remove debris between shrubs; widen the head for raking leaves in the lawn. The sturdy steel tines make the rake a bit heavy, but it's a good choice for handling tough jobs. Handles—either wooden or lightweight aluminum—are sold separately; the head snaps easily and securely into the shaft. This rake comes with a 10-year warranty.



Leaf Claws

To make shorter work of gathering raked leaves to deposit in a bag or a cart, Gardener's Edge offers **Leaf Claws**. Each of these oversized plastic claws have a hand grip for you to hold onto and a semi-circular forearm support for steadiness. With an overall length of 26 inches and width of 19 inches, the claws extend your reach—significantly increasing the quantity of leaves you can collect at one time and reducing the amount of bending you have to do. They are also useful for picking up grass or hedge clippings. I find them handy for gathering pine needles that I use to mulch my blueberries.

The **Haxnicks Leaf Picker**, also from Gardener's Edge, is just the ticket for removing leaves from hard-to-reach spots.



Haxnicks Leaf Picker

handle, sold separately, snaps securely onto the head. The wheels at either end of the head make the dethatching process some-

It's great for cleaning out my window wells or for removing clumps of leaves that sometimes accumulate in my creek. The business end of the tool is about seven inches square and is equipped with metal spikes that collect leaves and other debris by impaling them. To clear the tool of whatever you've collected, just slide the release handle downward. The 51-inch handle provides a good reach.

Bow rakes—also called garden rakes—have short, rigid tines arranged in a straight line. While the full-size garden rake is indispensable for breaking up and leveling soil, spreading gravel or mulch, and other garden chores, the **Narrow 10-Tine Rake** by Sneeboer available from Garden Tool Company (www.gardentoolcompany.com) is my preferred rake for working the soil in the raised beds of my kitchen garden, where space is a bit tight. Handcrafted in Holland, this rake has great balance and it comes with a lifetime guarantee. The stainless steel head is nine-and-a-half inches wide and curves gently to fit onto an ash handle, providing good leverage for the closely spaced, curved tines.

The **WOLF-Garten Dethatching Roller Scarifying Rake**, from BlueStone Garden, is the perfect choice for another autumn chore: dethatching and/or reseeding your lawn. The rake's head is 12 inches wide and is equipped with 10 very sharp steel tines. A 59-inch lightweight aluminum



Narrow 10-Tine Rake



WOLF-Garten Dethatching Roller Scarifying Rake

what easier and hold the tines at the proper depth. Pull the rake toward you to remove thatch, old grass clippings, and moss from your lawn, push it away and a slight rotation of the tines releases the accumulated debris. The rake comes with a 10-year warranty.

So enjoy the cooler temperatures of autumn as you tidy up your beds and lawn. Using the right tool for the job makes each chore easier.

Rita Pelczar is a contributing editor for The American Gardener.

Recommendations for Your Gardening Library

Monarchs and Milkweed

Anurag Agrawal. Princeton University Press, Princeton, NJ, 2017. 283 pages. Publisher's price, hardcover: \$29.95.

OBSERVING THE array of butterflies during a summer stroll through a wildflower garden is always a visual delight. Likely included in this winged assemblage is the beloved monarch butterfly (*Danaus plexippus*), with its highly-recognizable vibrant wing coloration. We watch as a male monarch lightly lands on a fragrant blossom of common milkweed (*Asclepias syriaca*), and begins sipping the sweet nectar. Next, a female monarch dips close to a milkweed leaf and lays an egg destined to become a voracious caterpillar. While this may appear like a perfect alliance between plant and butterfly, there is more than meets the eye.

In *Monarchs and Milkweed*, Anurag Agrawal, who is a biologist at Cornell University in Ithaca, New York, describes the “coevolutionary arms race” between monarchs and milkweeds. The reader learns that, while the monarch is dependent on milkweed as the sole food source for its caterpillars, the plant gains nothing from this association, not even the benefit of pollination. And, yet, milkweed persists. Its “one-two punch” is in the toxic steroids, called cardenolides, it produces. Contained in the milky liquid that oozes from wounds in the plant, cardenolides are deadly to most animals, but monarchs have evolved to tolerate much of this toxicity. Additionally, toxins that enter a monarch caterpillar’s body are quickly “sequestered” and used to repel potential enemies. But don’t think for a minute that milkweed is down for the count! Much more about this complex “tit-for-tat” relationship is revealed as pages are turned.

Agrawal addresses a wide range of related topics—from the monarch’s life cycle, to historic research, other invertebrates that are part of the milkweed complex, taste aversion, and even mimicry of the monarch’s coloration by other butterflies. The author’s accessible writing style will appeal to both the scientist and lay person. Helpful illustrations and photographs assist in clarifying the narrative.

There is an informative chapter on monarch migration, offering facts and theories about their amazing journey. And, while the alarming fluctuation in monarch populations in recent years is addressed, I’m pleased to report that Agrawal expresses confidence that monarchs will be adorning our gardens for generations to come.

—Kathryn Lund Johnson

Kathryn Lund Johnson is a freelance writer and nature photographer who resides in Michigan’s Upper Peninsula.

Of Naked Ladies and Forget-Me-Nots: The Stories Behind the Common Names of Some of Our Favorite Plants

Allan M. Armitage. Self-published, Athens, GA, 2017. 219 pages. Publisher's price, softcover: \$20.

QUITE SIMPLY, Allan Armitage is an incredible yarn-spinner. And this is a delightful collection of stories behind common plant names, presented in his wildly humorous style. It’s a book that will appeal even to those typically oblivious to the plant world.

Armitage notes in the preface that his original proposed title for the book had been “Of Naked Ladies and Sleepy Dicks,” and it’s hard not to get a kick out of the origins of some of the naughty names in the plant world, including naked ladies (*Lycoris radiata*), hairy balls (*Gomphocarpus physocarpus*), and horny goat weed (*Epimedium* sp.).

But the stories behind these titillating common names represent only a few of the dozens of fascinating anecdotes about plant names Armitage has researched. As a now-retired University of Georgia horticulture professor, he of course includes a liberal sprinkling of serious botany, history, and a few growing tips in each narrative.

Under the heading of “Raising the Nap,” for example, Armitage romps through the history of teasel (*Dipsacus sativus*), a weedy plant whose bristly seedheads “hurt when I touched them,” he says. He chronicles the plant’s long history of use for teasing or carding wool fiber, first in England and France, and later in the United States. Machines with teasel heads were used into the mid-20th century, he says, when they were finally replaced by units with metal teeth.

Then there’s the eyeball plant, one of the common names for *Spilanthes acmella*. It is also known as the toothache plant because when the leaves and flowers—a source of spilanthal—are chewed, they cause significant salivation. Some dentists believe salivation is important for tooth health, and “a daily mouth rinse” of the extract has been recommended for gum health.

Even those with no interest in either growing these plants or learning about their sometimes astonishing lore are sure to enjoy this book for the many marvelous, personal, and invariably funny anecdotes Armitage recounts.

—Linda Yang

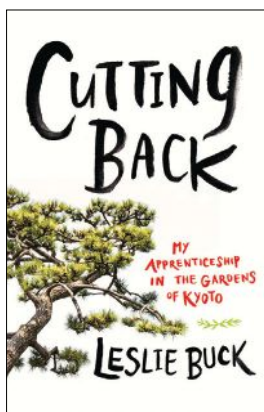
Linda Yang, former New York Times garden writer, is author of four books, including The City Gardener’s Handbook (Storey Publishing, 2002).

Tomes About Trees

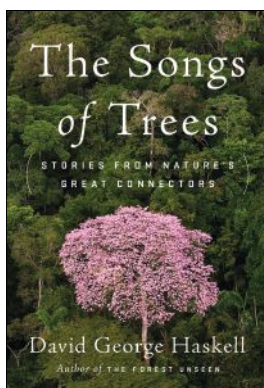
THE RELATIONSHIPS we share with trees often run deep, but we sometimes take them for granted, perhaps because of their constant, seemingly unchanging presence in our lives. Trees provide beauty, shade, and building material. Some of them yield fruits or sweet sap for syrup. Others are steeped in folklore or history. Each of the following books views trees through different perspectives, ranging from the lyrical, to academic, practical, and scientific. Takeaways range from growing tips to lessons in sustainability and poetic insights into our natural world.



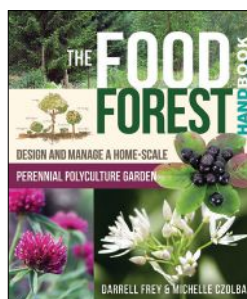
The Long, Long Life of Trees (Yale University Press, 2016, \$21.99) by Fiona Stafford is a poetic tribute to trees and their beauty, characteristics, and diverse histories. The book goes beyond our utilitarian need for trees and delves into the emotional and spiritual connections we have with them. Stafford explores the human relationships with 17 common trees from ash and apple, to pine, oak, cypress, and willow.



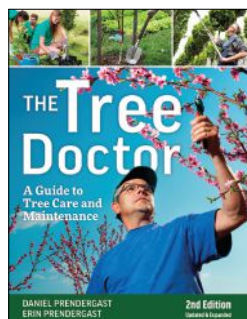
Leslie Buck's unique memoir, *Cutting Back: My Apprenticeship in the Gardens of Kyoto* (Timber Press, 2017, \$24.95), traces the story of the then 35-year-old garden designer, who left a secure life behind to learn pruning from one of the most renowned landscaping companies in Kyoto. Informative and inspiring, the book will appeal to both gardeners and non-gardeners. As much as Buck's story is about Japanese garden aesthetics, it is also about stepping out of your comfort zone and taking a chance.



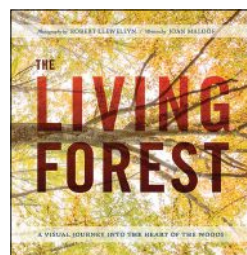
David George Haskell's *The Songs of Trees* (Viking, 2017, \$28) makes a powerful argument for restoring our severed relationship with the natural world. Haskell repeatedly visits a dozen trees around the globe from the Amazon to the Rocky Mountains, keenly observing each tree's connection with the environment and natural communities around it. This book may inspire readers to reflect on how the natural world has enriched their own lives, and how they might return the favor.



The Food Forest Handbook (New Society Publishers, 2017, \$39.95) by Darrell Frey and Michelle Czolba is a manual for gardeners, designers, and naturalists who want to create their own home-scale food forest. One of the oldest methods of gardening, food forests have become popular again alongside a renewed interest in permaculture. This guide includes thorough and clear instructions for starting, tending, and harvesting a food forest, along with helpful illustrations and tempting recipes.



The Tree Doctor (Firefly Books, 2017, \$19.95) by Daniel and Erin Prendergast provides comprehensive information on tree identification, tips for choosing the right tree, proper planting and pruning techniques, and advice on how to get the most value out of your trees. The book is an invaluable resource for anyone from homeowners with trees on their property to landscape professionals. Urbanites will appreciate the particular attention given to planting and caring for trees in a city setting.



The Living Forest (Timber Press, 2017, \$40), a photographic exploration of the beauty of forests, features 200 vibrant images by Robert Llewellyn that reveal the small and large, seen and unseen. Accompanying essays by Joan Maloof provide inspired and scientific insight. By immersing readers in the serene, dreamlike world of the forest ecosystem, *The Living Forest* is sure to make future strolls through the woods a much richer experience.

—Stephanie George, Editorial Intern

REGIONAL HAPPENINGS

Horticultural Events from Around the Country

NORTHEAST

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

RAP SEPT. 30. **Native Tree Fall Foliage Walk.** Mountain Top Arboretum. Tannersville, NY. (518) 589-3903. www.mtarboretum.org.

RAP OCT. 1. **Chili Pepper Festival.** Brooklyn Botanic Garden. Brooklyn, NY. (718) 623-7200. www.bbg.org.

RAP OCT. 4. **Natural Defense: Enlisting Bugs and Germs to Protect our Food and Health.** Lecture and book signing. Arnold Arboretum of Harvard University. Boston, MA. (617) 384-5277. www.arboretum.harvard.edu.

AHS OCT. 5-7. **America in Bloom Symposium & Awards.** Conference. Holliston, MA. (614) 453-0744. www.americainbloom.org.

AHS OCT. 6. **Great Plants Symposium.** Perennially Yours. Sturbridge Host Hotel & Conference Center. Sturbridge, MA. (207) 502-7228. www.pyours.com.

RAP OCT. 7 & 8. **Harvest Festival.** Berkshire Botanical Garden. Stockbridge, MA. (413) 298-3926. www.berkshirebotanical.org.

RAP OCT. 15. **Harvest Fest and Pumpkin Patch.** Festival. Queens Botanical Garden. Flushing, NY. (718) 886-3800. www.queensbotanical.org.

RAP OCT. 15. **Scarecrow Jubilee.** Festival. Ithaca Children's Garden. Ithaca, NY. (607) 319-4203. www.ithacachildrensgarden.org.

RAP OCT. 28. **Growing Plants for Pollinators from Seed.** Class. Nasami Farm Nursery. Whately, MA. (508) 877-7630. www.newenglandwild.org.

Looking ahead

RAP NOV. 4. **Hydrangea Winterizing Workshop.** Heritage Museums & Gardens. Sandwich, MA. (508) 888-3300. www.heritagemuseumsandgardens.org.

RAP NOV. 4-19. **Fall Chrysanthemum Show.** Smith Botanical Garden. Northampton, MA. (413) 585-2740. www.smith.edu/garden.

RAP NOV. 25. **Decorating with Native Greenery.** Class. Landis Arboretum. Esperance, NY. (518) 875-6935. www.landisarboretum.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.ahsgardening.org/rap.

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

MID-ATLANTIC

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

SEPT. 26 & 27. **Fall Symposium.** Garden Club of Virginia. Richmond, VA. (804) 643-4137. www.gcvsymposium.org.

SEPT. 30. **Conquering Cool Season Edibles.** Lecture. Brookside Gardens. Wheaton, MD. (301) 962-1404. www.montgomeryparks.org/parks-and-trails/brookside-gardens.

RAP SEPT. 30. **Hands-On Seed Harvest, Cleaning, and Storage.** Workshop. Bartram's Garden. Philadelphia, PA. (215) 729-5281. www.bartramsgarden.org.

RAP SEPT. 30. **Korean Harvest Festival.** Morris Arboretum. Philadelphia, PA. (215) 247-5777. www.morrisarboretum.org.

RAP OCT. 16. **Glorious Shade.** Class. University of Delaware Botanic Gardens. Newark, DE. (302) 831-0153. www.ag.udel.edu/udbg.

RAP OCT. 21. **Building Good Garden Soil.** Workshop. Lewis Ginter Botanical Garden. Richmond, VA. (804) 262-9887. www.lewisginter.org.

RAP OCT. 22. **Celebrate Fall 2017.** Festival. Reeves-Reed Arboretum. Summit, NJ. (908) 273-8787. www.reeves-reedarboretum.org.

RAP OCT. 23. **Fall: In Love with the Cool-Season Garden.** Class. Rutgers Gardens. New Brunswick, NJ. (732) 932-8451. www.rutgersgardens.rutgers.edu.

RAP OCT. 24. **Gardening for the Birds.** Class. Van Vleck House & Gardens. Montclair, NJ. (973) 744-4752. www.vanvleck.org.

RAP OCT. 27. **Guided Garden Tour.** Tudor Place Historic House & Garden. Washington, DC. (202) 965-0400. www.tudorplace.org.

Sonnenberg Gardens Fall Symposium

EACH YEAR, Sonnenberg Gardens & Mansion State Historic Park in Canandaigua, New York, hosts a Fall Gardening Symposium where garden enthusiasts



Speaker Claudia West

from around the country can hear horticultural experts speak about exciting and relevant topics. This year's symposium, slated for October 7, features Claudia West, co-author of *Planting in a Post Wild World* (Timber Press, 2016) and sales manager at North Creek Nurseries in Landenberg, Pennsylvania.

West will discuss the unique opportunity and responsibility gardeners have to bring wilderness and conservation into our gardens. Attendees will learn about the importance of wild design and how to best integrate it into their plantings. West will also speak about some of the best perennials and grasses that, when used in combination, create a landscape that is ornamental, functional, and rich in ecological value.

For more information and to purchase tickets, visit the Sonnenberg website (www.sonnenberg.org).

—Stephanie George, Editorial Intern

Looking ahead

RAP NOV. 18. **Floral Design: Thanksgiving Table.** Workshop. Green Spring Gardens. Alexandria, VA. (703) 642-5173. www.greenspring.org.

SOUTHEAST

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

RAP OCT. 5. **Growing Cool Season Vegetables.** Class. Paul J. Ciener Botanical Garden. Kernersville, NC. (336) 996-7888. www.cienerbotanicalgarden.org.

RAP OCT. 6-8. **Art in the Garden.** Festival. New Hanover County Arboretum. Wilmington, NC. (910) 798-7660. www.arboretum.nhcgov.com.

RAP OCT. 9. **Fall Harvesting.** Workshop. Sarah P. Duke Gardens. Durham, NC. (919) 684-3698. www.gardens.duke.edu.

RAP OCT. 14 & 15. **Fall Plant Festival.** Plant vendors, workshops, and children's activities. University of South Florida Botanical Gardens. Tampa, FL. (813) 910-3274. www.cas.usf.edu/garden.

RAP OCT. 18 & 19. **Tree Identification.** Workshop and tour. Highlands Botanical Garden. Highlands, NC. (828) 526-2602. www.highlandsbiological.org.

RAP OCT. 21-23. **Fall Plant Sale.** Mobile Botanical Garden. Mobile, AL. (251) 342-0555. www.mobilebotanicalgardens.org.

RAP OCT. 22. **Fall Festival.** Knoxville Botanical Garden and Arboretum. Knoxville, TN. (865) 862-8717. www.knoxgarden.org.

RAP OCT. 25. **Creating a Sustainable Urban Wildlife Habitat for the Birds, Bees, and Butterflies.** Class. JC Raulston Arboretum at NC State University. Raleigh, NC. (919) 515-3132. www.jcra.ncsu.edu.

RAP OCT. 27. **Backyard Rain Gardens.** Class. South Carolina Botanical Garden. Clemson, SC. (864) 656-3405. www.clemson.edu/scbg.

Looking ahead

RAP NOV. 10-21. **Galaxy of Lights.** Exhibition. Huntsville Botanical Garden. Huntsville, AL. (256) 830-4447. www.hsvbg.org.

NORTH CENTRAL

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

RAP THROUGH OCT. 29. **Chrysanthemums and More!** Exhibit. Frederik Meijer Gardens & Sculpture Park. Grand Rapids, MI. (888) 957-1580. www.meijergardens.org.

RAP THROUGH NOV. 12. **Harvest Blooms.**

Fall display. Franklin Park Conservatory and Botanical Gardens. Columbus, OH. (614) 715-8000. www.fpconservatory.org.

RAP OCT. 5-8. **Ohio Mart 2017.** Craft fair and festival. Stan Hywet Hall & Gardens. Akron, OH. (330) 836-5533. www.stanhywet.org.

RAP OCT. 6-8. **Fall Bulb Festival.** Chicago Botanical Garden. Glencoe, IL. (847) 835-5440. www.chicagobotanic.org.

RAP OCT. 8. **Fall at the Arboretum.** Festival. Klehm Arboretum and Botanic Garden. Rockford, IL. (815) 965-8146. www.klehm.org.

OCT. 11. **Poisonous Plants.** Class. Cleveland Botanical Garden. Cleveland, OH. (216) 721-1600. www.cb garden.org.

RAP OCT. 14. **Fall Festival.** Seed Savers Exchange at Heritage Farm. Decorah, IA. (563) 382-5990. www.seedsavers.org.

RAP OCT. 21. **Fall Foliage Festival.** Hidden Lake Gardens. Tipton, MI. (517) 431-2060. www.hiddenlakegardens.msu.edu.

RAP OCT. 21. **Just Keep Planting.** Symposium. Greater Des Moines Botanical Garden. Des Moines, IA. (515) 323-6290. www.dmbotanicalgarden.com.



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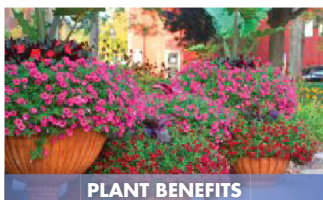
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AG17

San Diego Botanic Garden Fall Plant Sale



FROM OCTOBER 21 to 23, the San Diego Botanic Garden (SDBG) in Encinitas, California, will host its 35th annual Fall Plant Sale, billed as the largest plant sale in the San Diego area. Plant lovers from all levels of expertise will enjoy this chance to browse a massive selection of plants including California natives, herbs, succulents, annuals and perennials, fruit trees, bromeliads, and sub-tropicals. "The selection is truly amazing," says Julian Duval, SDBG president and CEO. "Every public garden in the country has plant sales, but I know of no other that is like ours." And because the sale is the garden's biggest fundraiser, all the plants are donated by local nurseries and individuals.

In addition to shopping for plants, attendees can find new and gently used gardening items in the Botanic Attic, browse an offering of used books, or snack on baked goods at the Bakery Shoppe. Admission to the garden is \$14 for adults, \$10 for students, seniors, and active military, \$8 for children ages three to 12, and free for children under three. Because the garden participates in the AHS's Reciprocal Admissions Program, AHS members receive free admission. More information can be found at www.sdbgarden.org.

—Stephanie George, Editorial Intern

RAP OCT. 26. **Plant Health and Sustainability Symposium.** Michigan State University Horticulture Gardens. East Lansing, MI. (517) 355-5191 ext. 1328. www.hrt.msu.edu/our-gardens.

RAP OCT. 28. **Using Native Grasses in Your Landscape.** Class. Minnesota Landscape Arboretum. Chaska, MN. (952) 443-1400. www.arboretum.umn.edu.

SOUTH CENTRAL

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

RAP OCT. 2. **Fruit Trees for the Home Landscape.** Class. LSU AgCenter Botanic Gardens. Baton Rouge, LA. (225) 763-3990. www.burdenhorticulturesociety.com.

RAP OCT. 5-22. **Pumpkinville.** Festival. Myriad Botanical Gardens. Oklahoma City, OK. (405) 445-7079. www.oklahomacitybotanicalgardens.com.

RAP OCT. 7. **Urban Gardening: Permaculture for Small Spaces.** Class. Botanical Research Institute of Texas. Fort Worth, TX. (817) 332-4441. www.brit.org.

RAP OCT. 7 & 8. **Fall Garden Festival.** New Orleans Botanical Garden. New Orleans, LA. (504) 483-9488. www.neworleanscitypark.com/botanical-garden.

RAP OCT. 21. **Fall in the Gardens.** Festival. Garvan Woodland Gardens. Hot Springs, AR. (501) 262-9300. www.garvangardens.org.

RAP OCT. 28 & 29. **Japanese Garden Fall Festival.** Fort Worth Botanic Garden. Fort Worth, TX. (817) 392-5548. www.fwb.org.

Looking ahead

RAP NOV. 6. **Southern Landscape Design.** Class. LSU AgCenter Botanic Gardens. Baton Rouge, LA. (225) 763-3990. www.burdenhorticulturesociety.com.

RAP NOV. 11. **Forever Evergreens.** Workshop. Powell Gardens. Kingsville, MO. (816) 697-2600. www.powellgardens.org.

SOUTHWEST

AZ, CO, NM, UT

RAP SEPT. 30. **Success with Orchids.** Class. Santa Fe Botanical Garden. Santa Fe, NM. (505) 471-9103. www.santafebotanicalgarden.org.

RAP OCT. 13-15. **Pumpkin Festival.** Chatfield Farms at Denver Botanic Garden. Denver, CO. (720) 865-3500. www.botanicgardens.org.

OCT. 14. **Cider Festival.** Albuquerque BioPark Botanic Garden. Albuquerque, NM. (505) 768-2000. www.cabq.gov/culturalservices/biopark.

RAP OCT. 14. **Rare and Imperiled Plants of Colorado.** Workshop. Betty Ford Alpine Gardens. Vail, CO. (970) 476-0103. www.bettyfordalpinegardens.org.

RAP OCT. 18. **Bulb Forcing.** Workshop. Red Butte Garden and Arboretum. Salt Lake City, UT. (801) 585-0556. www.redbuttegardens.org.

OCT. 19. **Thriving Hive: Winterizing the Hive.** Class. USU Botanical Center. Kaysville, UT. (801) 593-8969. www.usubotanicalcenter.org.

RAP OCT. 22. **Pumpkin Walk and Fall Fest.** The Arboretum at Flagstaff. Flagstaff, AZ. (928) 774-1442. www.thearb.org.

Looking ahead

NOV. 15. **The Art of Watering.** Class. Desert Botanical Garden. Phoenix, AZ. (480) 941-1225. www.dbg.org.

WEST COAST

CA, HI, NV

RAP SEPT. 30. **Arcadia Moon Festival.** Los Angeles County Arboretum & Botanic Garden. Arcadia, CA. (626) 821-3222. www.arboretum.org.

RAP SEPT. 30. **Living Walls & Vertical Gardens.** Class. San Diego Botanic Garden. Encinitas, CA. (760) 436-3036. www.sdbgarden.org.

RAP OCT. 1. **Gardening with Chinese Herbs in the Bay Area.** Class. University of California Botanical Garden at Berkeley. Berkeley, CA. (510) 643-2755. www.botanicalgarden.berkeley.edu.

RAP OCT. 7. **Fall Plant Sale.** UC Davis Arboretum and Public Garden. Davis, CA. (530) 752-4880. www.arboretum.ucdavis.edu.

RAP OCT. 12. **Renovating the Mature Landscape: Resources and Inspiration for a Beautiful Sustainable Garden.** Class. The Gardens at Heather Farm. Walnut Creek, CA. (925) 947-1678. www.gardenshf.org.

RAP OCT. 13. **John C. Pritzlaff Conservation Symposium.** Santa Barbara Botanic Garden. Santa Barbara, CA. (805) 682-4726. www.sbbg.org.

RAP OCT. 21. **Rare Plants of the East Bay.** Class. Regional Parks Botanic Garden. Berkeley, CA. (510) 544-3169. www.nativeplants.org.

RAP OCT. 28. **Composting with Worms.** Class. Fullerton Arboretum. Fullerton, CA. (657) 278-3407. www.fullertonarboretum.org.

Looking ahead

RAP NOV. 11. **Mushroom Identification for Beginners.** Workshop. Mendocino Coast

Botanical Gardens. Fort Bragg, CA. (707) 964-4352. www.gardenbythesea.org.

NORTHWEST

AK, ID, MT, OR, WA, WY

RAP SEPT. 28. **Mushroom Walk and ID. Workshop.** Alaska Botanical Garden. Anchorage, AK. (907) 770-3692. www.alaskabg.org.

SEPT. 30. **Fall Festival and Craft Show.** Tizer Botanic Gardens and Arboretum. Jefferson City, MT. (406) 933-8789. www.tizergardens.com.

RAP OCT. 7 & 8. **Fall Harvest Festival.** Idaho Botanical Garden. Boise, ID. (208) 343-8674. www.idahobotanicalgarden.org.

RAP OCT. 11. **Put Your Vegetable Garden to Bed.** Workshop. Bellevue Botanical Garden. Bellevue, WA. (425) 452-2750. www.bellevuebotanical.org.

RAP OCT. 19. **Fungi and Fall Colors.** Plant Walk. Bloedel Reserve. Bainbridge Island, WA. (206) 842-7631. www.bloedelreserve.org.

RAP OCT. 21. **Fuchsia Propagation.** Class. Leach Botanical Garden. Portland, OR. (503) 823-9503. www.leachgarden.org.

RAP OCT. 28. **Everything Chocolate.** Lecture.

W.W. Seymour Botanical Conservatory. Tacoma, WA. (253) 591-5330. www.metroparkstacoma.org/conservatory.

RAP OCT. 29. **Mushroom Festival.** Mount Pisgah Arboretum. Eugene, OR. (541) 747-3817. www.mountpisgaharboretum.org.

CANADA

OCT. 6-31. **Great Pumpkin Ball.** Exhibition. Montreal Botanical Garden. Montreal, QC. (514) 872-1400. www.espacepourlavie.ca/en/botanical-garden.

OCT. 14 & 15. **Apple Festival.** UBC Botanical Garden. University of British Columbia. Vancouver, BC. (604) 822-4208. www.botanicalgarden.ubc.ca.

OCT. 18. **Fun with Ferns.** Class. VanDusen Botanical Garden. Vancouver, BC. (604) 257-8662. www.vandusengardening.org.

RAP OCT. 21. **Plant Identification and Culture.** Workshop. Horticulture Centre of the Pacific. Victoria, BC. (250) 479-6162. www.hcp.ca.

Looking ahead

RAP NOV. 15. **Small Garden Design.** Class. Toronto Botanical Garden. Toronto, ON. (416) 397-1341. www.torontobotanicalgarden.ca.

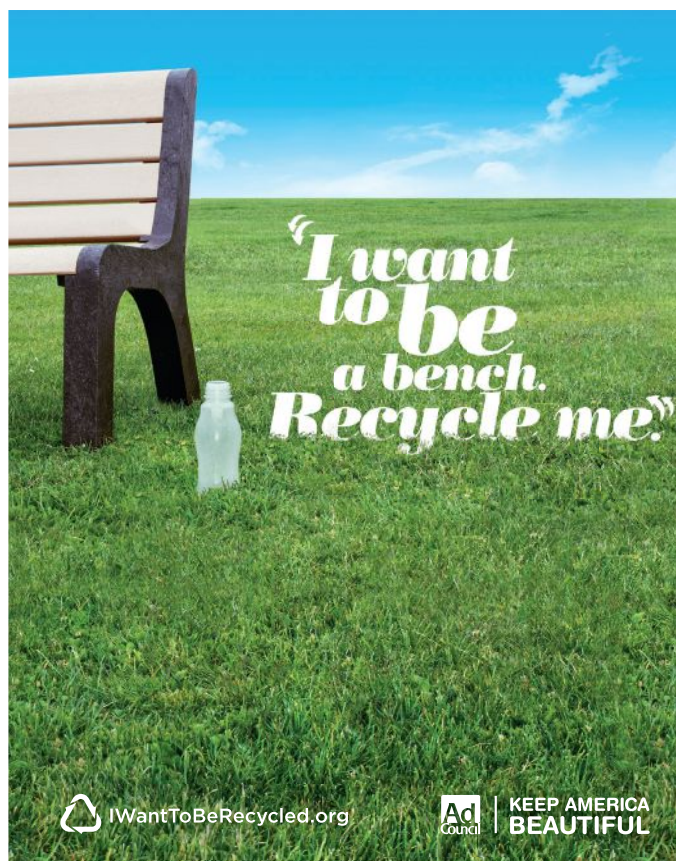
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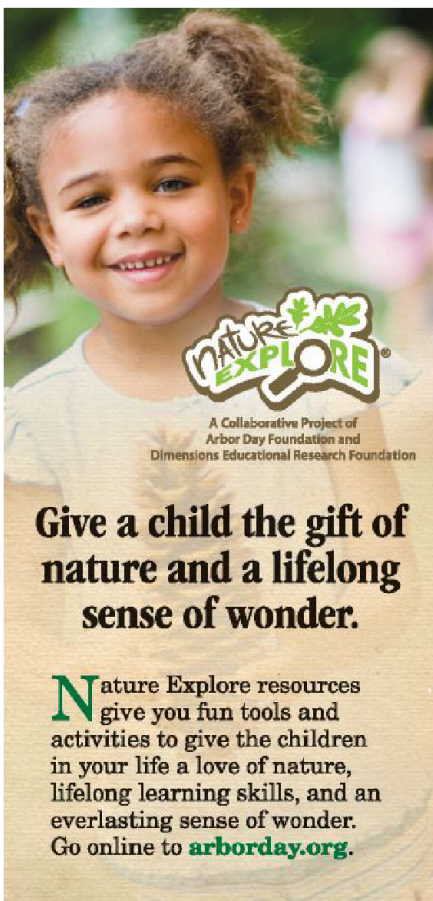


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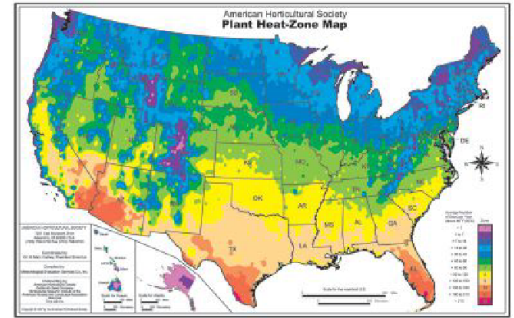
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PRONUNCIATIONS AND PLANTING ZONES



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.

Acanthus hungaricus uh-KAN-thus
hun-GAIR-ih-kus (USDA Hardiness Zones 6–9, AHS Heat Zones 9–5)

A. mollis A. MOL-lis (7–11, 12–4)

Actaea simplex ack-TEE-uh SIM-pleks
(4–8, 8–1)

Amsonia hubrichtii am-SO-nee-uh
hew-BRIK-tee-eye (4–9, 9–5)

Arisaema candidissimum air-ih-SEE-muh
kan-dih-DISS-ih-mum (5–9, 9–4)

A. concinnum A. kon-SIN-um (5–8, 8–6)

A. dracontium A. druH-KON-tee-um (4–9, 9–6)

A. fargesii A. far-JEZ-ee-eye (5–8, 8–1)

A. flavum A. FLAY-vum (5–9, 9–1)

A. heterophyllum A. het-ur-ah-FIL-lum
(5–9, 9–1)

A. intermedium A. in-ter-MEE-dee-um
(7–8, 8–1)

A. ringens A. RIN-jenz (5–9, 9–6)

A. sazensoo A. sah-ZEN-zoo (6–9, 9–6)

A. serratum A. sair-RAY-tum (5–9, 9–5)

A. sikokianum A. sih-ko-kee-AN-um (4–9, 9–3)

A. ternatipartitum A. turn-NAY-tee-par-tee-tum
(6–9, 9–6)

A. tortuosum A. tor-too-OH-sum (8–9, 9–7)

A. triphyllum A. try-FIL-lum (4–9, 9–1)

A. urashima A. yoo-ruh-SHEE-mah (5–9, 9–1)

Aronia arbutifolia uh-RO-nee-uh
ar-byew-tih-FO-lee-uh (4–9, 9–4)

A. melanocarpa A. mel-an-o-KAR-puh
(3–8, 8–2)

Asclepias syriaca ass-KLE-pee-us
sih-rih-AY-kuh (3–9, 9–2)

Calycanthus floridus kal-ee-KAN-thus
FLOR-ih-dus (5–9, 9–4)

C. occidentalis C. ok-sih-den-TAY-liss
(7–10, 10–7)

Clethra alnifolia KLETH-ruh al-nih-FO-lee-uh
(4–9, 9–1)

Cornus sericea KOR-nus seh-RISS-ee-uh
(3–8, 8–1)

Diervilla rivularis dy-ur-VILL-uh
riv-yew-LAIR-iss (5–7, 7–4)

D. sessilifolia D. ses-sih-lih-FO-lee-uh
(4–8, 8–3)

Echinacea purpurea ek-ih-NAY-see-uh
pur-PUR-ee-uh (3–9, 9–1)

Gaultheria shallon gawl-THEER-ee-uh
SHAL-lon (7–9, 9–7)

Heteromeles arbutifolia het-ur-OM-uh-leez
ar-byew-tih-FO-lee-uh (8–10, 10–8)

Heuchera americana HYEW-kur-uh
uh-mair-ih-KAN-uh (4–8, 8–1)

H. micrantha H. my-KRAN-thah (4–8, 8–1)

H. villosa H. vih-LO-suh (4–9, 9–1)

Hydrangea arborescens hy-DRAN-juh
ar-bo-RES-enz (4–9, 9–1)

Hylotelephium spectabile hy-lo-tuh-LEF-ee-um
spek-TAB-ih-lee (3–9, 10–3)

Ilex glabra EYE-leks GLAB-ruh (5–9, 9–3)

I. verticillata I. vur-tih-sih-LAY-tuh (3–9, 9–1)

Itea virginica eye-TEE-uh vir-JIN-ih-kuh
(5–9, 9–4)

Malvaviscus drummondii mal-vuh-VIS-kus
drum-AWN-dee-eye (7–11, 12–6)

Neviusia alabamensis nev-ee-YEW-see-a
al-uh-bam-EN-sis (5–8, 8–4)

Rhus aromatica ROOS ar-oh-MAT-ih-kuh
(3–9, 9–3)

Salix humilis SAL-iks HEW-mil-is (3–8, 8–1)

Schizachyrium scoparium skits-ah-KEER-ee-um
sko-PAR-ee-um (3–9, 9–1)

Tanacetum coccineum TAN-uh-SEE-tum
kok-SIN-ee-um (5–9, 9–5)

Thalictrum aquilegifolium thal-ik-trum
ah-kwi-lee-jih-FO-lee-um (5–9, 9–4)

Vernonia lettermannii ver-NON-ee-uh
let-ter-MAH-nee-eye (4–9, 9–1)

Viburnum nudum vy-BUR-num NEW-dum
(4–9, 9–4)

Xanthorrhiza simplicissima zan-tho-RISE-uh
sim-plih-KISS-ee-muh (3–9, 9–3)

GARDEN MARKET

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Little Bluestem: Tough and Terrific

by Carolyn Singer

I HAVE A single little bluestem (*Schizachyrium scoparium*, USDA Hardiness Zones 3–9, AHS Heat Zones 9–1) plant growing in a large container, and the graceful movement of the foliage delights me from spring through early winter. So I can imagine how breathtaking it must have been when acres of it flourished across the Kansas and Nebraska prairie, where it dominated the landscape for centuries.

The blue-green foliage of this upright, clump-forming grass emerges in late spring, adding a steely hue to perennial borders or meadows. In late summer, a series of attractive seasonal changes begin with the foliage color transitioning to apricot and even a bit of purple. Soon most of the foliage is, depending on selection, somewhere between coral and red. By fall, pink—or in some cases purple—is the dominant hue, contrasting nicely with the silvery seedheads. In winter, the foliage gradually bleaches to tan or off white.

Selections of little bluestem with a range of different sizes, habits, and color attributes are available. Among these are ‘The Blues’, with pale blue foliage; columnar ‘Standing Ovation’; ‘Twilight Zone’, which has blue foliage with purple highlights; ‘Smoke Signal’, which is upright with deep purple fall foliage;



The pale blue foliage of little bluestem ‘The Blues’ turns a warm cinnamon hue in autumn.

and compact ‘Carousel’, which tops out at two-and-a-half feet.

CARING FOR LITTLE BLUESTEM

With a native range that covers much of North America, little bluestem thrives in full sun and is adapted to a broad range of soil types, from clay to sandy loam, and moisture levels. Its tolerance for periods of drought and utility for erosion control in disturbed landscapes can be attributed to its network of fibrous roots, which can extend five feet into the soil.

Because little bluestem has great winter interest—retaining its upright habit even in harsh weather—hold off on cutting the stems back to the base

until new growth begins emerging in late spring. The timing of this differs from region to region, but is generally between February and April. Divide clumps in early summer if they become too large or floppy.

In the garden, little bluestem is not usually bothered by browsing deer, yet in its natural environment it is a valued food source for wildlife from bison to birds. Its fine foliage, even at the base of the plant, provides nesting material for a variety of birds and mammals.

Levels of irrigation, soil fertility, and even climate can affect the mature size of little bluestem. In my meadow garden in the Sierra foothills, where it gets deep irrigation every two weeks, little bluestem grows to three feet. In fertile garden soil, or where it receives more irrigation, plants can reach four to five feet tall.

LANDSCAPE USES

What little bluestem lacks in height and bulk, it makes up for with an elegant upright habit and dramatic color and movement. It serves as a landscape focal point for months, so avoid crowding it with other grasses or tall perennials. I recommend planting several little bluestems spaced three to four feet apart to create a distinctive drift within the larger landscape.

I consider little bluestem one of the most versatile and beautiful of America’s native grasses. Whether in a container, a perennial border, or a meadow, it’s a valuable addition to any garden.

Carolyn Singer is a freelance writer based in Cedar Ridge, California.

Sources

American Meadows, Shelburne, VT.
www.americanmeadows.com.
Digging Dog Nursery, Albion, CA.
www.diggingdog.com.

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If you have seeds you would like to donate to the 2018 Seed Exchange Program, here's what to do:

1. Collect enough seeds of each variety to fill a minimum of 50 orders. (See "Tips for Collecting Seeds" at www.absgardening.org/seeds). For very small seeds, one order would be enough to fill the tip of a teaspoon; for large seeds, such as beans, it would be five to 10 seeds.
2. Package clean, dry seeds in zip-top plastic baggies, each labeled with the name of the plant.
3. Complete a Donor Information Sheet (below) for each type of seed. Photocopy as many sheets as needed.
4. Mail seeds in a box or padded envelope marked **HAND CANCEL** to: 2018 AHS Seed Exchange Program, 7931 East Boulevard Drive, Alexandria, VA 22308. **Must be postmarked by November 1, 2017.**

A list of available seeds will appear in the January/February 2018 issue of *The American Gardener*. The catalog of available seeds complete with descriptions will be posted on the AHS website (www.absgardening.org) in mid-January. AHS members who donate seeds get first pick from the entire list of seeds.

Please note: Due to Federal regulations, the AHS can only accept seed donations from, and send seeds to, members living in the United States.

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Comments on germination, maintenance, appearance, and/or use:

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I appreciate the AHS's efforts to reduce paper usage by making the seed list available online, but I prefer to have a copy mailed to my home. I've enclosed a self-addressed, stamped, business-size envelope.

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