The American GARDENER®

The Magazine of the American Horticultural Society

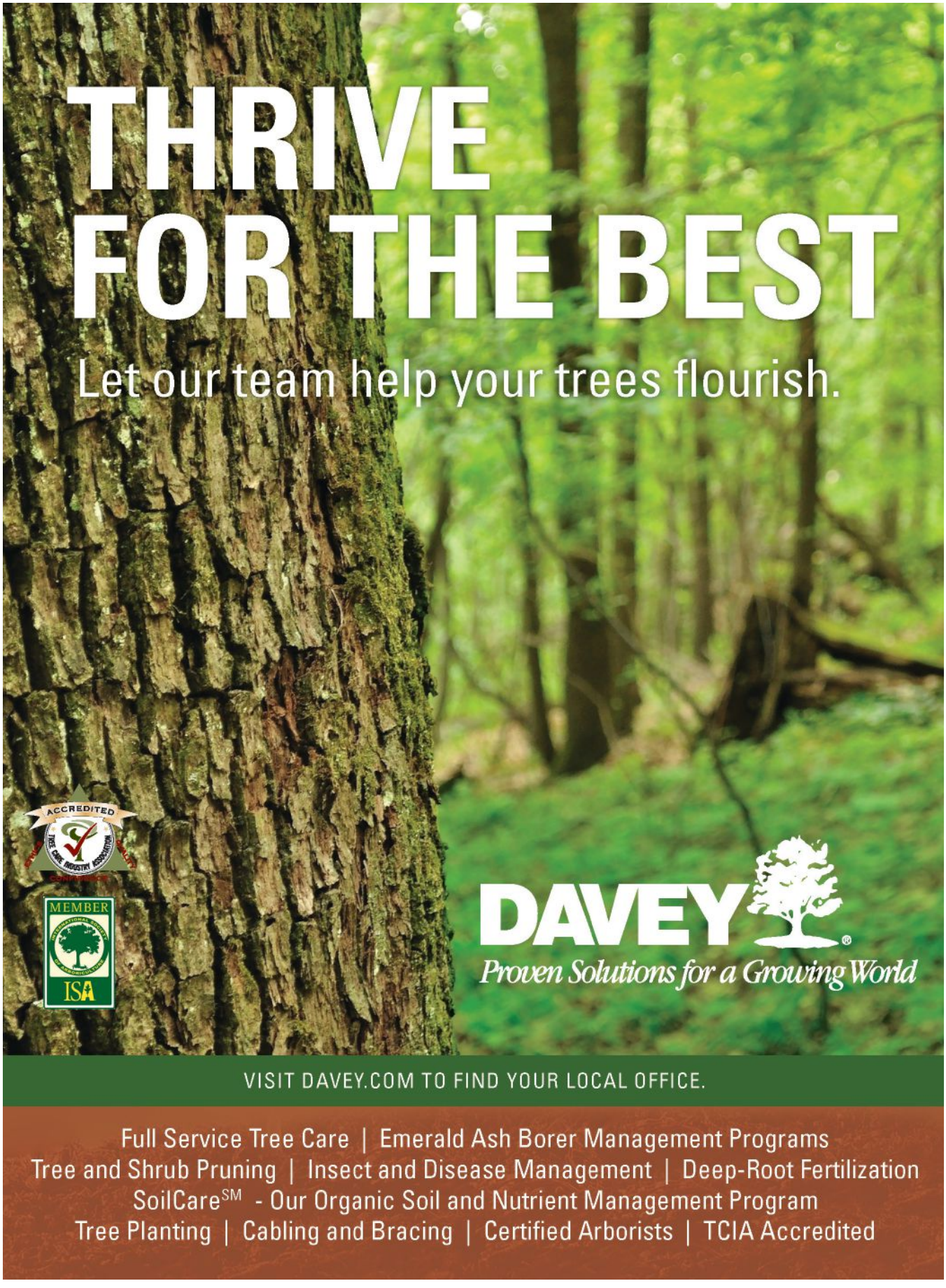
March / April 2020

Designing with Ephemerals

Boxwood Alternatives

The Joys of Foraging

Add Drama with See-Through Plants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contents

Volume 99, Number 2 · March / April 2020

FEATURES

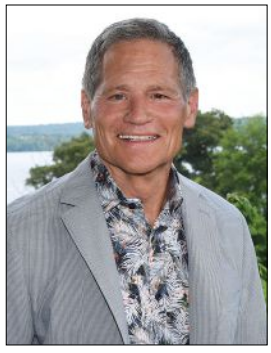
ON THE COVER: Native to the eastern half of North America, bloodroot *(Sanguinaria canadensis)* lights up woodlands with its white flowers for a short time in early spring.
Photograph by judywhite, GardenPhotos.com

DEPARTMENTS

TOP: JANET DAVIS. BOTTOM: COURTESY OF PROVEN WINNERS

NOTES FROM RIVER FARM

HAPPY SPRING! My husband and I recently returned from a trip to Kenya and Tanzania, where we were visibly and profoundly reminded of the interdependence of animals, humans, and plants. We learned about the reliance of the Maasai on their pastured cattle, how elephants spread seeds of the acacia trees a long distance from where the fruit is consumed, and about the symbiotic relationship between giraffe-lip-biting ants and their plant hosts.



KATIE GARLOCK

Returning to our garden in the Mid-Atlantic region, we discovered a mild winter has meant a jump start on the growing season for farmers and gardeners alike. At River Farm, the AHS's headquarters in Alexandria, Virginia, everything has bloomed earlier than usual—from daffodils and other spring bulbs, to camellias, winter hazels, and cherry trees. If you are looking forward to visiting River Farm for our popular Spring Garden Market in April, never fear, there will still be plenty of things in bloom. The same goes for Earth Day on April 22. We will mark the 50th anniversary of this groundbreaking environmental awareness event at River Farm with a volunteer work day.

Over the past couple of months, the AHS Board of Directors has been focused on the ongoing national search for a new president and chief executive officer. Meanwhile, our Interim Director, Bob Brackman, continues to oversee the day-to-day operations of the AHS staff, which is gearing up for our 2020 national programs and events. Among the highly anticipated events this year is the 2020 Great American Gardeners Award Ceremony and Banquet, which will be held at River Farm on June 18. The 2020 slate of national honorees has just been announced, and you can read about Liberty Hyde Bailey Award winner Jim Folsom and all the other incredibly talented people and organizations being recognized for their work, starting on page 12.

Another one of our signature events is the National Children & Youth Garden Symposium, which this year will be held July 7 to 10 in Santa Cruz, California. This is the 28th anniversary of this one-of-a-kind event, which brings together teachers, youth garden leaders, public garden staff, and others who are on the front lines of getting kids engaged with plants, gardens, and nature.

In this issue of the magazine, you'll enjoy articles ranging from advice on effectively using spring-blooming ephemerals to design tips for using plants with airy flowers or foliage as screens, a beginner's guide to foraging for gardeners, and recommendations for plants that can be used as replacements for boxwoods in the landscape. You will also find a profile of a relatively new public garden in Pittsburgh, detailed information on growing broccolini, and sage advice on how—and when—to prune different kinds of hydrangeas.

I hope the information and inspiration you gain from the magazine—and from being an American Horticultural Society member in general—will not only enhance your life but encourage you to share your knowledge and passion with others in your family, your neighborhood, and your larger community. And what better time than spring to help someone get started on the path toward a lifelong love of plants?

Erich Veitenheimer, Ph.D.
Chair, AHS Board of Directors

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Botanical nomenclature is based on *The American Horticultural Society A–Z Encyclopedia of Garden Plants*, the Plant List *(www.theplantlist.org)*, and the USDA Plants Database *(plants.usda.gov)*. Opinions expressed in the articles are those of the authors and are not necessarily those of the Society. Manuscripts, artwork, and photographs sent for possible publication will be returned if accompanied by a self-addressed, stamped envelope. We cannot guarantee the safe return of unsolicited material. Back issues are available at $8 per copy.

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MEMBERS' FORUM

ARTICLES DON'T ADDRESS WILDLIFE PREDATION

I read the November/December 2019 issue with interest, particularly two articles: "Potted Edibles" by Charlie Nardozzi and "A Look-Into Garden" by Carole Ottesen. I must, however, point out an important issue that was not addressed in either article—namely, how to deal with the inevitable competition from wildlife.

Depending on where you live, and whether your pots, containers, bags of soil mix, or raised beds are on patios, porches, decks or in hanging baskets, these may include deer, woodchucks, raccoons, chipmunks, squirrels, rabbits, skunks, birds, and even turtles. I plant and maintain all types of containers for clients living in condo and coop developments bordered by strips of woodland or unmanaged fields and have found that only barriers at least as wide and tall as the mature width and height of the plants give you any chance of a harvest. And, if you use netting, the mesh must be small enough to block paws and beaks.

The only effective deterrent methods I have found are either raised planter boxes fitted with wire hoops over which to stretch netting or frost-protection fabric that admits sunlight, or an individual circle of upright wire fencing lined with small-mesh netting around each pot or group of pots. If the homeowner's association permits it, fencing off the section of deck or patio dedicated to edibles is effective and a lot easier.

The wildlife problem also occurs with several plants suggested in "A Look-Into Garden." Almost any plant with red berries will be stripped by December, at least here in USDA Zone 6 in New York, where I garden, and further north. Evergreen hollies do merit a place in a winter viewing garden, but primarily for foliage, not fruit.

If you want ornament from fruit, better choices are pyracanthas and some viburnums, whose berries are unappealing until a couple of rounds of freezing and thawing weather has softened them up. Another option, where you can grow them, is mahonias.

Karen Jescavage-Bernard
Croton-on-Hudson, NY

KINDRED SPIRIT

I really enjoyed Nan Sterman's article about Annie Hayes in the January/February issue of the magazine. It was a great human interest story of an exceptional plantsperson who has also made significant contributions to horticulture. As gardeners, we need to know there are kindred spirits in our world and this article really delivered that message. I can't wait to explore the plants from Annie's that I might want to grow in my Arizona garden.

Linda Larson
Mesa, AZ

CORRECTIONS

In the January/February article "Garden Trends and New Plants for 2020," Sinclair Adam, Jr., Extension Educator Horticulture & Flower Trials Director at Penn State University, was misidentified.

In the resources box included with Karen Bussolini's article "Design Lessons from Mother Nature" in the January/February issue, the name of the author of *Ecology for Gardeners* was misspelled. It was written by Steve Carroll.

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

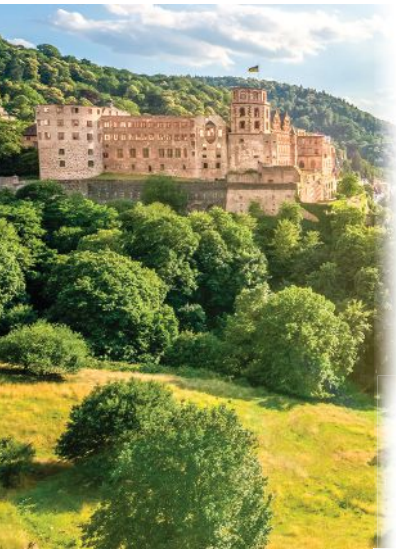
AMERICAN HORTICULTURAL SOCIETY TRAVEL STUDY PROGRAM UPCOMING TOURS

Join us as we venture to extraordinary garden destinations around the world. We've planned spectacular offerings for 2020 and beyond that you won't want to miss!

2020

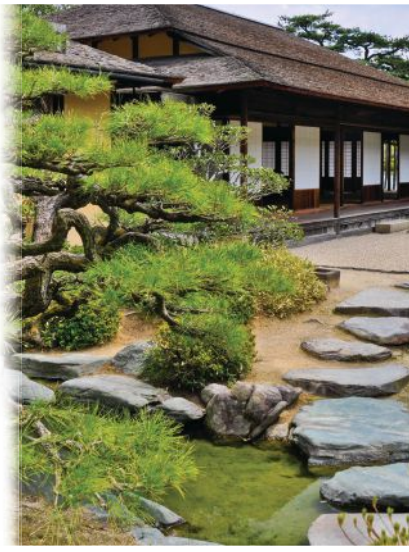
BHUTAN (April 13–25) **SOLD OUT**
with Susie Orso and Katy Moss Warner

PONANT CRUISE TO JAPAN (May 30–June 7)
with Holly and Osamu Shimizu



PROVENCE, FRANCE (May 1–10)
with Frances Roxburgh and Sherran Blair

BAVARIA, GERMANY (September 4–12)
with Harriet Landseer and Eleanor Walker
and Holly and Osamu Shimizu



2021

NEW ZEALAND (January 9–31, 2021)
with Richard Lyon and Rachel Muir

More destinations coming soon!

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."*

News from the AHS

March / April 2020

PROGRAMS • EVENTS • ANNOUNCEMENTS

PROMOTING PLANT CAREERS WITH SEED YOUR FUTURE

IN FEBRUARY, AHS Associate Director of Member Programs **Nora MacDonald** attended a meeting with Seed Your Future (SYF), a national organization that promotes plant careers to younger generations, helps foster a more positive perception of horticulture, inspires younger people to pursue careers working with plants, and highlights the importance of plants to the world around us. The meeting in Columbus, Ohio, was attended by representatives of many gardening industry groups that support SYF's work.

The AHS's Nora MacDonald, second from left, joined with other garden industry representatives in Columbus.

"One of SYF's initiatives this year is called the "Year of the Plant." As part of this program, we are encouraging people to pledge to make 2020 a year of plants by performing year-long activities that promote plant passion," reports MacDonald. These activities could range from teaching young people to grow their own plants, giving plants as gifts to friends and family, incorporating more plants in your home or workspace, or volunteering at local gardens or nature centers.

Additionally, SYF has created new scholarship and internship search tools on their website as an aid to students in plant-related fields such as horticulture, agriculture, environmental science, landscape design, and many more. For more information on all of SYF's work, visit *www.seedyourfuture.org*.

AHS'S 2020 SPRING GARDEN MARKET AT RIVER FARM

JOIN US at our annual Spring Garden Market, April 17 and 18 at our River Farm headquarters in Alexandria, Virginia. From 10 a.m. to 4 p.m. each day, visitors will be able to shop a wide array of natives, specialty plants, herbs, vegetable seedlings, trees, and much more from vendors from across the Mid-Atlantic region. Garden-themed art, books, accessories, and other gardening tools will be available for sale as well. According to **Dan Scott**, associate director of horticulture and River Farm, the annual event is "the perfect start to the gardening season. It is a chance to connect with friends and shop with local and regional vendors."

Food will be available for purchase onsite, and visitors are welcome to grab a bite to eat and take a stroll around River Farm to enjoy the fresh

TOP: COURTESY OF BROC SANDELIN. BOTTOM: COURTESY OF THALIA ROMERO

AMERICAN HORTICULTURAL SOCIETY

CONTACTS FOR AHS PROGRAMS, MEMBERSHIP BENEFITS & DEPARTMENTS

For general information about your membership, call (703) 768-5700. Send change of address notifications to our membership department at 7931 East Boulevard Drive, Alexandria, VA 22308. If your magazine is lost or damaged in the mail, call the number above for a replacement. Requests for membership information and change of address notification can also be e-mailed to membership@ahsgardening.org.

THE AMERICAN GARDENER To submit a letter to the editor of *The American Gardener*, write to The American Gardener, 7931 East Boulevard Drive, Alexandria, VA 22308, or send an e-mail to editor@ahsgardening.org.

DEVELOPMENT To make a gift to the American Horticultural Society, or for information about a donation you have already made, call (703) 768-5700 ext. 127, or send an e-mail to development@ahsgardening.org.

E-MAIL LISTS To subscribe to specific e-mail lists for updates on programs and events, visit *http://connect.ahsgardening.org/email*.

INTERNSHIP PROGRAM The AHS offers internships in communications and horticulture. For information, send an e-mail to internships@ahsgardening.org. More information and application forms can also be found in the 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 over 330 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 October. 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 *www.ahsgardening.org/travel*.

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 members-only sections.

spring blooms. Visitors can explore our historic manor house and stop by River Farm's Garden Shop to peruse a broad selection of books and unique gifts. For more details, visit *www.ahsgardening.org/sgm*.

AHS'S RIVER FARM PART OF VIRGINIA'S HISTORIC GARDEN WEEK

FROM APRIL 18 to 25, over 250 of Virginia's most charming homes, gardens, and historic landmarks will be open to the public during the Garden Club of Virginia's Historic Garden Week. Spanning eight days, the annual event includes 31 tours and provides visitors with the chance to see the most picturesque sites across the state, as well as over 2,300 beautiful flower arrangements created by Garden Club of Virginia members. Among the Alexandria gardens recommended as a place of interest is the AHS's River Farm headquarters. Ticket proceeds from Historic Garden Week help support the Garden Club of Virginia's projects to restore and preserve many historic landscapes throughout Virginia, as well as fund a graduate-level research fellowship program, and the club's centennial project. For tickets and additional information, visit *www.vagardenweek.org*.

REMINDER: SPECIAL DISCOUNTS AVAILABLE FOR AHS MEMBERS

ON TOP OF receiving free or reduced admission at more than 330 public gardens and arboreta across North America through the Reciprocal Admission Program (RAP), AHS members also enjoy special discounts on books, seeds, and tickets to select garden shows and AHS educational programs.

A partnership with **Timber Press** allows AHS members to save 35 percent on all Timber Press books and receive free shipping on orders of $50 or more. Timber Press is an esteemed publisher of books on gardening, horticulture, and natural history, written by experts in these fields. Another benefit is a 15 percent discount on all seed and plant purchases from **Select Seeds**. Select Seeds offers a variety of high-quality seeds and plants, specializing in heirloom flowers, pollinator-friendly flower seeds and plants, and rare annuals and perennials. Additionally, a partnership with **Renee's Garden** provides members with a 20 percent one-time discount on a seed packet order. Renee's Garden offers an assortment of non-GMO vegetable, flower, and herb seeds.

Thanks to a new partnership with **Marketplace Events**, AHS members also receive special discounts on tickets at select Home + Garden Shows. Discounts on admission at flower and garden shows where the AHS will be presenting Environmental Awards, as well as at AHS educational programs, including the National Children & Youth Garden Symposium, are also available. To access any of the discount codes for these benefits, log in to the members-only website at *www.ahsgardening.org*.

YOUTH GARDEN SYMPOSIUM HEADS TO CALIFORNIA

SAVE THE DATE for the 28th annual AHS National Children & Youth Garden Symposium, to be held July 7 to 10 in Santa Cruz, California. For almost three decades, this AHS event has gathered together teachers, landscape designers, botanic garden and non-profit staff, and youth program leaders who strive to

AHS NATIONAL AND LOCAL 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.

MAR. 28. **Gardening for Pollinators Workshop.** River Farm, Alexandria, VA. *https://connect.ahsgardening.org/river-farm-events/2020/gardening-for-pollinators-workshop---non-members.*

APR. 4. **Kokedama Workshop.** River Farm, Alexandria, VA. *https://connect.ahsgardening.org/river-farm-events/2020/kokedama-workshop---non-members.*

APR. 14–25. **Discovering the Beauty of Bhutan.** AHS Travel Study Program. *www.ahsgardening.org/gardening-programs/travel-study/discovering-the-beauty-of-bhutan-land-of-the-thunder-dragon.*

APR. 17 & 18. **Spring Garden Market.** River Farm, Alexandria, VA.

APR. 17–19. **Colonial Williamsburg Garden Symposium.** Williamsburg, VA. (Partner event) *www.colonialwilliamsburg.com/learn/conferences/garden-symposium.*

APR. 20–22. **Coalition of American Plant Societies Meeting.** (Partner event) Magnolia Plantation, Charleston, SC.

APR. 22. **Earth Day Volunteer Work Day.** River Farm, Alexandria, VA.

APR. 25. **Introduction to Beekeeping Workshop.** River Farm, Alexandria, VA. *https://connect.ahsgardening.org/river-farm-events/2020.*

MAY 1–10. **Gardens of Provence.** AHS Travel Study Program. *www.ahsgardening.org/gardening-programs/travel-study/gardens-of-provence.*

MAY 8–17. **National Public Gardens Week.** (Partner event) *www.publicgardens.org/programs/national-public-gardens-week/about-national-public-gardens-week.*

MAY 9. **Botanical Illustration Workshop.** River Farm, Alexandria, VA. *https://connect.ahsgardening.org/river-farm-events/2020.*

MAY 30–JUNE 7. **Treasures of Japan.** AHS Travel Study Program. *www.ahsgardening.org/gardening-programs/travel-study/treasures-of-japan.*

JUNE 18. **Great American Gardeners and AHS Book Awards Ceremony**. River Farm, Alexandria, VA.

JUNE 22–28. **National Pollinator Week.** (Partner event)

JULY 7–10. **National Children & Youth Garden Symposium.** Santa Cruz, CA. *www.ahsgardening.org/gardening-programs/youth-gardening/ncygs/2020-overview.*

SEPT. 2–12. **Bavaria, Germany.** AHS Travel Study Program. *www.ahsgardening.org/gardening-programs/travel-study/gardens-of-bavaria.*

SEPT. 26. **AHS Annual Gala.** River Farm, Alexandria, VA.

OCT. 1–3. **America in Bloom Symposium and Awards Program.** Washington, MO. (Partner event) *www.americainbloom.org/programs/symposium-awards-celebration.*

Gifts of Note

In addition to vital support through membership dues, the American Horticultural Society relies on grants, bequests, and other gifts to support its programs. We would like to thank the following donors for gifts received between December 18, 2019 and February 26, 2020.

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In honor of Lori Vreeke
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In honor of Ken and Theresa Wright
Ms. Mary Newling

If you would like to support the AHS, please call Susan Klejst, Director of Development & Engagement, at (703) 768-5700 ext. 127.

connect and engage young people with the natural world.

This year, the event will be hosted by the University of California, Santa Cruz nonprofit organization, **Life Lab**. During the symposium, attendees can choose from a wide selection of educational sessions, keynote presentations, and workshops that cover a wealth of topics, as well as take part in valuable networking opportunities. Online registration and the complete symposium agenda will be available soon. Check AHS's website at *www.ahsgardening.org/ncygs* or contact education@ahsgardening.org for further updates and information.

News written by AHS staff.

28TH ANNUAL
AMERICAN HORTICULTURAL SOCIETY

NATIONAL CHILDREN & YOUTH GARDEN SYMPOSIUM

JULY 7–10, 2020 • SANTA CRUZ, CA

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- **SHARE** ideas, success stories, and inspiration with like-minded colleagues from across the nation.

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AMERICAN HORTICULTURAL SOCIETY

AHS 2020 Great American Gardeners National Award Winners

THE American Horticultural Society (AHS) is proud to announce the recipients of the Society's 2020 Great American Gardeners Awards. These individuals have contributed significantly to fields such as plant research, garden communication, landscape design, youth gardening, teaching, and commercial horticulture. The awards will be presented June 18 during a ceremony and banquet at River Farm, the AHS's headquarters in Alexandria, Virginia. For more information, or to register to attend the ceremony, visit *www.ahsgardening.org/awards* or call (703) 768-5700.

LIBERTY HYDE BAILEY AWARD

The American Horticultural Society's highest award, the Liberty Hyde Bailey Award is given to an individual who has made significant lifetime contributions to at least three of the following horticultural fields: teaching, research, communications, plant exploration, administration, art, business, and leadership.

Named after Liberty Hyde Bailey (1858–1954), horticulturist, educator, author. First awarded in 1958.

THIS YEAR'S winner of the American Horticultural Society's highest honor, given for career achievements in multiple horticultural disciplines, is **James P. Folsom** of San Marino, California. Since 1987, Folsom has been Director of the Botanical Gardens at the Huntington Library, Art Museum, and Botanical Gardens, also in San Marino. He originally joined the Huntington staff in 1984 in the role of assistant curator. Folsom and his wife, Debra—who is also a botanist—raised their children Molly and Jimmy at a home on the Huntington's grounds.

Folsom, whose colleagues call him "Jim," oversees more than a dozen thematic gardens covering 130 acres of the Huntington's 207-acre grounds. He serves as visionary and project head for the development of new gardens and botanical facilities and the restoration of historic gardens and maintenance. Much of his focus is directed toward educational programs that increase public interest and understanding of the science, culture, and history of plants and gardens.

He supervises some 85 staff members, including 10 curators, 40 gardeners, and numerous technicians and other staff, as well as hundreds of volunteers who maintain the botanical collections, provide interpretive programs for visitors, and propagate plants.

ENLARGING THE GARDEN

Some of the most notable additions to the garden under Folsom's tenure include a botanical research and education facility in 2001, the Helen and Peter Bing Children's Garden in 2004, the Rose Hills Foundation Conservatory for Botanical Science in 2005, the Chinese garden—Liu Fang Yuan, or the Garden of Flowing Fragrance—in 2008, as well as the renovation and expansion of the Japanese Garden in 2012. As part of the Huntington's Centennial this year, an expanded Chinese garden is opening to the public, making it one of the largest classical-style Chinese gardens in the world.

The newly expanded Chinese garden at the Huntington will reopen this spring as part of the Huntington's Centennial celebrations.

RIGHT: COURTESY OF NICHOLAS HARTMANN, WIKIMEDIA

Folsom has also been instrumental in adding invaluable botanical collections to the Huntington, including, most recently, more than 5,000 orchids donated by the family of the late collector and grower S. Robert Weltz that will help the Huntington become a center for orchid conservation.

"Under Jim Folsom's guidance, the Huntington's gardens have achieved an uncannily perfect union of scientifically significant research collections and astonishing artistry," says Panayoti Kelaidis, Director of Outreach at the Denver Botanic Gardens in Colorado. "Jim has fostered a vibrant culture among his staff and made his garden the envy of our profession."

FORMATIVE YEARS

Folsom was born in what he describes as the "drop-dead gorgeous small Alabama town of Eufaula," where he says his lifelong love of plants developed because he "grew up with astonishing freedom to roam and observe." After high school, he attended nearby Auburn University, graduating with a bachelor's degree in botany, before serving three years in the United States Air Force. Following his service, he went on to get a master's degree in biology from Vanderbilt University, and then a doctorate in research botany from the University of Texas at Austin (UTA). While working on his doctorate, he spent several years as a teaching assistant in UTA's botany department.

Folsom's botanical and horticultural interests are wide-ranging, but his research in the 1970s and 1980s was largely focused on the orchid family. He did extensive field work in Central and South America, including stints in Costa Rica, Panama, and Peru, as well as a year in Colombia on a Fulbright Pre-Doctoral Fellowship.

Over the course of his career, Folsom authored numerous research papers, articles, and reports in both scientific and popular publications. Some of Folsom's photos and musings on plants and gardens—including excerpts from *A Botanical Reader*, his free e-book on Apple—are published in a blog called botanyincontext.com, which is available on the Huntington's website.

Folsom has been the recipient of numerous awards. He was named a Friend of the Cactus and Succulent Society of America in 1996, was awarded a Professional Citation by the American Public Gardens Association in 1999, received the Medal of Honor from the Garden Club of America in 2007, and was given the AHS's Professional Award in 2003. In 2016, he was inducted into the Order of the Rising Sun (Gold Rays with Rosette) by the government of Japan for the Huntington's assistance in celebrations honoring the centennial of Japan's gift of cherry trees to the United States in 2012.

LUTHER BURBANK AWARD

Recognizes extraordinary achievement in the field of plant breeding. Named for Luther Burbank (1849–1926), legendary American plant breeder. First awarded in 1993.

Over the course of his career, **Dan Heims**, president of Terra Nova Nurseries in Canby, Oregon, has become a major leader and influencer in ornamental plant breeding. He started Terra Nova out of his own home in 1992, and the company has since introduced more than 1,000 plants to horticulture. Heims is known in particular for his groundbreaking work with herbaceous perennials such as coral bells *(Heuchera* spp.), foamflowers *(Tiarella* spp.), and coneflowers *(Echinacea* spp.).The company employs more than 100 people, and its plant breeding facility includes a state-of-the-art tissue culture lab. Heims has written two gardening books and dozens of articles in popular and professional journals. He is a sought after speaker who makes presentations on plant- and horticulture-related topics to professional and amateur groups around the world.

Among the accolades Heims has received is the Award of Merit, the highest honor bestowed by the Perennial Plant Association, as well as the Royal Horticultural Society's Reginald Cory Memorial Cup, an honor given for breeding work within a specific genus.

DR. H. MARC CATHEY AWARD

Given to an individual for outstanding scientific research that has enriched horticulture and plant science. Named for H. Marc Cathey (1928–2008), a horticultural scientist who served as President of the American Horticultural Society for many years. First awarded in 1953 as the Scientific Award; renamed in 2000.

A world renowned ethnobotanist at the New York Botanical Garden (NYBG), **Michael J. Balick**, Ph.D., works with indigenous cultures to document plant diversity, preserve knowledge about traditional uses for plants, and help these communities sustainably manage their resources. In the course of this work, he evaluates the potential of these botanical resources for broader medical or pharmaceutical applications. His most recent project focuses on the tropical Pacific Islands in Micronesia and Melanesia, where he is documenting the diversity, local use, and management of plant resources in support of a region-wide conservation plan. Balick is currently vice president for botanical science at NYBG, where he has worked since 1980. He is also

Michael J. Balick, left, with Chief Johnson Noar in the Republic of Vanuatu

director and senior philecology curator of the NYBG Institute of Economic Botany, which he cofounded in 1981.

Balick has published more than 150 scientific papers in peer-reviewed journals. In addition, he has authored or edited 28 scientific and general interest books and monographs.

COMMUNITY GREENING AWARD

Recognizes exemplary contributions by an individual, institution, or company demonstrating the application and value of horticulture in creating livable communities that are greener, healthier, and more equitable. First awarded in 1985 as the Urban Beautification Award; renamed in 2019.

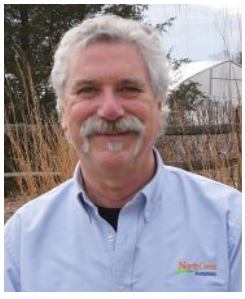
Established by the Cornell Cooperative Extension of Monroe County, **Blocks in Bloom** debuted in 2015 in the City of Rochester, New York. The idea was to build community, enhance property values, and promote healthy living in the city's low-income neighborhoods by providing free plants and gardening instruction to participating residents. The program is led by Master Gardener volunteers, who train residents to prepare, plant, and maintain their front-yard flower gardens. In 2018, a leadership development component was added, enabling experienced residents to become mentors to new program participants.

The program's success is indicated by its growth from serving two blocks with 15 households in 2015 to serving 15 blocks and 135 households in 2019. By design, the program has a sustainable structure—built around volunteers and donated materials—that makes it easily replicable in other communities.

PAUL ECKE JR. COMMERCIAL AWARD

Given to an individual or company whose commitment to the highest standards of excellence in the field of commercial horticulture contributes to the betterment of gardening practices everywhere. Named for Paul Ecke Jr. (1925–2002), innovator, facilitator, businessman. Formerly known as the Commercial Award, it was first awarded in 1971.

An entrepreneur with an eye for ecological landscaping, **Steve Castorani** cofounded North Creek Nurseries in 1988 and is its president and CEO. The wholesale nursery, based in Landenberg, Pennsylvania, specializes in perennial, fern, vine, and ornamental grass plug production, with an emphasis on Eastern regional native plants. Known for its innovations, the nursery developed and introduced Landscape Plugs™ to the horticulture industry in the early 2000s. Castorani also co-created the American Beauties Native Plants® brand, which—through partnerships with organizations like the National Wildlife Federation—has contributed hundreds of thousands of dollars to ecofriendly causes. The focus on introducing new native plant species and cultivars has also broadened the diversity and availability of native plants to the general public. Castorani has held leadership positions in plant propagation organizations and serves on several nonprofit boards.



EMERGING HORTICULTURAL PROFESSIONAL AWARD

Recognizes significant achievements and/or leadership that have advanced the field of horticulture in America. First given in 2017.

As the first treeologist-science communication leader at the Morton Arboretum in Lisle, Illinois, **Jessica B. Turner-Skoff**, Ph.D., is deeply devoted to trees. Having gained an appreciation for the natural world while growing up in rural Ohio, Turner-Skoff earned a bachelor's degree in conservation science at Muskingum University in New Concord, Ohio. She went on to receive a master's degree in sustainable development and conservation biology at the University of Maryland, and in 2015 earned a doctorate in biology from West Virginia University.

Jessica Turner-Skoff with two students in a STEM program

Turner-Skoff's role at Morton since she was hired in 2016 is to help the public understand the benefits of trees, explain key concepts about tree science and conservation, and highlight research underway at the arboretum. Among other achievements, Turner-Skoff co-developed and co-hosts Morton's "Planted: Finding Your Roots in STEM Careers" podcast, which introduces students to diverse career options available in the plant sciences. She also holds leadership roles in a number of professional organizations, including Seed Your Future, the Chicago Council on Science and Technology, and the Associated Colleges of the Chicago Area.

HORTICULTURAL THERAPY AWARD

Recognizes significant contributions to the field of horticultural therapy. First given in 1985.

Catharine McCord is a horticultural therapist specializing in sensory and therapeutic garden design and programming. Known for her multidisciplinary approach to horticultural therapy, McCord blends her landscape design training with her personal passion for mental health awareness, and her interest in herb- and plant-based medical treatments. As the program coordinator for Denver Botanic Gardens' therapeutic horticulture program, McCord helps deliver programming both on-site in the Sensory Garden and off-site at care facilities. She also serves as a sensory garden design con-

sultant in the Metro Denver area, supporting cultural institutions and other non-profits as they plan and build sensory gardens.

In 2017, as part of her master's thesis project, McCord designed a sensory garden for Denver's Sewall Child Development Center. This garden was constructed with the aid of a $75,000 grant McCord helped secure from the Colorado Garden Foundation. These accomplishments led to her selection as a National Olmsted Scholar Finalist, and invited to present her work at the Council of Educators in Landscape Architecture conference held in Beijing, China.

LANDSCAPE DESIGN AWARD

Given to an individual whose work has demonstrated and promoted the value of sound horticultural practices in the field of landscape architecture. First given in 1974.

A landscape designer and writer, **Leslie Bennett** is the owner of Pine House Edible Gardens, an Oakland, California-based landscape design/build firm that creates aesthetic edible gardens and productive outdoor spaces. Bennett's work entails creating culturally grounded gardens that provide as much visual inspiration as they do organic harvests of food, flowers, and medicinal herbs. Her designs have been featured in *Sunset* magazine, *Better Homes & Gardens*, *Martha Stewart Living*, *Garden Design*, *C Magazine*, *Los Angeles Times*, *San Francisco Chronicle*, and *Gardenista.com*. She is also co-author of *The Beautiful Edible Garden* (Ten Speed Press, 2013).

Bennett holds degrees from Harvard University, Columbia Law School, and the University College London in the fields of environmental justice, land use law, cultural property, and preservation. She lives in Oakland, California with her husband, Linval, and two children, Samuel and Zeta.

PHOTO OF LESLIE BENNETT BY CAITLIN ATKINSON

Nominations for 2021 Awards

Help us give recognition to deserving "horticultural champions" by nominating someone you know for one of the 2021 Great American Gardeners Awards. Look for more details in the July/August 2020 issue of this magazine or online on our website at *www.ahsgardening.org/awards*.

MERITORIOUS SERVICE AWARD

Recognizes a past Board member or friend of the American Horticultural Society for outstanding service in support of the Society's goals, mission, and activities. First awarded in 1980.

J. Landon Reeve IV is recognized for his leadership and dedication to the American Horticultural Society for nearly two decades. He served on the AHS Board of Directors from 2006 to 2019, and was the organization's treasurer for many of those years. In addition, Reeve's firm Chapel Valley Landscape Company has been providing invaluable maintenance support at the AHS's River Farm headquarters for many years, and is recognized as an AHS Corporate Member.

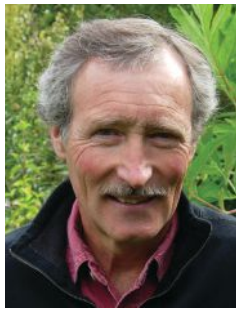
Reeve's career in landscaping started in high school with a part-time summer job at a nursery near his home in Baltimore County, Maryland. After graduating from the University of Maryland with a degree in ornamental horticulture, Reeve and a partner founded a small garden center and landscaping business. In 1968, Reeve struck out on his own and established Chapel Valley, for which he initially was the sole employee. The company, based in Woodbine, Maryland, now employs more than 400 people and has regional offices in Dulles, Virginia, and Canton, Georgia.

Over the course of his career, Reeve also served as president of three major regional trade organizations. He retired from Chapel Valley in 2015 and has been succeeded by his son, James Reeve.

B.Y. MORRISON COMMUNICATIONS AWARD

Recognizes effective and inspirational communication—through print, radio, television, and/or online media—that advances public interest and participation in horticulture. Named for Benjamin Yoe Morrison (1891–1966), landscape architect, plant breeder, artist. Formerly known as the Horticultural Communication Award, it was first awarded in 1987. In 2005, this award merged with the Horticultural Writing Award, which debuted in 1953.

After nearly 30 years as garden communicator in the Pacific Northwest, **Ciscoe Morris** has done it all—from hosting a live radio show, to making regular appearances on news broadcasts, penning garden columns for Seattle newspapers, giving garden presentations, and writing top-selling gardening books. A trained horticulturist and Master Gardener, Morris spent 24 years as the director of grounds care at Seattle University, where he developed one of the nation's first pesticide-free gardening programs at a university campus. Under his leadership, the university was recognized with two national environmental awards and became the first campus in Washington to be designated a wildlife sanctuary by the State Department of Wildlife.



His most recent book, *Oh, La La!*, released in January 2020, contains garden stories, advice, and humor.

PROFESSIONAL AWARD

Given to a public garden administrator whose achievements during the course of his or her career have cultivated widespread interest in horticulture. First awarded in 1953.

A leading authority on the cultivation and conservation of tropical plants, **Charles "Chipper" Wichman, Jr.**, is president of the National Tropical Botanical Garden (NTBG) in Kalaheo, Hawaii. Wichman has spent more than 40 years with the NTBG, starting as an apprentice gardener in the mid-1970s and working his way up to an executive leadership role in the early 2000s. Over the course of his career, Wichman has amassed an astounding list of accomplishments. These include discovering or rediscovering more than a dozen previously unknown plant species; leading a successful conservation initiative at Limahuli Valley in Hawaii before donating the land—owned by his family—to NTBG for preservation; raising NTBG's profile as an influential conservation, research, and education center; and helping found the International Center for Tropical Botany at Florida International University in Miami.

In 2018, Wichman was awarded the Garden Club of America's Medal of Honor for outstanding service to horticulture. He makes presentations on tropical plant conservation to audiences worldwide.

FRANCES JONES POETKER AWARD

Recognizes significant contributions to floral design in publications, on the platform, and to the public. Named for Frances Jones Poetker, floral designer, author, lecturer. First given in 1988.

Nancy Ross Hugo is a floral designer with a passion for wildflowers, weeds, and other important yet underappreciated plants. Hugo, who lives on a 50-acre farm in Howardsville, Virginia, started flower arranging at age five, when The Buds, an offshoot of her mother's garden club, encouraged children to create tiny flower arrangements before their mothers' meetings. During her career, she has taught floral design to amateurs and experts, practiced floral design professionally, and conducted workshops all over the mid-Atlantic.

Beginning in 2011, Hugo began creating small, spare arrangements on her windowsill daily, using this exercise as a way of connecting to the seasons and exploring the creative process. Over time, she posted over 1,400 of these arrangements on her blog. In 2014, she published *Windowsill Art* to explain her process and to describe techniques and materials particularly well-suited to this art form.

Hugo is also the author of *Remarkable Trees of Virginia, Seeing Trees,* and *Trees Up Close*. She has worked as a garden columnist for the *Richmond Times-Dispatch*, conducted lectures across the eastern United States, and worked as an education manager at Lewis Ginter Botanical Garden in Richmond, Virginia.

JANE L. TAYLOR AWARD

Given to an individual, organization, or program that has inspired and nurtured future horticulturists through efforts in children's and youth gardening. Named for Jane L. Taylor, youth advocate, horticulturist, educator. First awarded in 2000.

Grow Dat Youth Farm, an urban farm and youth development organization in New Orleans, Louisiana, was founded in 2010 as a way of nurturing a diverse group of young leaders through the growing of food. The organization works to create a more just and sustainable food system in a region where many people face food insecurity. In its first year, the program employed 13 student workers who grew 2,200 pounds of food. Today, more than 250 youth leaders have graduated from the farm's leadership programs, and the farm is producing 25,000 pounds of food annually, 30 percent of which is donated to community partners who help distribute the food where it is needed the most. The organization's executive director, Devon Turner, is a Louisiana native who has spent her career focused on supporting and advocating for young men and women, including as an educator teaching about social justice issues.

TEACHING AWARD

Given to an individual whose ability to share his or her horticultural knowledge with others has contributed to a better public understanding of the plant world and its important influence on society. First awarded in 1953.

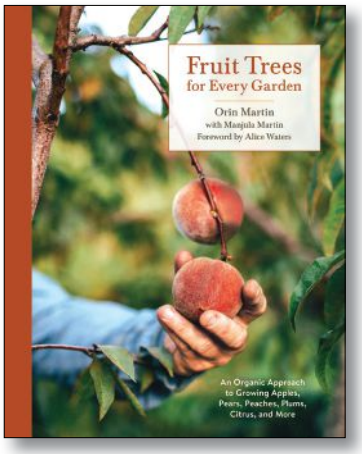
For more than 50 years, **Barry Fugatt**, director of horticulture at the nonprofit Tulsa Garden Center in Oklahoma, has been educating people about plants. Fugatt is known for his passionate and inspiring teaching style, which enables him to get people—even individuals without prior horticultural experience or enthusiasm—engaged with plants. Early in his career, Fugatt was a county Extension agent in ornamental horticulture for Oklahoma State University, where he created its Master Gardener program. He went on to become Extension director before joining the Tulsa Garden Center, an educational organization, as director of horticulture. Shortly after assuming the position, he created the Linnaeus Teaching Garden and volunteer program; in the last 15 years, the program has graduated over 640 students and maintains 262 active volunteers.

Fugatt is also a skilled garden communicator, contributing regularly to local television programs, presenting at conferences, and writing newspaper articles.

2020 AHS Book Award Winners

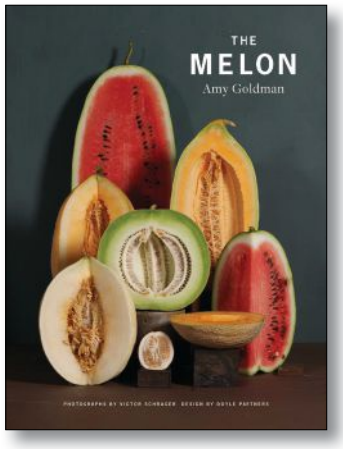
Each year, the American Horticultural Society recognizes outstanding gardening books published in North America with its annual Book Award. Nominated books are judged by the AHS Book Award Committee on qualities such as writing style, authority, accuracy, and physical quality. This year's award recipients, selected from books published in 2019, are listed below.

The 2019 Book Award Committee was chaired by **Deb Wiley**, a garden writer, editor, and book project manager in Des Moines, Iowa. Other members were: **William Aldrich**, founder and former editor of *Chicagoland Gardening*, from Springfield, Missouri; **Catriona Tudor Erler**, a garden writer, photographer, and book author based in Charlottesville, Virginia; **Nancy Rose**, horticulturist and former editor of *Arnoldia,* published by the Arnold Arboretum of Harvard University in Jamaica Plain, Massachusetts; **Amy Campion**, a freelance garden writer, photographer, and blogger in Portland, Oregon; **Kim Toscano Holmes**, a garden educator, communicator, and designer based in Stillwater, Oklahoma; and **Susan Eubank**, a horticultural librarian at the Los Angeles County Arboretum & Botanic Garden in California.



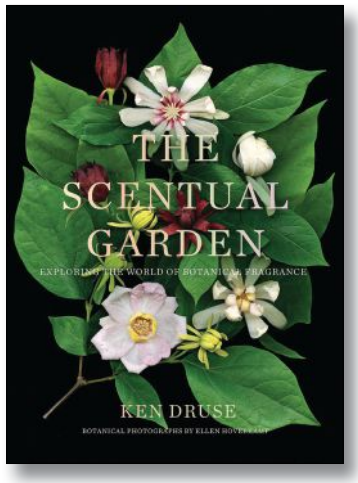
Fruit Trees for Every Garden: An Organic Approach to Growing Apples, Pears, Peaches, Plums, Citrus, and More
by Orin Martin with Manjula Martin. Ten Speed Press.

■ Judges praised this book for its detailed information on growing fruit trees. Amy Campion described it as "a no-nonsense guide for beginning fruit tree growers using the French intensive method of the late Alan Chadwick." Bill Aldrich noted that while the authors' overall expertise was evident, "what distinguished this book was the extensive pruning section. Backyard gardeners have little experience in how essential proper pruning is to the eventual size of their crops." Kim Toscano Holmes said, "Few books provide such detail regarding fruit tree pruning, and I appreciated the honest assessment of available cultivars."



The Melon
by Amy Goldman. Photographs by Victor Schrager. City Point Press.

■ Amy Goldman's personal commitment to growing and preserving heirloom melons, along with her clear expertise, pushed this book into the winner's circle. "Meticulously researched, masterfully written, and beautifully illustrated, *The Melon* showcases the remarkable diversity within this group of delectable fruits. It was a joy to read," said Campion. "*The Melon* warmed my soul the instant I opened the book," said Holmes. "I was delighted to find a wealth of information accompanying the beautiful photography."



The Scentual Garden: Exploring the World of Botanical Fragrance
by Ken Druse. Botanical photographs by Ellen Hoverkamp. Abrams.

■ Committee members were impressed with Ken Druse's attempt to classify and describe plant scents. "Obviously this is a difficult task, because scent is very individually perceived, but I think he did a very good job," said Nancy Rose. "A thorough exploration of a subject that has the potential to add a great deal of pleasure to our gardens," said Campion. "This book will have you sniffing all your garden plants to determine if you can pick up on all the nuances that Druse's keen nose can detect!" "Having a language you can apply to scent is very valuable," said Deb Wiley, who called the book "elegant and edifying."

Fleeting Splendor

Ephemeral plants provide dazzling displays for only a short time, but they are worth including in every garden if you know how to use them effectively.

BY C. COLSTON BURRELL

SPRINGTIME WOODS, moist with winter's precipitation and flooded with light, are carpeted with a stunning array of transient wildflowers. Nowhere is this display of ephemerals more spectacular than in the deciduous forests of North America, Europe, and Asia. From earliest spring, when the buds of trees begin to swell, until a carpet of autumn leaves provides protection from winter cold, woodlands change with each passing day.

Although breathtaking in bloom, ephemerals spend much of the year dormant. Those that bloom in spring and summer usually go dormant soon after flowering. Those that bloom in autumn may retain foliage until spring before retiring to a dormant summer. Each has a slightly different strategy for regaining the energy expended during flowering and storing sufficient reserves to do it all again next year. Understanding how ephemerals respond to seasonal dormancy in nature enables us to bring their enchantment into our gardens (see "Why Go Dormant?" on page 21).

In a garden setting, vertical layering spans from the canopy to the root zone, but the key to a compelling garden picture lies in the strategic layering of the shrubs and herbaceous plants at ground level. But beware the garden built on flowers alone. To ensure more than a brief but glorious

In this woodland landscape at Winterthur estate in Delaware, ephemerals such as white trillium *(Trillium grandiflorum)* and Italian windflower *(Anemone apennina)* form a carpet of color and texture in early spring.

SAXON HOLT

TOP: NANCY J. ONDRA. BOTTOM: SUSAN A. ROTH

flower tableau followed by a blank canvas, persistent plants must be co-mingled with those that leave the party early.

DESIGN STRATEGIES

"When planting ephemerals, interplant them with species that emerge later in spring," says John Manion, curator of Kaul Wildflower Garden at Birmingham Botanical Garden in Alabama. "By using this technique, when the ephemerals melt away, you aren't left with bald spots. I find some ferns, such as the maidenhair ferns, serve this purpose well." Large ferns with wide-spreading fronds can form an arched canopy above plants as they go dormant. Equally suited to the task are larger persistent perennials like black cohosh *(Actaea racemosa)*, spikenard *(Aralia racemosa)*, and yellow wax bells *(Kirengeshoma palmata)*.

The key to design with ephemerals is interplant them with species that emerge later in spring. Above left, When 'Gold Heart' bleeding heart fades away in summer, surrounding hostas and yellow waxbells will fill the void. Bottom left: Ephemerals such as glory-of-the-snow *(Chionodoxa* sp.) are good choices underneath deciduous trees or shrubs, where they will bloom before the foliage emerges to shade them.

Additional strategies include intermingling ephemerals around the skirts of open-branching shrubs like witch hazel *(Hamamelis* spp.), winter hazel *(Corylopsis* spp.), viburnums, fothergillas, and hydrangeas. Or use a groundcover such as sedums, speedwells *(Veronica* spp.), sedges *(Carex* spp.) and phlox; the ephemerals will emerge and retreat through a colorful, persistent carpet.

The same techniques apply to sunny beds and borders. Summer- and autumn-blooming plants such as salvias, phlox, and asters produce lush growth beginning in late spring, hiding the fading leaves of early bloomers. From summer to early fall, their blooms provide weeks of color, and as summer wanes, autumn-blooming bulbs arise through the perennial foliage.

EPHEMERALS FOR THE SUNNY GARDEN

Late summer and autumn welcome a fresh suite of transient beauties, especially in sunny gardens. Autumn snowflake (*Acis autumnalis*, syn. *Leucojum autum-*

nalis, USDA Hardiness Zones 6–9) "is a perennial favorite and a sign of the waning of the dog days of summer," says Hans Hansen, head of the breeding program at Walters Gardens in Zeeland, Michigan. In his home garden, he nestles the wiry foliage and pop-up flowers in a planting of *Veronica* 'Georgia Blue'.

Aristocratic colchicums *(Colchicum* spp., Zones 4–8), falsely called autumn crocus, open rosy goblets in early autumn, erupting from the ground without foliage. Emerging in late winter, dense green rosettes of leaves morph to lemon-yellow as they decline. Hansen has planted a mix of species on both sides of his driveway growing through *Stachys byzantina* 'Big Ears'. "The magenta-pink flowers are softened by the silver foliage of the lambs ear," says Hansen. "The foliage of the colchicums seems to go dormant soon enough in the season to allow the *Stachys* to maintain its vigor and hold its own."

Right: European pasqueflower, paired here with grape hyacinths *(Muscari* sp.), is attractive both in bloom and for its gauzy seedheads. Bottom left: For best effect, interplant fall-blooming colchicums such as 'Rosy Dawn' with a groundcover like the creeping raspberry *(Rubus hayata-koidzumii)* shown here. Bottom right: Oriental poppies *(Papaver orientale)* such as 'Patty's Plum' make a splash in early summer but should be surrounded by later-blooming perennials that can fill the gap when the poppies go dormant.

Western fawn lilies such as the white-flowered *Erythronium oregonum* (Zones 7–9) are brief but glorious additions to spring's floral tapestry. The mottled leaves give the plant its common name. For something different, garden designer Lucy Hardiman of Portland, Oregon, recommends *E. revolutum* (Zones 5–8), which holds its bright pink flowers high above the mottled leaves. Plants grow best in sun and moist, rich soil that can dry in summer.

Naked ladies in the genus *Lycoris*, also called surprise lilies, are peerless bulbs for the late summer and autumn garden. Hansen plants several species that produce fresh spring foliage, including *L. squamigera* (Zones 6–8), *L. chinensis* (Zones 5–9) and *L. aurea* (Zones 8–10). "I like to plant these with daylilies *(Hemerocallis* sp.). When they flower in late summer,

TOP: MARK TURNER. BOTTOM LEFT: NANCY J. ONDRA. BOTTOM RIGHT: DOREEN WYNJA

the stark naked stems don't look unnatural, and the yellowing spring foliage is masked by the daylilies," he says.

The Oriental poppy *(Papaver orientale*, Zones 3–9) is a true aristocrat of the early summer border. The huge crepe-paper flowers in fiesta colors seem to usher in the vacation months. After flowering, the plants go dormant until autumn, when a fresh rosette of foliage may appear. Hilary Cox of Leescapes Garden Design in Avon, Indiana, loves their vibrant colors. "They look good in perennial borders and in formal situations," she says. "When they start to look ratty, I cut them down and let blowsy perennials like geraniums and Japanese anemone *(Anemone ×hybrida)* fill the empty spots." Hardiman recommends 'Patty's Plum', "a dusty-purple selection with enormous flowers used to create unusual combinations with orange wallflowers and salmon cape fuchsia *(Phygelius capensis)* to hide the declining foliage."

From the dry prairies of the Midwest comes the charming pasqueflower *(Pulsatilla patens*, Zones 3–8). This beauty revels in a well-drained spot with sandy or gravelly soil and full sun to light shade. "It can be a little touchy outside its midwestern homeland, or where the soils are too rich and moist," says Cox. "I love the early flowers and feathery foliage, and will always grow it despite its short-lived nature." Hardiman recommends European pasqueflower *(P. vulgaris*, Zones 4–8) for areas with wetter and warmer winters. "The red, maroon, and rich purple colors are fabulous with early bulbs and peach-colored wall flower *(Erysimum* 'Peter Adams')," says Hardiman. Pasqueflowers do not grow well in regions with hot, humid summer nights.

(For additional selections for sun and shade, see chart on page 23.)

EPHEMERALS FOR SHADE

The starry white or blue flowers of European wood anemone *(Anemone nemorosa*, Zones 4–8) form solid drifts of color in the spring garden. "This is one of the best, most floriferous spring perennials," says Marietta O'Byrne, who with husband Ernie, owns Northwest Garden Nursery in Eugene, Oregon. Their favorites include the double, white-and-green 'Bracteata'; late-blooming, double white 'Vestal'; the ragged green-flowered 'Monstrosa'; and the yellow-flowered buttercup anemone *(A. ranunculoides*, Zones 4–8). This last one, says O'Byrne, is planted "along the edge of my woodland border, where it creeps around taller plants to form a delicate carpet."

Kelly Dodson of Far Reaches Farm in Port Townsend, Washington, describes the five-leaved cuckoo flower *(Cardamine quinquefolia*, Zones 6–8) as a "lovely thing with new growth poking above ground in early January and developing into a dense carpet of leaves with five leaflets followed by a fine display of pink flowers in March and April." Soon after flowering, it dies back to the ground. Dodson cautions, however, that "it carpets with the intention of a zealot" so is best suited for larger gardens.

The old-fashioned bleeding heart *(Lamprocapnos spectabilis*, syn. *Dicentra spectabilis*, Zones 3–9) is familiar to many gardeners, but the gold-leaf cultivar is causing quite a sensation. "I adore 'Goldheart'," says Hardiman. "Plant it with dark purple 'Queen of the Night' tulips, hot pink 'Elizabeth Arden' tulips, and golden hakone grass *(Hakonechloa macra* 'Aureola') for a traffic-stopping

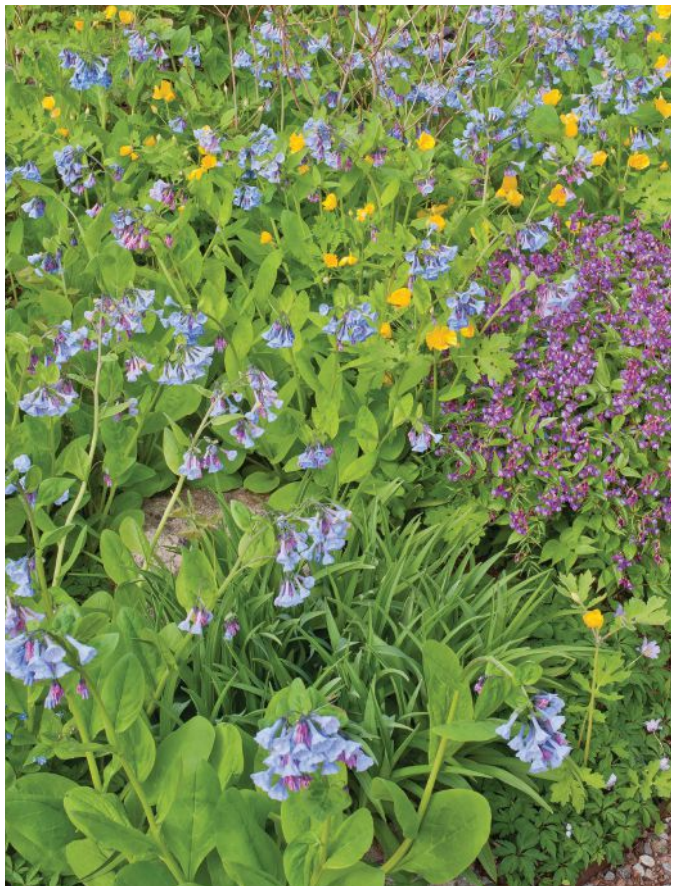
WHY GO DORMANT?

Plants adapt to extremes in a variety of ways. A common strategy is early senescence and dormancy. In seasonally stressful regions like prairies, steppes and shrub lands, drought and heat are challenges plants must overcome. Many adopt a strategy of summer, or dry season dormancy. Autumn, winter, and spring—when moisture is abundant and temperatures are moderate—are times for foliage and flowers.

Even regions with seemingly abundant rain experience seasonal extremes such as dense shade, root competition, and intermittent dryness, which dictate seasonal growth patterns and induce dormancy. Ephemeral plants contend with these stresses by storing water and energy in bulbs, corms, tubers, rhizomes, and tuberous roots rather than in their aboveground stems. These underground storage structures provide the energy for rapid leaf and flower development when growth resumes. —C.C.B.

CATRIONA T. ERLER

Shade-loving buttercup anemone, planted with daffodils in this woodland garden, creates a blanket of color in early spring before disappearing in the heat of summer.



Five-leaved cuckoo flower, above left, and Virginia bluebells, above right, naturalize in a shade or woodland garden under the right conditions. Both go dormant in summer, so should be interplanted with ferns or later-blooming perennials for a continuous display.

combination." I use the white selection 'Pantaloons' in partial shade along with the sea-green horseshoes of eastern maidenhair fern *(Adiantum pedatum)*.

Leopard's bane *(Doronicum orientale*, Zones 4–8) is an early-spring composite that opens its yellow daisies with the daffodils. Cox recommends 'Little Leo' as "a showstopper with semi-double, glowing golden flowers" for the moist clay soils of the Midwest. Years ago, when I lived in Minnesota, I grew giant leopard's bane *(D. pardalianches*, Zones 4–8), a late-spring bloomer with quarter-sized daisies on two- to three-foot stems. Despite its northern affiliation, it also thrives in Virginia, where I now reside. It quickly collapses as the days warm, and retreats below ground until autumn, when new basal leaves may form. It thrives in moist soils.

The beautiful blue-violet flowers of Lebanese cranesbill *(Geranium libani*, Zones 6–9) open in spring, long before most other hardy cranesbills. "Plants are perfect for a dry shady spot, even where tree roots pose a problem for other perennials," says O'Byrne. "They go dormant after flowering, and miraculously reemerge with lush foliage in autumn that carries over until spring." Knobby, tuberous roots give the plant its extreme drought tolerance. In my garden, it thrives despite intense competition from roots and taller plans.

Spring vetchling *(Lathyrus vernus*, Zones 5–7) is always a standout in my garden. This low, mounding charmer to 12 inches high bursts from the ground in early spring, flowers blazing. The wild form has rosy-pink, asymmetrical, pea-shaped flowers carried atop decumbent stems in airy clusters. After flowering, red pea pods develop—decorative foils to the bright green, pinnately compound leaves. Tough, adaptable, and drought-tolerant, this European perennial has a place in every garden. I have it planted in drifts among the roots of a tulip poplar, surrounded with wood anemones against a background of log ferns *(Dryopteris celsa)*. Cultivars in white, pink and blue are sometimes offered.

Sources

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Plant Delights Nursery, Raleigh, NC. *www.plantdelights.com.*

Resources

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The New England Wild Flower Society Guide to Growing and Propagating Wildflowers of the United States and Canada by William Cullina. Houghton Mifflin Harcourt, Boston, MA, 2000.
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LEFT: LYNNE HARRISON. RIGHT: KAREN BUSSOLINI (PHOTO TAKEN AT OLIVER NURSERIES)

THE BEST OF THE REST

Name	Height/Spread (inches)	Ornamental Characteristics	Native Origin	USDA Hardiness Zones
Adonis amurensis (Amur adonis)	4–8/8–12	Golden-yellow flowers with multi-layered petals emerge in early spring atop lacy green leaves	China, Japan Korea, Russia	4–7
Arisaema sikokianum (Japanese cobra lily)	12–18/12	Erect purple hood reveals white throat with white spadix, silver-streaked leaflets	Japan	4–8
Camassia leichtlinii (giant camas)	24–36/12	Stunning wands of blue starry flowers in mid- to late spring above erect, keeled foliage	Western North America	4–9
Corydalis solida (bird-in-a-bush)	4–10/8–10	Dense spikes of tubular pink or purple flowers smother the divided leaves in early spring	Europe, western Asia	3-9
Crocus speciosus (Bieberstein's crocus)	4–6/3–6	Elegant autumn-flowering species with calices of purple in loose clusters before leaves arise	Asia Minor	4–9
Enemion biternatum (false rue anemone)	4–8/12	Free-spreading with white early-spring flowers above delicate divided leaves, summer dormant	Eastern and Central North America	4–8
Galanthus reginae-olgae (autumn snowdrop)	4–8/10–12	Delicate autumn flowers with snowy outer segments and a single green mark on inner segments, strappy foliage	Southern Europe	6–8
Hacquetia epipactis (hacquetia)	3–6/6–10	Button of yellow spring flowers encircled by chartreuse bracts, tri-lobed leathery foliage emerges after flowers	Europe	5–7
Lewisia rediviva (bitterroot)	2–3/6	Oversized pink to white, multi-petaled, flat flowers in spring above a scant rosette of linear leaves	Western North America	3–8
Narcissus cyclamineus (cyclamen-flowered daffodil)	3–4/4–8	Diminutive species with long-trumpeted yellow flowers featuring dramatically reflexed corolla	Portugal and Spain	4–9
Primula sieboldii (Japanese primrose)	3–8/12–16	Rounded clusters of rose-pink flowers emerge in spring as felted foliage rosettes expand, tardily ephemeral	China, Japan, Korea, Russia	4–7
Sanguinaria canadensis (bloodroot)	4-8/12–16	Tardily ephemeral with a white starburst flower followed by a single-lobed leaf in early summer, easily forms large clumps	Eastern and Central North America	3–9
Saxifraga granulata 'Flore Pleno' (double-flowered meadow saxifrage)	5–10/8–12	Diminutive white flowers over a dense foliage rosette, best for rock garden or trough	Europe	4–8
Scopolia carniolica (henbane bell)	12/12–24	Tardily ephemeral of wet woods with thin leaves and pendant red or yellow bells in early spring	Europe	5–8
Thalictrum thalictroides (rue anemone)	4–10/4–6	Wire-thin stems support open cluster of white or pink early-spring flowers above divided leaves	Eastern and Central North America	3–8

Since colonial times, the belle of the spring garden has been the sky-blue Virginia bluebell *(Mertensia pulmonarioides*, syn. *M. virginica*, Zones 3–7). A native of floodplains and low woods, it grows well in humus-rich soil that is moist in spring and seeds prolifically into large drifts. The best way to fill the spacious gaps left as the plants wither is to intermingle them with shrubs or tall perennials such as yellow wax bells or spikenard. Another option is to intersperse the drifts with clumping ferns.

Trilliums take my breath away with their seductive symmetry of repeated triads of foliage and flower. The familiar white trillium *(Trillium grandiflorum*, Zones 3–7) is a pedicillate, or stalked species. Native throughout the East and Midwest, it is easily cultivated in rich soil. For the West Coast, Hardiman recommends regionally native *T. ovatum* (Zones 5–8), which is similar in flower and responds better to the western climate. Hardiman also appreciates the California toadshade *(T. chloropetalum* 'Volcano', Zones 6–9), "with its richly mottled foliage and wine-red flowers." This sessile species is noted for the stalkless flower sitting atop the leaves with the three elongated petals facing skyward.

Ephemeral plants are discreet garden guests. They shine brightly during their star turn, but never hold center stage for long. Make sure to pair them with vibrant foliage, late-blooming perennials and shrubs to keep your garden full and lush all through the growing season.

Garden designer and award-winning author C. Colston Burrell escorts garden and natural history tours in the United States and abroad. He lives in the Blue Ridge Mountains of Virginia.

PHOTO CREDIT

Rethinking Boxwoods

As blight wreaks havoc on boxwoods across the country, new blight-tolerant cultivars and attractive substitutes offer alternatives to the popular landscaping staple.

BY PATRICIA A. TAYLOR

FOR CENTURIES, millennia actually, boxwood *(Buxus* sp.) has been the go-to shrub for both formal and informal gardens. It is easy to see why: The long-lived, dense, evergreen shrubs can be round, short, slim, or tall and can be pruned to an amazing variety of shapes. And there's more: They are deer-resistant and are adaptable to sites in sun or shade.

While there are over 70 species in the genus, here in the United States three—along with their varieties, hybrids, and cultivars—predominate: *B. microphylla* (USDA Hardiness Zones 6–9), *B. sempervirens* (Zones 5–8), and *B. sinica* var. *insularis* (Zones 4–8). They are stalwarts of historic, public, and home gardens from the East Coast through the West Coast.

That all changed nine years ago when growers and gardeners began learning about a fungal disease attacking plants in Europe. On this side of the Atlantic, gardeners also noticed some of their boxwoods were shedding dark-spotted leaves and dying. Boxwood blight, caused by the fungus *Calonectria pseudonaviculata*, had arrived. And there is no known cure.

As of last November, the disease was confirmed in 28 states—predominantly east of the Mississippi and the West and Gulf Coasts. "The disease has had a significant impact on the American garden and will likely get worse before getting better," Virginia Tech professor and Cooperative Extension specialist Chuan Hong wrote in the American Boxwood Society's Spring 2019 *Bulletin*.

'Helleri', a dwarf selection of Japanese holly *(Ilex crenata)* is used as a substitute for boxwood at this Long Island, New York, garden designed by Kathy Fleming.

And then a second blow struck: The boxwood tree moth *(Cydalima perspectalis)*, which has a hungry caterpillar phase that feeds exclusively on boxwoods, was spotted in Ontario, Canada, two years ago—the first sighting in North America. Native to China, Korea, and Japan, it has spread to 30 countries and destroyed entire boxwood forests. Chances are the moth will appear in the United States before long.

In light of this double threat, boxwood aficionados—both commercial growers

SUSAN A. ROTH

Early signs of boxwood blight infection include dark brown or black spots on leaves. Leaves turn brown and quickly drop off; dark cankers often appear on the stems.

and gardeners—are faced with two alternatives: search for new cultivars and maintenance regimes to protect boxwood plantings or look for acceptable shrub substitutes. This article describes current efforts involved in each approach.

PROTECTION IN PUBLIC GARDENS

Dean Norton, director of horticulture at George Washington's Mount Vernon estate near Alexandria, Virginia, is a man who will not give up on boxwoods. Norton views his job as caretaker of George Washington's gardens and grounds, which appear much as they did in Washington's day. Boxwood is found in edgings, parterres, topiaries, and throughout the landscape. Boxwood substitutes would not be authentic.

Norton protects these by propagating additions through cuttings and through plant management. "Plucking or thinning is the most important practice you can apply to boxwood," he says, "and can be accomplished at any time of year in the absence of any disease." He describes plucking as breaking off random branches by hand and thinning as removing dead branches and debris with hand pruners. "You want a plant to have portals within its foliage to allow air and light inside."

At George Washington's Mount Vernon estate in Virginia, formal parterres of boxwood are still carefully maintained for historic authenticity.

Tom Tiddens, supervisor of plant health care at the Chicago Botanic Garden, oversees 3,500 boxwoods. "We monitor our boxwood collection closely and continuously," he says.

Even though boxwood blight is yet to be a significant problem in Illinois (only 14 documented cases in 2019), Tiddens has installed a strict management protocol for all incoming boxwood plants as well as those already in place. Nurseries supplying plants must adhere to the industry's best management practices and boxwood blight cleanliness program. Newly purchased plants are quarantined for 30 days and checked weekly during that period; once planted, the boxwoods receive monthly inspections for two years.

Don Gabel, director of plant health at the New York Botanical Garden in the Bronx, feels that the blight is "early in the bell curve" in New York and wants to keep it that way. Gabel has instituted a strict protocol for incoming boxwood plants: They are quarantined for six months, and all boxwood plantings are periodically checked for disease.

This diligent oversight goes beyond plantings. As Gabel explains, florists can also be a source of the blight because diseased branches are sometimes found in arrangements. The Garden is frequently the venue for receptions and meetings; on these occasions, any flower arrangements are discarded in a landfill dumpster the next morning.

Ben Chu, horticultural supervisor of the Japanese and South Gardens at the Missouri Botanical Garden, reports that to date, there has been no sign of the blight among the 3,000 boxwoods found throughout the St. Louis garden's grounds. To ensure that remains the case, the garden now propagates most of its boxwoods; any brought in from elsewhere are quarantined for six months. And boxwood branches are banned from all floral displays

With regard to home gardeners, Gabel offers the following advice. If you remove plants because of blight symptoms, make sure to dispose of any leaves that have fallen

TOP: ADRIA BORDAS, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY; BUGWOOD.ORG. BOTTOM: COURTESY OF GEORGE WASHINGTON'S MOUNT VERNON

to the ground, because the blight spores are viable for years. Furthermore, once you start using fungicides to protect your boxwoods, you must do so forever. There are chemicals that can halt the disease, but none to date are capable of eradicating the blight.

STRATEGIES FOR NURSERIES

While public gardens can financially survive a blight infestation, boxwood nursery growers cannot. This is an acute problem in Oregon, which produces more boxwood shrubs than any other state and exports many across the country. USDA Agricultural Research Service research plant pathologist Jerry Weiland is seeking to determine how widespread the disease is throughout the state's nursery industry.

This is not a clear-cut proposition because Oregon is dry during summer months, a condition not conducive to the disease's development. It is often difficult to spot the fungus on plants being shipped. Weiland has found that the so-called American boxwood *(B. sempervirens)*—which is native to pretty much everywhere except the Americas—is quite susceptible to the disease even in less than ideal conditions.

Through the Oregon Association of Nurseries (OAN), private funding is directed toward understanding and combating the disease. The association has prepared a collection of resources to help growers stay informed about boxwood blight. In addition to spreading by infected plants, the OAN warns, the blight can be transmitted through landscape workers, contaminated garden tools, and rain or irrigation splash. Growers are further cautioned that other members of the boxwood family (Buxaceae), including *Pachysandra* and *Sarcococca*, are also susceptible to the blight.

BLIGHT TOLERANT HYBRIDS

Bennett Saunders, a second-generation member of Saunders Brothers Nursery in Piney River, Virginia, is the firm's boxwood guru. As he relates, the nursery took immediate action when boxwood blight made its 2011 appearance in nearby North Carolina. Saunders headed a company team that did extensive research with academics and public gardens to find the best parents to create boxwood hybrids that would flourish despite the blight.

The result is a patented and trademarked group of boxwoods under the

Promising blight-tolerant boxwood selections include NewGen Independence, introduced by Saunders Brothers Nursery.

NewGen label that is reportedly highly tolerant of the blight. NewGen Freedom® (USDA Hardiness Zones 5–8) is a relatively fast grower that reaches three-and-a-half to five feet tall and wide; NewGen Independence® (Zones 5b–8) grows three to four-and-a-half feet tall and wide. Both are being introduced to the trade this year via wholesale growers and may soon be available at local garden centers.

SUBSTITUTION

For public gardens with huge collections, it makes monetary as well as aesthetic or historical sense to work diligently to protect their boxwoods. For public gardens with smaller collections and for home gardeners, however, the care and the continued application of fungicides is simply not worth it. Substitutes are called for. (For more details on the boxwood substitutes mentioned below, see the chart on page 28.)

This was the case at the Reynolda Gardens of Wake Forest University, located on the school's campus in Winston–Salem, North Carolina. As garden director Jon Roethling explains, North Carolina is a hot bed of boxwood blight, and when it appeared among Reynolda's 300 'Justin Brouwers' boxwoods, there was an immediate search for an acceptable substitute.

"We needed to find a small shrub with a tight habit and dark green foliage

Plants that resemble boxwoods in growth habit and leaf texture include dwarf inkberry holly *(Ilex glabra)* cultivars such as Gem Box, which bears small, dark green leaves.

TOP: COURTESY OF NEWGENBOXWOOD.COM. BOTTOM: COURTESY OF PROVEN WINNERS

Yaupon holly *(Ilex vomitoria)*, especially the dwarf selection 'Nana', is a good boxwood substitute.

throughout winter," he says. "While I was aware of inkberry holly *(Ilex glabra)* cultivars, I was not enamored of their naked bottoms." When Roethling heard about Spring Meadow Nursery's Gem Box® inkberry introduction, which he notes, is "properly covered in the right places with small, dark green leaves," he decided to give it a try. To date, Gem Box has lived up to its billing as a perfect boxwood substitute.

Gem Box was introduced in 2015; in 2018 Spring Meadow brought two other boxwood substitutes to market. Strongbox®, another inkberry cultivar, was developed by Mike Farrow of Holly Hill Farms in Earleville, Maryland, and ×*Pyracomeles* Juke Box®, an intergeneric hybrid of *Pyracantha* and *Osteomeles,* was bred by Tom Ranney of North Carolina State University.

Relatively new to American horticulture, the genus *Distylium* holds some promise as a boxwood replacement, as seen in the selection Cinnamon Girl, above.

TOP: DOREEN WYNJA. BOTTOM: COURTESY OF BAILEY NURSERIES

Sources

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Monrovia Nursery Company, Azusa, CA. *www.monrovia.com.* (Check website for retail suppliers.)
Sooner Plant Farm, Park Hill, OK. *www.soonerplantfarm.com.*

Resources

The American Boxwood Society, *www.boxwoodsociety.org.*
Boxwood Blight: Purdue Extension Bulletin. *https://www.extension.purdue.edu/extmedia/BP/BP-203-W.pdf.*

Three years ago, the University of Georgia Cooperative Extension urged state residents to "think outside the boxwood," publishing a listing of over 50 alternative shrubs. Among them was *Distylium*, which University of Georgia professor emeritus and woody plant expert Michael Dirr has dubbed "the best new plant you've never heard of." Heather Kirk-Ballard of Louisiana State University's AgCenter agrees, recommending the selection Cinnamon Girl™ as an outstanding boxwood proxy.

Another shrub on the University of Georgia's list of boxwood substitutes is the dwarf yaupon holly *(Ilex vomitoria* 'Nana'), which bears leaves that closely resemble those of boxwood on compact dwarf plants.

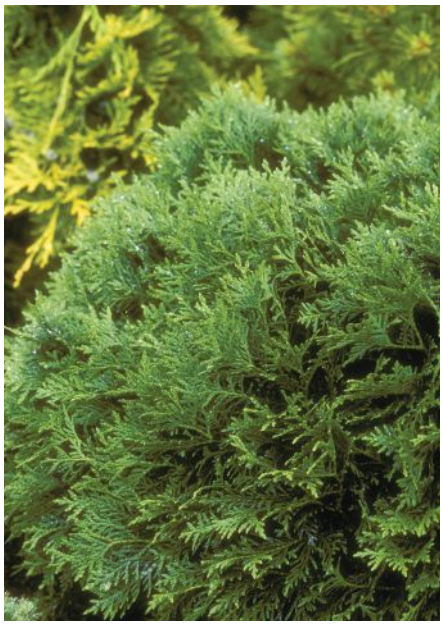
"I am a lifelong lover of boxwood," says Cedar Baldridge of Houston's Baldridge Landscape, "and I am bereft by the blight. It is indeed a problem for us here on the Gulf Coast." Baldridge no longer uses boxwood shrubs in her high-end designs and is now relying on hedges of dwarf yaupon hollies with variegated *Pittosporum (P. tobira* 'Variegata') as punctuation points.

Home Nursery, Inc., a large Midwest distributor and grower primarily centered in the greater St. Louis area, advises its customers to consider Gem Box and Strongbox inkberries as well as several Japanese holly *(I. crenata)* cultivars. Two

BOXWOOD SUBSTITUTES

When selecting an alternative or replacement for boxwoods, consider the plant's light requirements and mature size and form. The following are just a few of the many options available.

Name	Exposure	Height/Spread (feet)	Native Origin	USDA Hardiness Zones
Distylium Cinnamon Girl™	Sun	2–3/3–4	Hybrid	7-9
Ilex crenata (Japanese holly) cultivars:				
'Chesapeake'	Sun, part sun	6–8/4–5	Japan, Korea	6–9
Patti O Box®	Sun, part sun	3–4/1–2	Japan, Korea	6–8
'Sky Pencil'	Sun, part sun	4–8/1–3	Japan, Korea	6–8
'Soft Touch'	Sun	2–3/2–3	Japan, Korea	5–9
Ilex glabra (inkberry) cultivars:				
Gem Box®	Sun, part sun	2–3/2–3	E. North America	5–9
Strongbox®	Sun, part sun	2–3/2–3	E. North America	5–9
Ilex vomitoria 'Nana' (dwarf yaupon holly)	Sun, part sun	3–5/5–8	SE North America	7–9
Pittosporum tobira 'Variegata'	Sun, part sun, shade	4–5/4–5	China, Korea, Japan	8–11
×*Pyracomeles* Juke Box®	Sun, part sun	1–3/1–3	Hybrid	7–9
Thuja occidentalis (American arborvitae) cultivars:				
'Hetz Midget'	Sun, part sun	3–4/3–4	E. North America	3–7
'Little Giant'	Sun	4/4	E. North America	3–8
Mr. Bowling Ball®	Sun	2–3/2–3	E. North America	3–7
Tater Tot™	Sun, part sun	1–2/1–2	E. North America	3–7



Other potential alternatives to boxwood include 'Sky Pencil', above left, a cultivar of Japanese holly, and Mr. Bowling Ball, above right, a globe-shaped dwarf American arborvitae selection.

are columnar. The taller 'Sky Pencil' was found in a Buddhist monastery in Japan and the slightly shorter Patti O Box® was bred by Holly Hill Farms' Mike Farrow from 'Sky Pencil' seed. 'Soft Touch' is a low-growing, mounded selection.

The Indiana Department of Natural Resources also recommends 'Sky Pencil' to replace the columnar 'Graham Blandy' boxwood, along with another Japanese holly cultivar, the pyramidal 'Chesapeake', which grows to eight feet tall.

Robert Schutzki, associate professor of horticulture at Michigan State University, praises two dwarf American arborvitae *(Thuja occidentalis)* cultivars: Mr. Bowling Ball® and Tater Tot™. Other globed-shaped varieties recommended by Home Nursery include 'Hetz Midget' and 'Little Giant'.

It should be noted that while boxwood blight is widespread, it does not thrive everywhere. Leonard Coop of Oregon State University in Corvallis, who is working on a boxwood blight risk-of-infection climate model, reports that the disease has yet to be found in either very dry or very cold climates.

Still, all boxwood owners should be on high alert. Even if you do not buy new plants, pathogens floating through a misty rain or on the tools of landscape workers could infect your plants. Fortunately, there are a plethora of attractive alternatives to choose from no matter where your garden is located.

Patricia A. Taylor of Princeton, New Jersey, is a frequent contributor to this magazine. She has published numerous articles and several books on a variety of gardening topics.

LEFT: DOREEN WYNJA. RIGHT: JUDYWHITE, GARDENPHOTOS.COM

DOREEN WYNJA

Native to South Africa, wandflower or angel's fishing rod *(Dierama pulcherrimum)* is a grassy-looking perennial growing to six feet tall that bears drooping stems of pink flowers in summer.

Screen Stars

Use plants that have open, see-through flowers and stems as scrims and screens to bring drama to the garden.

BY JANET DAVIS

BEYOND THE basics of designing a border with appropriate plants chosen for their color, height and shape, there is another more ethereal quality common to a small roster of plants that makes them ideal for adding movement, light, and a sense of enigma to a planting scheme. These are the "see-through" or "scrim" plants. In theater parlance, a scrim is a gauzy, transparent curtain that allows the audience to see through it to a scene being played out in the background. In garden design, such plants fulfill their own roles while encouraging viewers to look through them to other plants or distant corners of the garden. They can also be used as seasonal exclamation points and to partially screen views—around a patio or pool, for instance—without obscuring the view completely.

The best see-through plants feature tall, wiry stems topped by small or very airy, loose flowers or inflorescences that sway easily in the wind, in delicate contrast to their more stolid neighbors. The flowers might be slender spikes that create vertical brushstrokes against background plants, bouncing balls that lend a kinetic quality to a planting scheme, or flowers that create a hazy effect that invites a look through them, rather than around them.

HERBACEOUS PERENNIALS

Perennials with tall, branching stems topped with cloudlike inflorescences composed of numerous tiny flowers are excellent to use as gauzy screens.

Giant kale *(Crambe cordifolia)* with its coarse basal leaves and tiny, white flowers atop airy stems is one; lime-loving baby's breath *(Gypsophila paniculata)* with its masses of tiny, white summer flowers is another; and American native prairie spurge *(Euphorbia corollata)* topped with small, white flowers in summer to early fall is a third.

Above: *Eryngium planum* 'Blue Glitter' complements the yellow-flowering spurge *(Euphorbia* sp.) behind it. Grasses and lanky perennials—such as blazing star with tufted hair grass, top right, and gaura with Mexican feather grass, bottom right—pair beautifully to create screenlike effects.

These plants look lovely screening other perennials, of course, but really sparkle in front of dark-leaved shrubs such as deep-colored cultivars of ninebark *(Physocarpus opulifolius)*, elderberry *(Sambucus* spp.), and smoke bush *(Cotinus coggygria)*.

Of the many meadow rues *(Thalictrum* spp.) with loose panicles of tiny blossoms, two of the best see-throughs are *T. rochebruneanum* and *T. delavayi* 'Hewitt's Double'. Though the latter might lean a little without staking, the effect of its small pink or white flowers twinkling in front of

TOP LEFT: SAXON HOLT. TOP RIGHT: JANET DAVIS. BOTTOM: DOREEN WYNJA

DOREEN WYNJA

The white candelabralike flowers of culver's root and orange-red flowers of Bright Eyes crocosmia provide plenty of contrasts in color, texture, and form to this shade garden.

other early-summer shade-lovers such as astilbe is magical.

For midsummer effect, try gaura *(Oenothera lindheimeri)*, a native of the American Southwest beloved for the fluttery effect of its white and pink flowers held above the foliage on arching stems. Golden lace *(Patrinia scabiosifolia)* has chrome-yellow, late-summer flowerscapes that make a brilliant scrim for other late-bloomers such as summer phlox *(Phlox paniculata)*, red cardinal flower *(Lobelia cardinalis)*, and fall-blooming New England aster *(Symphyotrichum novae-angliae)* or New York aster *(S. novi-belgii)*.

Many perennials feature tall, wiry stems topped with colorful, button or bottlebrush flowers that seem to dance in front of a contrasting foliage or floral background. Renowned Dutch garden designer Piet Oudolf is fond of using burnets, such as the dark red-flowered Japanese burnet *(Sanguisorba tenuifolia* 'Purpurea') and greater burnet *(S. officinalis)* as a scrim. As he notes in his book, *Designing with Plants* (Timber Press, 2008): "Their being spaced out on stems means that it is possible to see through clusters of buttons; they are effectively transparent, in the same way that groups of narrow stems are transparent."

Perennials with a similar habit include Macedonian scabious *(Knautia macedonica)* with its burgundy-red pincushion flowers; light-purple devil's bit scabious *(Succisa pratensis)* for part shade; giant scabious *(Cephalaria gigantea)* with small ivory flowers on rangy stems; and shade-loving masterwort *(Astrantia major)* with small blossoms in white, rose, and red. Then there are the spiky flowers of globe thistle *(Echinops* spp.), sea hollies *(Eryngium* spp.), and the prairie native rattlesnake master *(Eryngium yuccifolium)*, all of which are loosely-branched, architectural perennials that tolerate dry conditions.

Three good American native see-through plants are culver's root *(Veronicastrum virginicum)*, a summer bloomer that features candelabra spikes of white, pink, or lavender flowers; white-flowered foxglove penstemon (*Penstemon digitalis)*; and blazing star *(Liatris* spp.) with purple spikes. And the creamy-white spires of the tall summer and fall snakeroots *(Actaea* spp.) look luminous placed in front of a dark-green hedge.

Other plants that have slender or airy spikes include rusty foxglove *(Digitalis ferruginea* and drought-tolerant Russian sage (*Perovskia atriplicifolia*, syn. *Salvia yangii)*.

Seedheads can also provide a scrim effect, particularly tall, dramatic ones like those of great coneflower *(Rudbeckia maxima)*.

GRASSES

Ornamental grasses with tall, wispy inflorescences can be dramatic scrim plants, responding to the smallest breeze with constant movement and swishing sound. Among the best are the tall moor grass cultivars *(Molinia caerulea* ssp. *arundinacea)* 'Skyracer' and 'Transparent'—an Oudolf favorite—whose strong but slender stems and airy flowers make a delicate veil and a delightful foil to summer daisies such as false oxeye *(Heliopsis helianthoides)* and sneezeweed *(Helenium autumnale)*.

The zingy little flowers and seeds of native switch grass *(Panicum virgatum)*

Resources

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Encyclopedia of Grasses for Livable Landscapes by Rick Darke. Timber Press, Portland, OR, 2007.

Gardentopia: Design Basics for Creating Beautiful Outdoor Spaces by Jan Johnsen. Countryman Press, Woodstock, VT, 2019.

are constantly in motion and look lovely screening New England aster or the big, bold flowers of swamp hibiscus *(Hibiscus moscheutos)*. Similarly, the airy flowers of prairie dropseed *(Sporobolus heterolepis)* make a lively, textural scrim for other prairie natives, such as pink-flowered *Echinacea purpurea* or butterfly milkweed *(Asclepias tuberosa)*.

Many grasses with thin, silky leaves and flowers, such as tufted hair grass *(Deschampsia cespitosa)*, look transcendent when backlit by late-day sun. Other excellent see-through grasses are pink muhly grass *(Muhlenbergia capillaris)*; fountain grass *(Pennisetum alopecuroides)*; blue oat grass *(Helictotrichon sempervirens)*; feather reed grass *(Calamagrostis ×acutiflora* 'Karl Foerster'); giant feather grass *(Stipa gigantea,* syn. *Celtica gigantea)*; and Mexican feather grass *(Nassella tenuissima)*.

BULBS AND ANNUALS

Bulbs and annuals can also have a see-through effect. Alliums make good screens, especially drumstick allium *(Allium sphaerocephalon)*, a hardy summer-blooming bulb with spherical, crimson flowers on bobbing stems. 'Lucifer' crocosmia *(Crocosmia ×crocosmiiflora)* bears numerous scarlet flowers on arching stems in early to midsummer.

Blue oat grass forms neat clumps of blue-green foliage and produces showy pale yellow or tan flowers in late spring. In addition to its good looks, it's very cold-hardy and drought-tolerant.

Delicate lilies *(Lilium* spp.) with narrow profiles can be effective. A more unusual choice is fairy wand or angel's fishing rod *(Dierama pulcherrimum)*, a native of southern Africa that has small pink, purple, or white flowers on slender, flexible stems to six feet. Grow this plant in free-draining soil where it will receive regular water in summer. It's hardy in USDA Zones 7 to 9.

DESIGN TIPS

■ Since the scrim effect is a visual one intended to engage viewers, it's best achieved with tall or mid-sized plants that can be enjoyed at eye level while sitting or standing in the garden.

■ Keep your combinations simple and dramatic. While it's fine to use drifts of the same scrim plant in front of drifts of more substantial plants, don't layer more than one type of see-through plant or the design will look cluttered.

■ Many see-through grasses are beautiful when backlit, but for backlighting to be successful, you need to determine the track that the sun follows over your garden and situate plants in such a way that late afternoon sun shines behind them and is not blocked by obstacles such as fences or trees.

In this harmonious display, 'Red Dragon' fleeceflower *(Persicaria microcephala)* peeks out amid the globular flowers of 'Purple Sensation' allium.

TOP: DOREEN WYNJA. BOTTOM: JANET DAVIS

MORE SEE-THROUGH PLANTS

Plant Name	Height/Width (ft.)	Ornamental Characteristics	USDA Hardiness Zones
Actaea simplex 'Brunette' (autumn snakeroot)	3–4/2	Dark purple, fernlike foliage and tall, arching stems of purple-tinted, white flowers in fall	4–8
Agastache rupestris (sunset hyssop)	1½–3/1½	Aromatic leaves and spikes of orange flowers with lavender calyces in summer	5–9
Artemisia lactiflora (white mugwort)	5/2	Deeply-cut leaves and long-lasting, loose, white flower heads from late summer to fall	3–7
Aruncus dioicus (goatsbeard)	4–6/3–4	Large, fernlike leaves, loose pyramidal panicles of white flowers in early summer	3–7
Chaerophyllum hirsutum 'Roseum'	2/2	Tiny, soft-pink flowers in showy umbels from late spring to early summer	6–9
Dasylirion texanum (sotol)	5–8/5	Long, narrow, stiff, pointed leaves emerge from crown; white flowers in summer on five-foot stalk	8–11
Deschampsia cespitosa (tufted hair grass)	6/4–5	Tussock-forming evergreen grass with arching panicles of silvery spikelets in summer	5–9
Limonium latifolium (sea lavender)	2/1½	Basal leaves with wiry, loosely branched stems of lavender-blue flowers in late summer	7–9
Pennisetum alopecuroides (fountain grass)	2–5/2–4	Tufted grass with linear leaves and oblong panicles of green or purple spikelets in summer	6–9
Sporobolus heterolepis (prairie dropseed)	1½–2/2	Clump-forming grass with bright green leaves and drooping panicles of pale pink flowers in late summer	3–8

'Strawberry Fields' globe amaranth grows to about two feet tall and makes a good dried flower.

JANET DAVIS

As for annuals, lacy-leafed umbellifers such as dill *(Anethum graveolens)*, fennel *(Foeniculum vulgare)*, bishop's lace *(Ammi majus)*, cow parsley *(Anthriscus sylvestris* 'Ravenswing'), and jewels of Opar *(Talinum paniculatum)* have sparse umbels consisting of hundreds of small florets. These plants have the added benefit of catering to a variety of pollinators and other beneficial insects, but they also self-sow readily and can spread into natural areas in some regions, so be sure to deadhead them. The same caveat applies to tall or purpletop verbena *(Verbena bonariensis)*, a tender perennial graced by butterfly-friendly purple flowers that bloom atop tall, wiry stems in late summer.

Globe amaranths *(Gomphrena* sp.) are underused annuals that work well in designs featuring bold foliage. Among the best are magenta 'Fireworks', red 'Strawberry Fields' and 'QIS Orange'.

GETTING STARTED

The best way to perfect a planting scheme using see-through plants is to check out some of the plants mentioned here in books and at botanical gardens and take photos of good combinations you come across in your travels. (For a few design tips, see the box on opposite page.)

Above all, make sure your cast of "screen stars" performs well in your own garden. In warmer areas, for example, delphiniums can be divas, and fennel tends to self-sow aggressively in the mid-Atlantic region and in California. But once you've assigned the starring roles and directed a few performances, the scrim scenes in your garden will garner rave reviews from all who see them.

Janet Davis is a freelance writer and photographer based in Toronto, Ontario. She blogs at www.thepaintboxgarden.com. *This is an updated version of an article that was published in the July/August 2007 issue of this magazine.*

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HYDRANGEA OF THE YEAR®

The Joys of Foraging

If you've ever had a yen to harvest edibles beyond the confines of your vegetable garden, here are some tips for getting started.

BY ELLEN ZACHOS

IF YOU ARE READING this, chances are good you're a gardener, or at the very least a plant lover. Maybe you're crazy about exfoliating bark, variegated foliage, fragrant herbs, or alpines. But have you considered the potential flavors of your beloved ornamentals? In my experience, foraging comes naturally to gardeners, who tend to have an insatiable curiosity about plants that extends to an appreciation for their unique flavors.

WHY FORAGE?

When you forage, you connect with the natural world in a unique way. You slow down, you look closely at your surroundings, you breathe, you listen. You form an intimate relationship with the places where you forage; they become special because they feed your body and your soul. And don't forget about all that exercise you get, tramping through the woods. No need for a gym membership when you're a forager.

If you're a foodie, like me, foraging has even more to offer, because you gain access to mouthwateringly fresh flavors you simply can't find in your local grocery store. And yes, free food is definitely a bonus. I've never sat down to figure out how much I've saved by being a forager, but I can tell you I rarely buy fruit or vegetables. I stock up in season, then preserve the harvests.

But there's much more to recommend foraging than just free food. When you forage, you harvest fresh, local, seasonal, organic, perfectly ripe food. No one sprays stinging nettles with pesticides to keep them free of insects, and no one harvests black raspberries before they're fully ripe, just so they'll be easier to ship. And if you're anything like me, you'll also appreciate the adrenaline rush that comes with a wild harvest.

A FEW RULES–STARTING WITH SAFETY

Hopefully what I've written to this point has got you interested in the idea of for-

ELLEN ZACHOS

Summer provides a bountiful harvest of foraged edibles. Top row: Spice bush leaves *(Lindera benzoin)*, sweet clover *(Melilotus officinalis)*. Middle row: Immature black walnuts *(Juglans nigra)*, chicken of the woods *(Laetiporus cincinnatus)*, black-staining polypore *(Meripilus sumstinei)*, immature pods of common milkweed *(Asclepias syriaca)*. Front row: Queen Anne's lace flowers *(Daucus carota)*, wisteria flowers *(Wisteria sinensis)*, sweet cicely *(Osmorhiza longistylis)*, bee balm flowers *(Monarda fistulosa)*, daylily flowers *(Hemerocallis fulva)*.

aging. Before you venture out on your own, though, I highly recommend taking a class from an experienced forager near you. (Look online for local foraging resources.) Now let's go over some rules all foragers need to live by. Rule number one: *Never put anything in your mouth if you're not 100 percent sure what it is, and that it is safe.* It's your responsibility to make intelligent, educated choices about what you eat and drink.

In addition to knowing what plants are safe to eat, you also need to know which part of the plant is safe, and in what season. For example, pokeweed *(Phytolacca americana)* is a classic spring green, but it needs to be harvested soon after the young leaves and stems emerge. Once the stems toughen up, they're not only too fibrous to be delicious, but they can also cause gastrointestinal problems. And while ripe elderberries and elderflowers are delish, every other part of the plant is toxic. This may sound off-putting at first, but remember that many plants we eat on a regular basis have toxic parts; for instance, the foliage of rhubarb and every part of the potato plant, except the underground tuber, are toxic to humans.

Another good practice when trying new foods of any kind—whether it's from your backyard, a nearby woods, or your neighborhood grocery store—is to start with small quantities. That way, if you have an allergic reaction, it will be manageable.

The author harvests beach plums *(Prunus maritima)* in Cape Cod, Massachusetts.

If you know you're allergic to certain foods, you can also use your knowledge of plant families to help avoid potential problems. For instance, people who are allergic to cashews may also have allergic reactions to other plants in the cashew family (Anacardiaceae), such as mangoes and sumac.

You should also carefully consider the places where you forage. For example, golf courses or public gardens are generally not good choices, because the chemicals often used to maintain these perfectly manicured landscapes are not chemicals most of us want to ingest. Foraging from busy roadsides is another bad idea, not only because of traffic danger, but because heavy metals like lead, nickel, and cadmium

10 PLANTS FOR FIRST-TIME FORAGERS

HOSTAS All hosta species are edible, and you'll quickly discover why deer find these beloved shade plants delectable. But the good news is you can enjoy a side dish of roasted shoots in early spring without uprooting an entire plant. Harvest the outer ring of tightly furled shoots by cutting them just above the ground. As the inner shoots unfurl, they'll hide the evidence of where you harvested.

WILD GARLIC If you would like to try a wild onion, but are concerned about the overharvesting of native ramps *(Allium tricoccum)*, seek out wild garlic *(A. vineale)*, an invasive and delicious plant found in lawns, parks, and fields almost everywhere (avoid harvesting anywhere pesticides may be used). The foliage looks like grass, but is usually darker and taller. Break off a stem to see if it smells like garlic. The bulbs of this plant are strong and flavorful, fresh or dried.

MILKWEED Both common milkweeds *(Asclepias syriaca* and *A. speciosa)* produce multiple edible parts: young shoots, immature flowers, mature flowers, and immature seed pods. Make a syrup from the flowers to add to drinks and desserts. The immature flowers bake well in a quiche (shown left). You can also blanch the green plant parts (to stanch the flow of milky sap), then stir-fry, roast, or sauté them.

CURLY DOCK *(Rumex crispus)* is one of the most common and tastiest docks, with spring greens that make a tart and tender side dish. Older leaves should be chopped, blanched, then cooked to tenderize them. Curly dock often produces a second round of tender greens in fall after setting seed—-and by the way, those seeds can be dried, roasted, and ground to make a tasty, gluten-free flour.

TOP: COURTESY OF GARDENLADY.COM. BOTTOM (2): ELLEN ZACHOS

from vehicle exhaust can be absorbed by plants. Would you like a side of chromium with those dandelion greens?

FORAGING ETHICS

In addition to safety, there are ethical considerations to foraging if you are going beyond the bounds of your own garden. Always ask permission before foraging on private property. Every time I've asked, I've been granted permission to harvest, and when I offer some of my bounty as thanks, most people look at me as if I'm trying to poison them. But hey, fine with me if you don't want a share of my mulberries or oyster mushrooms.

If you're planning to forage on public property, check the rules before you pick. Most state and national parks have a document called the superintendent's compendium, which clearly outlines the rules of the park, including whether foraging is allowed. (Search online for the park name plus "Superintendent's Compendium".) Park rangers are often unfamiliar with the rules, so I carry a copy with me whenever I go out. That way, when the ranger along the Delaware River tells me I can't harvest acorns, I can politely show him where his superintendent says that I'm allowed a half bushel per day, as long as they're for my own consumption and not being sold commercially. Different parks have different rules. One of my favorite parks in New Mexico, where I live now, the Valles Caldera, has an interesting rule: You can harvest small amounts of fruit, but it must all be consumed *inside* the park.

Ethical considerations are important, not only because you'll surely want to obey the written rules, but because of the special relationship foragers have with the land. One key practice is to always leave some of what you're foraging behind, so the plant can sustain and propagate itself, so animals and insects will have something to eat, and so other foragers can enjoy the harvest.

The unfurling tips of ostrich fern *(Matteuccia struthiopteris)* are a springtime delicacy.

The amount you should harvest varies by plant, season, and location. Things to consider include: Is it endangered? Is the population small or large? Does it have an aggressive growth habit? Is it considered invasive in your area? How does the plant respond to harvesting? Gardeners have a head start here. We understand that harvesting all the foliage from a plant leaves it unable to photosynthesize. For example, if you're picking ostrich ferns (*Matteuccia struthiopteris)*, never take more than one or two fronds from each plant, leaving the remainder to photosynthesize and store energy for a repeat performance next year.

As a forager, the question I hear most often—after "How do you know it's safe?"—is "But if everybody forages, won't all the edible plants be wiped out?" In the first place, not everyone is going to forage, because it's a lot of work. Joyful work, wonderful, exciting, rewarding work, but work nonetheless.

And ethical foraging is far more likely to improve the environment than destroy

SERVICEBERRIES *(Amelanchier* spp.) Also known as Juneberries for their pinkish-purple to blue midsummer fruit, these lovely shrubs or small trees bear delicate white blooms in spring, and often red to orange foliage in fall. While the flavor of the fruit varies among species, most are delicious, reminiscent of blueberries mixed with strawberries, plus a touch of almond. Serviceberries should be harvested when the fruit is dark blue or purple; red fruit is not ripe and the flavor will disappoint you.

SOCHAN OR CUTLEAF CONEFLOWER *(Rudbeckia laciniata)* is a lovely native wildflower that produces two rounds of edible greens. Tender young leaves in spring are tasty in egg dishes, soups, or stir fries, and the new round of foliage produced after flowering has a slightly stronger flavor, resembling that of bok choi. Sustainable harvesting won't interfere with enjoying sochan's bright yellow summer flowers.

SPRUCE *(Picea* spp.) The feathery tips of new foliage on any spruce tree make an excellent flavoring. Move around the circumference of the tree as you harvest, so as not to remove all the new growth from only one section. A spruce-tip infusion can be used as the base for syrups, jellies, and cocktails, with a flavor that's both citrusy and herbal. Ground spruce tips can be combined with sugar or salt and used in baking. (For a link to my recipe for spruce-tip ice cream, visit the online version of this magazine issue at *www.ahsgardening.org*.)

TOP: ELLEN ZACHOS; BOTTOM (2): MARK TURNER

it. Who better than a forager to identify and harvest invasive species, which in turn allows natives to regain a foothold? A grateful forager pulls up invasive garlic mustard *(Alliaria petiolata)* while sustainably harvesting wild ginger stolons *(Asarum canadense)*, giving the native plant a fighting chance, and taking home two wild harvests in the process.

If we take care of the land, the land will respond in kind. Foragers depend on these plants. We love these plants. We risk bee stings and wet feet to harvest these plants. This food is important to us, and we want to make sure it will be there next year, and the year after that, and the year after that. So we care for the land. Some foragers also make donations of time and knowledge, leading plant identification walks and showing people how to harvest invasive edible plants. Some pick up litter when they forage, leaving a place cleaner than they found it. Some foragers harvesting wild seeds sow part of what they harvest on site, making sure the plant is able to propagate itself.

GETTING STARTED

For most gardeners, foraging comes naturally. Like foragers, gardeners love and value plants, and learning the edible qualities of your local flora will make you appreciate them even more. Knowing which invasive weeds are tasty also means you can bring them into the kitchen instead of sending them to the landfill or the compost pile.

But in case you need a starting point, I've chosen to highlight 10 edible plants—five are common weeds and five are popular ornamental plants—that can easily be found almost anywhere in North America. I'm hoping this will make it easy for you to sample some of these unbuyable flavors that you've been missing out on all your life.

Garlic mustard *(Alliaria petiolata)*, which is edible, is an invasive weed from Europe that has overtaken many North American ecosystems.

Resources

Backyard Foraging by Ellen Zachos. Storey Publishing, North Adams, MA, 2013.

The Forager's Feast by Leda Meredith. Countryman Press, Woodstock, VT, 2016.

Foraging & Feasting by Dina Falconi. Botanical Arts Press, LLC, Accord, NY, 2013.

The Fruitful City: The Enduring Power of the Urban Food Forest by Helena Moncrieff, ECW Press, Toronto, Canada, 2018.

Ellen Zachos is the author of The Wildcrafted Cocktail *and* Backyard Foraging: 65 Familiar Plants You Didn't Know You Could Eat. *She writes a foraging column for* Edible New Mexico *and shares recipes and foraging tips on her website:* www.backyardforager.com.

JAPANESE KNOTWEED *(Fallopia japonica)* Sometimes listed as *Reynoutria japonica* or *Polygonum cuspidatum*, this is the deep-rooted plant almost everyone loves to hate. Homeowners fear foundation damage, and native plant enthusiasts curse its invasive habit. But foragers know its young stems make an excellent rhubarb substitute, and repeated, consistent harvesting eventually weakens the colony.

JAPANESE QUINCE *(Chaenomeles japonica*, shown) and flowering quince *(C. speciosa)* Many new cultivars of these popular garden shrubs have been bred to be fruitless, but if you locate a plant that *does* produce fruit, you can use it in the same ways you'd use true quince *(Cydonia oblonga)*. The fruits make an excellent jam, jelly, or liqueur.

SUMACS *(Rhus* spp.) All sumacs that bear red fruit are edible, although some have more flavor than others. Taste a berry before harvesting, and if the flavor makes you pucker up, gather the ripe berries and dry them to use as a spice. Rain washes away some of the flavor, so try to harvest after several days of bright, sunny weather. If you're allergic to mangoes or cashews, however, skip the sumac. As noted earlier, these three plants are all in the cashew family (Anacardiaceae) and share certain chemical components. And, by the way, poison sumac has white fruit, so it's easy to avoid this in favor of red-fruited edible sumac. —E.Z.

ELLEN ZACHOS (3)

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Guide to Pruning Hydrangeas

by Scott Aker

FEW PLANTS have enjoyed a resurgence in popularity like hydrangeas. New varieties of these summer-blooming deciduous shrubs are better adapted to climate extremes, and the flowers are now available in more colors and forms than ever. However, many gardeners are uncertain about how to prune them to maintain healthy growth and flowering. There is no single rule for pruning hydrangeas; different species must be treated differently to achieve best results. The species described below are the most commonly grown; all are native to Asia except for smooth hydrangea *(Hydrangea arborescens)* and oakleaf hydrangea *(H. quercifolia)*, which are native to North America.

BIGLEAF HYDRANGEA NEEDS LITTLE PRUNING

By far, the most popular hydrangeas are selections of the bigleaf or florist hydrangea *(H. macrophylla)*, also known as hortensia. Bigleaf hydrangea has two different flower forms: mophead, in which all the individual florets in the flower cluster have large showy petals; and lacecap, in which only the outer sterile florets have large petals. This species flowers on old wood—that is, the flower buds form on stems the summer before blooming—and the buds of most selections aren't hardy enough to make it through the winter in cold areas. Bigleaf hydrangea grows best in coastal areas where sea breezes soften summer heat and winters are not too cold.

If you have been frustrated by selections that grow a great crop of leaves with no flowers, you may want to try a remontant, or reblooming, variety. Endless Summer® ('Bailmer') was the first in the late 1990s, and many have followed. Remontant hydrangeas have the ability to form flower buds on the current year's growth, so they can bloom over a much longer season and can bloom even if the flower buds that formed in the fall are killed by winter cold.

Introduced in the 1990s, Endless Summer® is a remontant bigleaf hydrangea that offers more reliable blooming than the species. Many other remontant selections are now available.

Blooming may stop in the heat of summer, but new flowers often appear in response to the cool nights of autumn.

You don't need to prune bigleaf hydrangeas except to remove dead stems or if they are outgrowing their space. Since hardiness is often an issue, wait until late spring, when new growth has begun, to remove dead branch tips. If your hydrangea has become too tall, cut individual canes down to the ground right after the first round of bloom is complete in early summer.

NO NEED TO PRUNE MOUNTAIN AND OAKLEAF HYDRANGEAS

The closely-related mountain hydrangea *(H. serrata)* features a more compact habit—growing to about four feet tall—and is hardy to USDA Hardiness Zone 5, which means the only pruning it needs is the removal of dead or diseased branches. Mountain hydrangea has smaller lacecap flower heads than those of bigleaf hydrangea, but it makes up for the size of its flowers by providing interest in fall when its foliage turns deep red.

The beautiful oakleaf hydrangea *(H. quercifolia)* has the best fall foliage color of any hydrangea, ranging from orange and red to maroon. Its cone-shaped flower clusters are white, aging to pink, then brown. It doesn't require pruning, but because it can grow to about eight feet tall and wide, you can control its height if needed by cutting the tallest branches back to a shorter branch. The species and older cultivars tend to be leggy, particularly if grown in shade, but many improved cultivars are available, such as 'Munchkin', 'Ruby Slippers', and 'Queen of Hearts', that are com-

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Gardening Q&A with Scott Aker

PRUNING WINTER-INJURED CONIFERS

My dwarf conifers took a beating last winter. Some needles have dropped, but the branches don't seem to be dried out. I'd like to tidy them up by pruning the naked branches. What is the best time to do this?

Wait until right after new growth begins. The plants might look really bad until then, but the new growth will soon cover the damage. Most conifers cannot sprout from the stubs left behind after pruning and only grow from buds at the tips of branches. For this reason, only remove them when it is clear that the buds at the ends of the branches are dead. It's best to wait until May or June for this, since injured buds take longer to begin growth than healthy buds.

CULTURAL SOLUTIONS FOR LAWN WEEDS

I have large patches of clover, violets, and other weeds in my lawn. I don't want to use herbicides that will the kill grass. Can I use herbicidal soap?

Herbicidal soap is not selective and will damage all plants, including turfgrass. Also, it only affects the soft tissues of the leaves, so established perennial plants such as clover and violets would be able to grow new leaves from the intact roots.

Because clover and violets are indicators of low soil fertility—and the other weeds may be present because of poor soil, compaction, or inadequate drainage—I suggest focusing your efforts on creating conditions that discourage weed growth. Aerate your lawn to improve drainage, and check the soil pH by sending a soil sample to a lab for analysis. If your soil test indicates a need, apply a slow-release source of nitrogen to favor the growth of the turfgrass. Use the highest setting of your mulching mower when mowing, and mow frequently. The high mowing height will be a disadvantage to the violets and other weeds that need light near the soil surface to grow well. —S.A.

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

Above left: Panicle hydrangeas such as 'Limelight' benefit from heavy pruning every few years to maintain the size of their flowerheads. Above right: Cut smooth hydrangea to the ground every year in late winter to encourage sturdier growth.

BOTTOM: COURTESY OF PROVEN WINNERS. TOP: NANCY J. ONDRA

pact and disease resistant with sterile florets that turn red as they age, greatly expanding the season of interest.

PRUNE TREE HYDRANGEAS FOR LARGER FLOWERS

Blooming exclusively on new growth, the panicle or tree hydrangea *(H. paniculata)* may sport the largest heads of flowers of all hydrangeas; the conical clusters may grow to two feet in length or more in some conditions. It is very adaptable to cold conditions and can be grown with a single trunk to a height of 10 to 15 feet or as a smaller shrub if cut back every few years within a few feet of the ground. If you want really big blossoms, cut the stems back every three or four years in late winter. Panicle hydrangea does fine with no pruning, but the size of the flower clusters will diminish to about six inches long as the plant matures. 'Limelight' is a widely grown cultivar.

PRUNE SMOOTH HYDRANGEA EVERY YEAR

Smooth hydrangea *(H. arborescens)* grows three to five feet tall and is best cut back to the ground every year after it is three years old. After it has matured, it tends to develop into a twiggy mess with very small flower heads unless it is rejuvenated this way. Because it blooms on new wood, cut the stems back in late winter before the start of a new growing season. The species is seldom cultivated, but cultivars such as 'Annabelle' and those in the Invincebelle® series are popular for improved traits such as pink flowers, stronger stems, and more compact habit.

PRUNE VINING HYDRANGEAS TO FIT SPACE

The climbing hydrangea *(H. anomala* var. *petiolaris)* is a woody, vining hydrangea that clings to surfaces with rootlets that emerge from the stems. It can be grown on a trellis or wall, or as a low, spreading groundcover shrub. A lacecap type that flowers on old wood, it needs little pruning unless you want to keep it in bounds. Climbing hydrangea takes at least three years to get established and begin blooming. The flower heads have only fertile florets but are surrounded by attractive white bracts.

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

Pittsburgh Botanic Garden

by Charlene Chuquillanqui

Nestled within 460 acres in the suburbs of Pittsburgh, Pennsylvania, is the Pittsburgh Botanic Garden (PBG). The garden, which opened on a permanent basis in 2015, is a relatively new addition to the Pittsburgh area but has already proven to be a valuable gem for the community.

While only 60 acres of the extensive property have been developed so far, the garden offers a range of serene garden areas, three miles of wooded trails, family-fun exploration stations, and a restored historic homestead that visitors of all ages enjoy. With 400 more acres to transform, PBG will continue to become "a special place of beauty for the community to connect with native plants and experience nature," says Keith Kaiser, PBG's executive director.

For years, acid residue flowing from nearby abandoned mines left this pond lifeless. Today, the restored lotus pond is full of aquatic plants and wildlife and is a popular destination for visitors.

REVITALIZING THE LAND

The garden itself may be newly opened, but the vision for PBG sprouted decades ago. In 1988, a group of local horticulturists and green industry members came together with a desire for Pittsburgh to have an outdoor public garden. Their collaborative efforts in the 1980s eventually led to the leasing of 460 acres of abandoned coalmine land from Allegheny County. Before the vision of the garden could become a reality, however, strong reclamation efforts were needed to restore the bleak acreage left from western Pennsylvania's industrial past. With unrelenting determination, the work to revitalize the land and restore it to its pre-industrial splendor was set in motion.

Most notable is the transformation of the lotus pond located in the garden's **Asian Woodlands**. When the property was acquired, the pond was a dreary, highly acidic body of water contaminated by coalmine drainage. Following the implementation of an innovative water treatment system, the pond is now teeming with a freshwater ecosystem of water lilies, insects, fish, and frogs. Ongoing work to create new gardens and restore degraded woodlands and water ecosystems remains an important objective for PBG.

Constructed in the 1780s, the Walker-Ewing-Glass log house, the former home of a pioneer family, now serves as an educational space.

PROMOTING VISITATION

In addition to its focus on the environmental remediation of the land, PBG is strongly committed to providing a space for all visitors to enjoy. "As one of many places in the Pittsburgh region where individuals choose to spend their free time, we strive to connect with the local and regional residents, including tourists, to our region," says Beth Exton, development director. In addition to the crowd-favorite lotus pond, the **Margaret Lawrence Simon Dogwood Meadow** is also a signature garden spot. This eight-acre meadow features an impressive stand of native flowering dogwood *(Cornus florida)*. When the trees bloom in April and early May, visitors enjoy the spectacle of what Kaiser describes as "a big white cloud that landed on the landscape."

Visitors can explore the roots of the region and learn about pioneer life in

PHOTOGRAPHS ON THIS PAGE AND OPPOSITE COURTESY OF PITTSBURGH BOTANIC GARDEN

Additional Information

Pittsburgh Botanic Garden
799 Pinkerton Run Road
Oakdale, PA 15071
(412) 444-4464
www.pittsburghbotanicgarden.org

■ Hours: **Apr.–Oct.:** Tues.: 9 a.m.–5 p.m.; Wed. & Thurs.: 9 a.m.–7 p.m.; Fri.–Sun.: 9 a.m.–5 p.m. **Nov.– Mar.:** Tues.–Sun.: 9 a.m.–5 p.m.
■ Admission: Members: free; see website for regular and special admission pricing.
■ RAP benefits: Free admission; special discounts for educational programs and select special events

HOW THE RECIPROCAL ADMISSIONS PROGRAM (RAP) WORKS

This American Horticultural Society program is designed to encourage people to visit gardens, arboreta, and conservatories while traveling. As a current member, you receive free admission and/or other special discounts at more than 330 sites throughout North America! Here's how to make the most of this member benefit:

■ View the current list of participating locations and the RAP benefits they offer at *www.ahsgardening.org/rapgardens*. This list is also published in a booklet. To order, visit *https://www.ahsgardening.org/gardening-programs/rap*.
■ Contact the garden to confirm the RAP benefits it offers. (Some sites may choose to enforce a 90-mile exclusion policy; if your zip code falls within that distance from the location, you would not receive the offered RAP benefits there.) Admission to special events may also be excluded.
■ Present your current membership card at the admissions counter or gift shop to receive the RAP benefit(s) offered by that garden. Each card will only admit the individual(s) listed on the card. In the case of a family, couple, or household membership card that does not list individual names, the garden must extend the benefit(s) to at least two members; it is at the garden's discretion to extend benefits to more than two individuals. Some gardens may require a photo ID.

the Allegheny Plateau at the garden's restored **Heritage Homestead**—featuring a historic log house, a heritage apple orchard, pioneer garden, and chicken coop. The garden's event center—a renovated 1870s barn—also serves as a symbol of the land's agrarian past. Additionally, seasonal events such as Dogwood Days and Autumn in the Garden, as well as educational programs for all ages, help foster an appreciation of the outdoors. Nature Passport, a hands-on children's garden activity, and a year-round Yoga in the Garden Series for adults are just a few of many offerings.

FUTURE DEVELOPMENT

With the success of the 60-acre woodlands, PBG is excited to continue converting its remaining 400 acres into an idyllic place of thriving beauty and environmental stewardship. According to Kaiser, the most remarkable aspect of the garden is "the transformation of the land from its former state to what it is becoming." New additions like the **Hillside Pollinator Garden**, which opened in 2019, teach visitors about native plants of the region and how to provide a nourishing habitat for pollinators.

This year, PBG will also unveil new garden areas that continue to strengthen the garden's mission. The 2020 additions—a new **Welcome Center**, **Auto Garden**, and **Garden of the Five Senses**—will enhance the visitor experience and connect people of all abilities with plants. In particular, the Garden of the Five Senses will be a sensory garden boasting interactive features. "The idea for this garden stemmed from the need to provide an outdoor learning/play space accessible for all ages and abilities," says Exton. "When this garden opens Mother's Day weekend, visitors including families, caregivers, and special needs individuals will feel welcome." In time, the garden hopes to "serve as one of the premiere public gardens where the beauty and knowledge of our collection of plants from the Allegheny Plateau are shared with the public."

Near the entrance of PBG, visitors can stroll through the Peirce Family Celebration Garden, which features an ornate iron gazebo surrounded here in spring by tulips.

Charlene Chuquillanqui is an editorial intern for The American Gardener.

Broccolini: A Gourmet Vegetable Anyone Can Grow

by Margene Whitler Hucek

A hybrid of two broccoli varieties, Broccolini produces small florets on elongated, edible stems.

IF YOU ARE fan of fresh broccoli and regret its short harvest season, consider planting Broccolini®. A trademarked cross between broccoli *(Brassica oleracea* var. *italica)* and Chinese broccoli, also known as gai-lan, kailan, or Chinese kale *(B. oleracea* var. *alboglabra)*, this member of the cabbage family is easy to grow and has a refined appearance and delicate flavor prized by restaurant chefs everywhere. Add to that it's significantly more expensive per pound at the supermarket than broccoli, and you can't lose by including it in your vegetable garden.

Rather than producing one large head like broccoli, Broccolini yields several slender six- to seven-inch-long sweet and tender stalks topped with bite-size heads. Under favorable conditions, harvests continue into late spring and early summer, and it can be planted again in late summer for fall harvest. The only downside to Broccolini is confusion over its multiple names (see sidebar, opposite page), but once you get your hands on it, it's clear sailing.

GROWING GUIDELINES

To grow your own transplants, start seeds indoors about six weeks before the last-frost date in your region. Where summers are cool, seeds may be direct-sown a quarter to half inch deep once the soil temperature reaches 55 degrees Fahrenheit (F). Broccolini grows best in temperatures between 65 and 80 degrees F; be sure your plants will have sufficient time to mature before the onset of higher temperatures. For a fall harvest, sow seed from mid- to late summer.

Transplant seedlings after all danger of a hard freeze in spring to a sunny location with free-draining, fertile soil with a pH of 6.0 to 7.0. Space plants 12 to 24 inches apart. Plants are more sensitive to cold than broccoli, so cover new plants if even a light frost is predicted. Mulch to conserve moisture and control weeds. Provide consistent soil moisture, especially during periods of drought.

PLANTING BASICS

Getting Started Sow seeds indoors about six weeks before the desired transplant date and plant seedlings after all danger of a hard frost has passed. For a fall harvest, sow seeds in the garden in mid- to late summer.

Spacing Plant 12 to 24 inches apart, in rows 18 to 36 inches apart.

Days to Maturity Depending on the variety, 50 to 60 days from date of transplant.

Sources

Johnny's Selected Seeds, Winslow, ME. *www.johnnyseeds.com.*
Park Seed Company, Hodges, S.C. *www.parkseed.com.*
Territorial Seed Company, Cottage Grove, OR. *www.territorialseed.com.*
West Coast Seeds, Vancouver, BC, Canada. *www.westcoastseeds.com.*

SHUTTERSTOCK

Broccolini is a heavy feeder, so apply a low-nitrogen fertilizer every three weeks during the growing season. Remove the central portion when it appears in order to promote development of side shoots.

PESTS AND DISEASES

Broccolini is susceptible to the same pests and diseases as broccoli. The white cabbage moth lays its eggs on the undersides of leaves, and the larvae that hatch—cabbageworms—chew through leaves and into heads, where they are difficult to extricate.

The most effective way to prevent cabbageworm damage is to use fabric row covers, placed immediately after planting. This will also deter cabbage loopers. The adult form of this pest is a gray moth, which also lays its eggs on the underside of leaves.

If plants aren't covered, check the undersides of leaves frequently and remove the sticky eggs before they hatch; handpick cabbageworms or loopers. Alternatively, apply Bt *(Bacillus thuringiensis)*, a biological control that can also be effective against these pests. Although seldom a problem, aphids can be controlled with a hard spray of water or application of Neem oil.

To avoid diseases, do not plant Broccolini in the same space you grew it—or any other cabbage family crop—in successive years.

RECOMMENDED VARIETIES

Broccolini, Asparation®, and 'Aspabroc' are different names for the original cross made by Sakata Seed in 1993, which has a mild flavor with peppery undertones.

Cultivars derived from other crosses between broccoli and Chinese broccoli include 'Apollo', a heavy producer that typically grows 24 to 28 inches tall and wide, and 'Atlantis', a heavy producer that requires no pinching.

WHAT'S IN A NAME?

Concerning Broccolini, "there is much confusion about all the names," says Gerald Brust, vegetable specialist with the University of Maryland Cooperative Extension Service. The original hybrid developed by the Japanese seed company Sakata in 1993 was named 'Aspabroc', a nod to its stalks' resemblance to asparagus. In 1994, Sakata partnered with Sanbon Inc. of Morgan Hill, California, and began marketing the crop under the name Asparation®. When, in 1998, Sakata approached the Mann Packing Company of Salinas Valley, California, to expand production, Mann christened it 'Broccolini'—which means baby broccoli in Italian—and registered the name for its own use. Because Mann is a major distributor of the crop to restaurants and grocery stores, that's the name people use to refer to the vegetable.

Other names for the crop include baby broccoli, brokali, and tenderstem. More crosses have been made using broccoli and Chinese broccoli as parents, resulting in new varieties. "Brokali comes from the same cross and has the varieties 'Apollo' and 'Atlantis'," says Brust.

Whatever you call this delicious vegetable, it's one worth growing. —M.W.H.

ENJOYING THE HARVEST

Harvest the central crown as soon as it develops. In a week or so, six- to seven-inch-long side shoots will form from the stem. Pick when heads are tight and firm. For best flavor, harvest before white flower buds appear, although the flowers are also edible.

Broccolini is delicious roasted, grilled, or sautéed in garlic or with other spring vegetables, or added to salads. After blanching it in boiling water for one minute, it makes a great topping for pizza or an addition to pasta dishes. The edible leaves have a slight peppery taste and are great for stir-fries. I like to eat Broccolini raw, dipped into sour cream laced with dill.

A cup of Broccolini provides more available calcium than a cup of milk. It is a rich source of potassium, the B-complex vitamins, and fiber.

Although tastiest when eaten the day of harvest, it may be refrigerated up to 10 days. Extra stems can be frozen for longer storage. Just blanch, cool, drain, and pack them into freezer-safe containers for later use.

Margene Whitler Hucek is a freelance writer who gardens in Keswick, Virginia.

Cooked briefly in boiling water, stems make a great topping for a bowl of Asian noodles.

TOP: COURTESY OF SAKATA SEED AMERICA INC.; BOTTOM: ISTOCKPHOTO

Horticultural News and Research Important to American Gardeners

'Can Can', left, and 'Zimbelstern', above, were two of the top performers in Mt. Cuba's sneezeweed study.

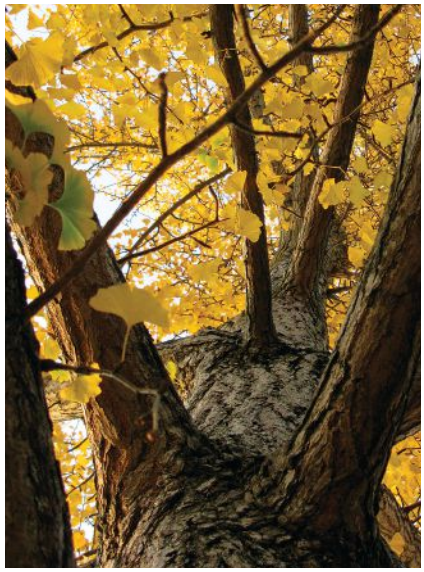
MT. CUBA CENTER SNEEZEWEED STUDY

Although native to the Americas, sneezeweeds *(Helenium* spp.) have never been embraced by American gardeners to the same degree they have been in Europe. In an effort to raise awareness about this under-appreciated native plant, the Mt. Cuba Center in Wilmington, Delaware, conducted a three year trial (2017–2019) of 44 *Helenium* species and cultivars. During the trial, the researchers encountered some significant issues with the plantings in their Mid-Atlantic climate. Many selections succumbed to plant diseases—mainly powdery mildew and aster yellows—dry soil conditions, and poor winter hardiness. The researchers concluded that sneezeweeds are not tolerant of prolonged dry periods, instead thriving in locations with moist to average soil, such as wet meadows and garden settings near river banks and streams. Researchers also noted that many cultivars tended to "flop" and required sturdy support of one kind or another.

Despite the overall challenges, a few species and cultivars displayed superior disease resistance, sturdy stems, high pollinator attraction, a floriferous appearance, and overall robustness. Top performers were 'Kanaria', 'Zimbelstern', *H. autumnale* 'Can Can' and 'Kugelsonne', 'Flammenspiel', 'Tijuana Brass', purplehead sneezeweed *(H. flexuosum)* 'Potter's Wheel', and 'Flammendes Kätchen'. To read more on this trial, visit *www.mtcubacenter.org/trials/helenium*.

THE NEARLY IMMORTAL GINKGO

Growing old is not much of a concern for many tree species. Ginkgo or maidenhair trees *(Ginkgo biloba)*, for instance, have been found to live for thousands of years. New research published in the *Proceedings of the National Academy of Sciences* (PNAS) takes a closer look at plant aging and reveals the secret to how ginkgo trees in particular are able to live so long. The key to the tree's longevity, according to the study, can be traced to the molecular level.



A mature ginkgo displays autumn color.

The researchers from China and the United States examined thin cores from 34 ginkgo trees of various ages in two areas of China. By looking at the growth rings, it was observed that the trees' growth rate did not slow down after hundreds of years, and in some cases, their growth

LEFT AND TOP RIGHT: COURTESY OF MT. CUBA CENTER. BOTTOM: AHS ARCHIVES

sped up. Additionally, other indicators of health such as leaf size, photosynthetic ability, and the seed-bearing quality of the trees did not vary by age.

Next, the researchers compared gene expression in the trees' cambium, the layer of tissue in the trunk that stimulates cell development and growth. To their surprise, they found no difference between the molecular structure of young and old trees; the capacity for continuous growth seemed to be steadily retained. Researchers concluded that ginkgos are thus unlikely to die of old age, but instead are killed by some combination of external stressors such as pests, diseases, soil compaction, and drought. To view the full study results, visit *www.pnas.org/content/117/4/2201*.

NATIVE AMERICAN HEIRLOOM SEEDS DONATED TO GLOBAL SEED VAULT

The Cherokee Nation has become the first Native American tribe in the United States invited to store its heirloom seeds at the Svalbard Global Seed Vault in Norway. Nine varieties of traditional Cherokee heirloom crops will be preserved in the long-term seed storage facility, which is nestled deeply inside a frozen mountain on a remote Norwegian island.

The nine samples collected by the Cherokee Nation Secretary of Natural Resources office include the tribe's most sacred corn variety, Cherokee White Eagle Corn, as well as seeds of other traditional crops like Cherokee Long Greasy Beans, Cherokee Trail of Tears Beans, Cherokee Turkey Gizzard black and brown beans, and Cherokee Candy Roaster Squash—all of which originated prior to European settlement of the Americas. By preserving the seeds, a piece of Cherokee

Above: Cherokee Nation Principal Chief Chuck Hoskin Jr., left, and Secretary of Natural Resources Chad Harsha hold packages of heirloom seeds that were deposited in the Svalbard Global Seed Vault in Norway in February. Among the seeds was Cherokee White Eagle Corn, left.

COURTESY OF WWW.ANADISGOI.COM (2)

cultural identity will be safeguarded for future generations.

Representing the world's largest collection of crop diversity, the Svalbard Global Seed Vault maintains seed samples from around the globe for use in the event of natural or human-made catastrophes that deplete the world's food supplies. The vault currently holds just over one million seed samples representing donations from almost every country in the world. Svalbard's deposit of the 2020 collection of seeds—including those of the Cherokee's Nation—took place in February. For more on Svalbard, visit *www.croptrust.org/our-work/svalbard-global-seed-vault*.

NEW STUDY REVEALS WOUNDS PRODUCE HEALTHIER ORGANIC PLANTS

Scientists from Texas A&M AgriLife Research in College Station discovered that organically grown produce benefited nutritionally from "wounding" caused by insects. The study, published in December 2019 in *Nature*'s "Scientific Reports," concluded that the damage attributed to insects caused a stress response in fruits and vegetables, which in turn triggered the plant to produce higher levels of antioxidant compounds.

Researchers have found that insect 'wounding"—such as the damage these Japanese beetles are causing on strawberry leaves—can enhance the health benefits of the fruits.

Using strawberries *(Fragaria ×ananassa)* as a model crop, the team of four scientists—Facundo Ibanez, Woo Young Bang, Leonardo Lombardini, and Luis Cisneros-Zevallos—mimicked the insect leaf-wounding that plants are typically exposed to prior to harvest and studied the aftereffects that occurred in the fruits. They observed that once leaf-wounding stress was applied to the strawberries a few days before harvesting, a systemic defensive response was initiated and the accumulation of antioxidant compounds within the fruits significantly increased. The higher levels of antioxidant compounds that appeared in organic fruits and vegetables were directly linked to the biotic stress caused by insect feeding or wounding. The scientists' research highlights the need for further study of how defensive stress responses in plants might yield healthier fruits and vegetables. To learn more about this study, visit *www.nature.com/articles/s41598-019-55033-w*.

NEW INSIGHTS ON THE EVOLUTION OF THE MODERN TOMATO

A team of biologists from the University of Massachusetts at Amherst, has traced the evolutionary history of the tomato from its origins as a wild blueberry-sized fruit in South America to the large domesticated one we have today. But during the course of the study, the team was surprised to discover a "missing link" in the evolution, when genetic testing revealed that today's cultivated tomato is most closely related to a weedlike tomato group still native to Mexico rather than, as earlier understood, to the semi-domesticated intermediate groups found throughout South America.

Prior to the study, it was thought that the domestication of the tomato involved two major transitions. The first transition being from wild *Solanum pimpinellifolium* (SP) to a semi-domesticated intermediate form, *S. lycopersicum* var. *cerasiforme* (SLC) in South America, and the second transition being from SLC to the fully domesticated tomato, *S. lycopersicum* var. *lycopersicum* (SLL). The University of Massachusetts study focused on the evolutionary changes occurring in the intermediate stages, however, and the results indicated that while many traits that are typical of cultivated tomatoes arose in SLC, they were then lost or diminished as these semi-domesticated groups spread northward. The researchers concluded, therefore, that a re-domestication of the weedy tomato group found in Mexico was responsible for those luscious tomatoes we all grow in our summer gardens. For more information on the study, visit *www.sciencedaily.com/releases/2020/01/200107170110.htm*.

THE GARDEN CLUB OF AMERICA'S 2020 PLANT OF THE YEAR

The Garden Club of America has announced that *Geum triflorum* is the winner of the organization's Montine McDaniel Freeman Horticulture Award and Plant of the Year. This lovely prairie plant, commonly known as prairie smoke or old man's whiskers, is native to the northern United States, from California to New York, and through most of southern Canada. Blooming in midspring to early summer, it displays reddish-pink or purple flowers that later reveal wispy, silvery-pink seedheads. In the wild, the airy habit of the fertilized seedpods creates the appearance of a smoky haze in midsummer, hence the

Wispy seedheads of *Geum triflorum*

LEFT: GERALD HOLMES; CALIFORNIA POLYTECHNIC STATE UNIVERSITY AT SAN LUIS OBISPO; BUGWOOD.ORG. TOP RIGHT: AHS ARCHIVES. BOTTOM RIGHT: CHARLIE MCDONALD, U.S. FOREST SERVICE

common name prairie smoke. Flourishing in part to full sun, prairie smoke tolerates a wide variety of soil types, dry conditions, and humidity. For more information, visit *www.gcamerica.org/gca-awards-plant-of-the-year*.

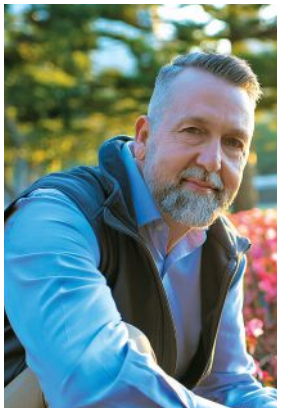
URBAN FLOWER STRIPS PROVIDE QUICK SUPPORT FOR BEES

The loss of natural habitats in urban environments has been linked to a rapid decrease not just in abundance, but in diversity, of pollinators. To help reverse the decline of flower-visiting insects, many cities have begun to implement greening measures, such as establishing designated flower strips, and these measures appear to be effective.

In a study published in February in the *Journal of Hymenoptera Research,* a group of scientists from the University of Munich assessed the speed and distance over which urban flower strips attract bees by monitoring nine 1,000-square-meter flower strips that had been recently planted in the city of Munich in Germany. The scientists identified and documented the bees visiting each strip and compared them to the total diversity of Munich's bee population and to the bee diversity at different distances from the strips. They anticipated that the new flower strips would attract a small group of common, non-threatened species and that specialist bees that only visit a limited variety of plant species would be in the minority compared to the city's overall species pool. This prediction was based on the premise that bees needed time to discover new food sources. However, the results of the assessment showed that 68 species of wild bees still managed to find the flower strips in just one year, thus demonstrating the effectiveness of simple green measures such as flower strips in providing foraging resources for pollinators in urban environments. To view the full study results, visit *https://jhr.pensoft.net/article/47507/list/8/*.

RED BUTTE GARDEN NAMES NEW EXECUTIVE DIRECTOR

Red Butte Garden at the University of Utah has appointed Jimmy L. Turner as its new executive director, effective March 23. Turner will replace Gregory Lee who is retiring from the Salt Lake City garden after 17 years in the leadership role. A veteran garden administrator, Turner returns to the United States after several years in Australia, where he served as director of horticulture management at the Royal Botanic Garden & Domain Trust, as well as Australian Botanic Garden Mount Annan, Blue Mountains Botanic Garden Mount Tomah, and Centennial Parklands. Before that, he was for more than a decade senior director of gardens at the Dallas Arboretum & Botanical Garden in Texas. His past achievements include increasing visitor engagement with innovative horticultural displays and creating some of the largest and most successful plant trials in the nation. Learn more at *www.unews.utah.edu/red-butte-garden-names-jimmy-l-turner-as-new-executive-director.*



Jimmy L. Turner

COURTESY OF RED BUTTE GARDEN

Written by Editorial Intern Charlene Chuquillanqui.

AMERICAN HORTICULTURAL SOCIETY

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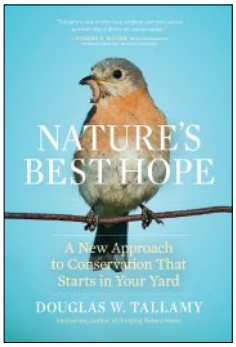
www.ahsgardening.org

Recommendations for Your Gardening Library

Nature's Best Hope: A New Approach to Conservation that Starts in Your Yard

Douglas W. Tallamy. Timber Press, Portland, OR, 2020. 256 pages. Publisher's price, hardcover: $29.95.



THIS LATEST book from Doug Tallamy gathers the core ideas, research, and call for activism from his first two books and ups the ante. While Tallamy devotees may see some rehashing of thoughts from his previous works—*Bringing Nature Home* (2009) and *The Living Landscape* (co-written with Rick Darke, 2014)—this book updates the developing science on native plant and pollinator interactions while pushing harder for urban and suburban dwellers to take immediate action in helping revive the natural ecosystem.

The book begins with an overview of the viewpoints of Aldo Leopold, well known for his landscape ethic philosophy, and E.O. Wilson, whose Half-Earth proposition states 50 percent of the planet should be left to its own devices. From there Tallamy challenges us revive wildness, fight for other species, and find deeper meaning with our home places and one another in the act of gardening for nature. Even amid the dire realities of the climate crisis and habitat loss, he sees the greatest hope in actions not only in the enormous scale of national parks, but in the environment around each of us—in hellstrips, foundation beds, school grounds, and business frontages—a space that Tallamy thinks we should view as a "Homegrown National Park." Every bit of lawn we replace with plants native to the ecoregion—and carefully chosen for aesthetics and ecological function—means we are practicing a landscape ethic that provides critical habitats for species we depend upon.

Personally, I found the "Frequently Asked Questions" section at the end of the book most compelling—partly because it's a no-holds-barred coverage of hot-button topics such as invasive plants, novel ecosystems, butterfly bush, Lyme disease, artificial plant migration, co-evolution, and native plant cultivars. This portion could be read first as an introduction to the book.

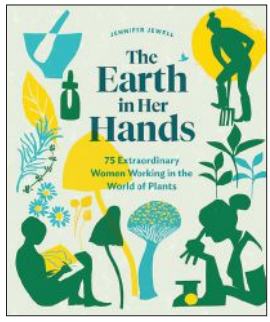
Nature's Best Hope isn't just what we can do with boots on the ground; it's about fighting for a changed cultural mindset. We can experience the health, wellness, and resiliency of life if we're willing to embrace all of the messy complications that make this world worth experiencing in all its wild promise.

—Benjamin Vogt

A resident of Lincoln, Nebraska, Benjamin Vogt is the author of A New Garden Ethic: Cultivating Defiant Compassion for an Uncertain Future *(New Society Publishers, 2017).*

The Earth in Her Hands: 75 Extraordinary Women Working in the World of Plants

Jennifer Jewell. Timber Press, Portland, OR, 2020. 324 pages. Publisher's price, hardcover: $35.



THE INSPIRATIONAL women profiled in *The Earth in Her Hands* come from many walks of life, but they all have some meaningful connection with plants. "I'm interested in how the plant world is improved by not only greater representation of women generally," writes author Jennifer Jewell in her introduction, "but also by diversity among those women." Those featured include accomplished plantswomen, scientists, environmentalists, artists, writers, photographers and executives from around the world, with a tilt toward the West Coast, home region of Jewell, known for her public radio podcast, Cultivating Place.

The women's profiles are arranged alphabetically by name rather than by occupation, encouraging readers to investigate a range of careers. Many readers will recognize names like Jamaica Kincaid, Vandana Shiva, and Amy Stewart, and longtime plantspeople will no doubt scan the pages for acquaintances. Simply leafing through this volume turns up one intriguing life story after another. (The American Horticultural Society is represented by former President and CEO Beth Tuttle and current Board member Mary Pat Matheson, President and CEO of the Atlanta Botanical Garden.)

Jewell captures each individual's voice and tells the story of a life and career in four pages of biography and quotations, each with a large portrait photo; these are just the right length, leaving readers wanting more.

This is a book to dip in and out of, wandering down new trails and discovering the paths that led these women to their vocations. Writer Marta McDowell first spent 20 years in corporate life. Eliza Blank, a former brand strategist, started a houseplant company in New York City. Others, like Janet Sluis, a sixth-generation nurserywoman, were born into the plant world.

Representing all stages of life experience, the 75 women in this book are making a living and finding purpose in the green professions. *The Earth in Her Hands* is an enjoyable read for anyone who loves plants, but it would make an especially eye-opening gift for a teenager who loves growing things, or for a gardening friend considering a midlife career change.

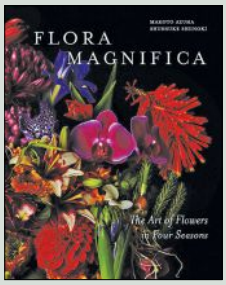
—Charlotte Germane

Charlotte Germane is a garden writer who works in communications for nonprofits in Washington, D.C.

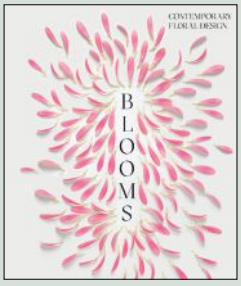
GARDENER'S BOOKS: TRANSFORMING FLOWERS INTO ART

THERE IS an inherent beauty in plants that has made them the perfect focal point for art throughout history. Today, floral art is as popular as ever and artists from around the world continue to incorporate the beauty of flowers in their work. Two recently published coffee-table books showcase the new and interesting ways in which contemporary floral designers are using flowers for artistic expression.

Flora Magnifica (Thames & Hudson, 2019, $50) is a collection of vivid photographs assembled by floral artist Makoto Azuma and botanical photographer Shunsuke Shiinoki. Azuma and Shiinoki selected and combined hundreds of diverse plant species to create astonishingly beautiful floral arrangements that are captured and preserved in time by photography. The plants in the photographs—echoing still-life paintings of the 17th century—are meticulously arranged to exemplify the exuberance and beauty of the plants, as well as to reflect on their transience. Illustrating the ephemeral nature of the plants, the full-page photographs are arranged into four sections based on the cycle of the seasons. The four sections showcase a variety of plants as they as move from their budding out in spring, to lushness in summer, withering in autumn, and sleep in winter. An illustrated index allows readers to identify the different plant species featured in the photographs. *Flora Magnifica* is book that can be appreciated by anyone with an interest in photography, flowers, and art.



A compendium of over 80 floral designers, ***Blooms*** (Phaidon, 2019, $49.95), illustrates how the art of floral arrangement is ever-evolving. The book is packed with images of groundbreaking designs created by diverse contributors who run the gamut from established artists to rising newcomers. These eccentric floral designs signify a new era of floristry that is not defined by one single style or trend. The flower arrangements—from large-scale installations to small bouquets—are truly mesmerizing as they embody each artist's unique style and interests. Showcased in a multitude of settings that range from museums to fashion shows, outdoor public areas, photoshoots, weddings, and even outer space, each artist's work highlights how floristry is making inroads into other arenas, such as the fashion industry, interior design, and other forms of visual arts. In today's visual culture, where all things aesthetically-pleasing are desired, there's no wonder a fascination for flowers is growing. *Blooms* is the perfect book to flip through to get inspired by floral art.

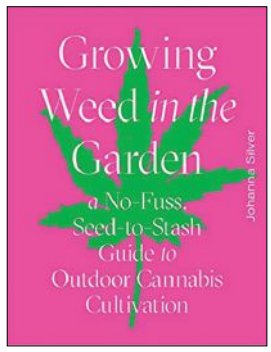


—Charlene Chuquillanqui, Editorial Intern

Growing Weed in the Garden: A No-Fuss, Seed-to-Stash Guide to Outdoor Cannabis Cultivation

Johanna Silver. Abrams Books, New York, NY, 2020. 256 pages. Publisher's price, hardcover: $29.99.

WHETHER YOU call it weed, grass, dope, ganja, marijuana or pot, chances are you've been influenced by decades of hype and hysteria about cannabis. It's been viewed either as a gateway drug or a cash crop grown in secret rooms for far too long. So it's refreshing to find a book that approaches cannabis as a garden plant.



For anyone interested in cannabis as a plant—and of course the legality of growing it varies from state to state—these commonsense sentences from the introduction of *Growing Weed in the Garden* set the tone: "Prohibition forced breeding and growing underground and indoors. You'll hear about clones and strains and vegetative states. That lingo a) makes the whole thing seem complicated, and b) doesn't translate well to any other plant you might want to grow (clones are otherwise called cuttings, strains is the wrong word for varieties, and vegetative state just means growing)." Well, hallelujah!

Author Johanna Silver treats cannabis like any other plant that people want to grow. She provides readers with practical, science-based knowledge and current, myth-busting intelligence. From plant size to watering, the author goes beyond the growing of weed for profit and addresses the interests of plant lovers and home gardeners.

Because of cannabis's rising popularity in horticulture, many are calling it "the new tomato." This book provides those growing cannabis at home the same practical information about soils, watering, varieties, and supporting structures that tomato growers require. It contains down-to-earth instruction about propagation, fertilizers, and pruning.

Toward the end of the book, as she discusses harvesting the buds, Silver writes, "Everyone has an opinion on the best way to do every part of the process, especially the harvest and drying. But at the end of the day, you're going to learn your plants. You're going to touch them and smell them. You're going to grow some weed. It's going to be pretty good weed, and everything is going to be OK."

For those interested in cannabis, from the history of the plant to how to raise it in your own backyard, this book provides the necessary information along with beautiful photos and welcome doses of humor. And whether you are interested in cannabis or not, be aware that weed is making major inroads in the horticulture industry and this book is only one of the first of many to be published on this topic.

—C.L. Fornari

C.L. Fornari is a plant geek who speaks, writes, and podcasts about gardens and plants, including cannabis. Her blog and information can be found at www.gardenlady.com.

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Horticultural Events from Around the Country

NORTHEAST

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

RAP MAR. 25. **Chance Encounters of a Young Gardener: A Horticultural Lecture by Uziel Crescenzi.** Wave Hill. Bronx, NY. (718) 549-3200. *www.wavehill.org.*

RAP MAR. 28. **Seed Starting & Garden Planning Workshop.** Merryspring Nature Center. Camden, ME. (207) 236-2239. *www.merryspring.org.*

RAP MAR. 29. **The Healing Power of Plants.** Day event. Buffalo and Erie County Botanical Gardens. Buffalo, NY. (716) 827-1584. *www.buffalogardens.com.*

RAP APR. 18. **Barn Talk: Thinking Outside the Box—Using Excellent Plants in Creative Ways.** Workshop. Hollister House Garden. Washington, CT. (860) 868-2200. *www.hollisterhousegarden.org.*

RAP APR. 23. **Uses and Lore of the Damask Rose.** Course. Massachusetts Horticultural Society. The Gardens at Elm Bank. Wellesley, MA. (617) 933-4900. *www.masshort.org.*

RAP APR. 25. **ArborEarth Festival.** Bartlett Arboretum and Gardens. Stamford, CT. (203) 322-6971. *www.bartlettarboretum.org.*

RAP APR. 25 & 26. **Sakura Matsuri.** Cherry blossom festival. Brooklyn Botanic Garden. Brooklyn, NY. (718) 623-7200. *www.bbg.org.*

Looking ahead

RAP MAY 8 & 9. **Plant Sale.** Berkshire Botanical Garden. Stockbridge, MA. (413) 298-3926. *www.berkshirebotanical.org.*

RAP MAY. 9. **Green Animals Plant Sale.** Green Animals Topiary Garden. Portsmouth, RI. (401) 683-1267. *www.newportmansions.org.*

RAP MAY 9–NOV. 1. **KUSAMA: Cosmic Nature.** Exhibition. The New York Botanical Garden. Bronx, NY. (718) 817-8700. *www.nybg.org.*

RAP MAY 10. **Lilac Sunday.** Tour and family activities. The Arnold Arboretum of Harvard University. Boston, MA. (617) 524-1718. *www.arboretum.harvard.edu.*

MID-ATLANTIC

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

RAP MAR. 21. **Narcissus & Other Early Spring Bloomers Walk & Talk.** Norfolk Botanical Garden. Norfolk, VA. (757) 441-5830. *www.norfolkbotanicalgarden.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 or other benefits. Special events may not be included; contact the host site for details or visit *www.ahsgardening.org/rap.*

RAP MAR. 26. **Designing a Garden for Birds.** Lecture. The Frelinghuysen Arboretum. Morristown, NJ. (973) 326-7601. *www.arboretumfriends.org.*

APR. 17–19. **2020 Garden Symposium.** The Art Museums of Colonial Williamsburg. Williamsburg, VA. (888) 965-7254. *www.colonialwilliamsburg.com.*

RAP APR. 18. **Plant Sale.** Historic London Town and Gardens. Edgewater, MD. (410) 222-1919. *www.historiclondontown.org.*

APR. 18 & 19. **The Washington Daffodil Society Annual Show.** Alexandria Scottish Rite Temple. Alexandria, VA. *www.thewashingtondaffodilsociety.org.*

RAP APR. 22. **Top Ten: Wildflowers.** Lecture. Adkins Arboretum. Ridgely, MD. (410) 634-2847. *www.adkinsarboretum.org.*

RAP APR. 25. **Herbs Galore & More.** Festival and plant sale. Maymont. Richmond, VA. (804) 358-7166. *www.maymont.org.*

RAP APR. 25. **Rare Plant Auction.** The Delaware Center for Horticulture. Longwood Gardens. Kennett Square, PA. (302) 658-6262. *www.thedch.org.*

RAP APR. 25 & 26. **Garden Fair and Plant Sale.** U.S. National Arboretum. Washington, DC. (202) 544-8733. *www.fona.org.*

RAP APR. 26. **Earth Day Plant Sale & Picnic.** Tudor Place Historic House & Garden. Washington, DC. (202) 965-0400. *www.tudorplace.org.*

Looking ahead

RAP MAY 1 & 2. **PlantFest.** Plant Sale. Lewis Ginter Botanical Garden. Richmond. VA. (804) 262-9887. *www.lewisginter.org.*

RAP MAY 8–10. **Art in Bloom.** Winterthur Museum, Garden & Library. Winterthur, DE. (302) 888-4600. *www.winterthur.org.*

SOUTHEAST

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

RAP MAR. 28 & 29. **Spring Plant Sale.** Heathcote Botanical Gardens. Fort Pierce, FL. (772) 464-4672. *www.heathcotebotanicalgardens.org.*

RAP APR. 3. **Explore Coastal Mangroves and Seagrass Beds on the Carefree Learner Boat.** Marie Selby Botanical Gardens. Sarasota, FL. (941) 366-5731. *www.selby.org.*

RAP APR. 4. **Raulston Blooms! A Garden Festival for All Ages.** JC Raulston Arboretum at NC State University. Raleigh, NC. (919) 515-3132. *www.jcra.ncsu.edu.*

RAP APR. 9. **Spring Bulb Walk and Master Class.** Yew Dell Botanical Gardens. Crestwood, KY. (502) 241-4788. *www.yewdellgardens.org.*

RAP APR. 11 & 12. **International Orchid & Bromeliad Show.** Flamingo Gardens. Davie, FL. (954) 473-2955. *www.flamingogardens.org.*

RAP APR. 17–19. **Spring Plant Sale.** Huntsville Botanical Garden. Huntsville, AL. (256) 830-4447. *www.hsvbg.org.*

RAP APR. 17 & 18. **Spring Plant Sale at the Garden.** Memphis Botanic Garden. Memphis, TN. (901) 636-4100. *www.memphisbotanicgarden.com.*

RAP APR. 18 & 19. **Spring Garden Weekend and Plant Sale.** Fairchild Tropical Botanic Garden. Coral Gables, FL. (305) 667-1651. *www.fairchildgarden.org.*

RAP APR. 22. **Exploring Native Plants.** Course. Atlanta Botanical Garden. Atlanta, GA. (404) 876-5859. *www.atlantabg.org.*

RAP APR. 23. **Spring Ephemerals Flower: Then What?** Workshop. Knoxville Botanical Garden and Arboretum. Knoxville, TN. (865) 862-8717. *www.knoxgarden.org.*

RAP APR. 24 & 25. **Dixon Garden Fair: Offering Rare, Choice, and Unusual Plants.** Plant

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MARKETPLACE | EVENTS

Cheekwood Welcomes Back Chihuly

THIS APRIL, the work of world-renowned glass artist Dale Chihuly returns to Cheekwood Estate & Gardens in Nashville, Tennessee, with "Chihuly at Cheekwood." The exhibition not only marks the 10-year anniversary of the prior Chihuly exhibition at Cheekwood, but also helps celebrate Cheekwood's 60th anniversary as a public institution.

Chihuly's Blue Fiddleheads and Neodymium Reeds are beautifully reflected in a garden pool at Cheekwood during the first exhibition in 2010.

The exhibition will feature remarkable, large-scale outdoor sculptures placed throughout the gardens, as well as beautiful indoor installations—including a chandelier installation in the Mansion Loggia and a neon installation inside the art galleries. After sunset, visitors can still enjoy Chihuly's vibrant work by taking a nighttime stroll through Cheekwood's illuminated gardens during "Chihuly Nights."

"Dale Chihuly's work connects two of Cheekwood's greatest assets, art and gardens," says Campbell Mobley, Cheekwood's curator. "The sculptures perfectly complement Cheekwood's vast array of gardens, inviting the visitor to consider a different, yet equally rich, experience of the estate."

Coinciding with the opening of Chihuly's exhibition, Cheekwood will reopen two gardens that have gone through renovations—the Ann & Monroe Carell Jr. Family Sculpture Trail and Blevins Japanese Garden—and unveil the new Bracken Foundation Children's Garden.

"Chihuly at Cheekwood" will be on display April 25 to November 1. For more information, visit *www.cheekwood.org.*

—Charlene Chuquillanqui, Editorial Intern

Sale. Dixon Gallery and Gardens. Memphis, TN. (901) 761-5250. *www.dixon.org.*

RAP APR. 25. **Earth Day at the Gardens.** Birmingham Botanical Gardens. Birmingham, AL. (205) 414-3950. *www.bbgardens.org.*

RAP APR. 25. **Gardenmania.** Festival. Cape Fear Botanical Garden. Fayetteville, NC. (910) 486-0221. *www.capefearbg.org.*

Looking ahead

RAP MAY 1 & 2. **Spring Plant Sale.** Aldridge Gardens. Hoover, AL. (205) 682-8019. *www.aldridgegardens.com.*

RAP MAY 3. **Plantapalooza.** Plant sale. University of Tennessee Gardens. Knoxville, TN. (865) 974-7151. *www.utgardens.tennessee.edu.*

NORTH CENTRAL

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

RAP MAR. 27 & 28. **Cultivating Connected Communities Spring Symposium.** Allen Centennial Garden. Union South. Madison, WI. (608) 576-2501. *www.allencentennialgardens.org.*

RAP MAR. 27 & 28. **2020 Garden Book Exchange.** Boerner Botanical Gardens. Hales Corners, WI. (414) 525-5600. *www.boernerbotanicalgardens.org.*

RAP APR. 4. **African Violets, Gesneriads, Terrarium and Fairy Garden Plants Display and Sale.** The University of Michigan Matthaei Botanical Gardens. Ann Arbor, MI. (734) 647-7600. *www.mbgna.umich.edu.*

RAP APR. 4. **Full Day Apple Grafting & Orchard School.** Seed Savers Exchange. Decorah, IA. (563) 382-5990. *www.seedsavers.org.*

RAP APR. 4 & 5. **Woodland Wildflower Sale.** Lincoln Memorial Garden. Springfield, IL. (217) 529-1111. *www.lincolnmemorialgarden.org.*

RAP APR. 16. **Planting for Pollinators.** Lecture. Oak Park Conservatory. Oak Park, IL. (708) 725-2400. *www.fopcon.org.*

RAP APR. 18. **Scarborough Faire Beyond Parsley, Sage, Rosemary and Thyme.** Festival. The Michiana Unit of the Herb Society of America. Fernwood Botanical Garden & Nature Preserve. Niles, MI. (269) 695-6491. *www.fernwoodbotanical.org.*

RAP APR. 18 & 19. **Perennial Premiere.** Plant sale. Newfields Horticultural Society. Indianapolis, IN. (317) 923-1331. *www.discovernewfields.org.*

RAP APR. 19–21. **Frederik Meijer Gardens & Sculpture Park 25th Anniversary Celebration.** Meijer Gardens. Grand Rapids, MI. (888) 957-1580. *www.meijergardens.org.*

RAP APR. 24. **Arbor Day Celebration.** Klehm Arboretum & Botanic Garden. Rockford, IL. (815) 965-8146. *www.klehm.org.*

RAP APR. 24 & 25. **Spring Affair Plant Sale & Garden Event.** Nebraska Statewide Arboretum. Lancaster Event Center. Lincoln, NE. (402) 472-2971. *www.plantnebraska.org.*

RAP APR 25. **Tree Planting Ceremony.** Hidden Lake Gardens. Tipton, MI. (517) 431-2060. *www.hiddenlakegardens.msu.edu.*

Looking ahead

RAP MAY 1. **Garden Social and Auction.** Iowa Arboretum & Gardens. Madrid, IA. (515) 795-3216. *www.iowaarboretum.org.*

RAP MAY 2. **Heirloom Plant Sale.** Seed Savers Exchange. Decorah, IA. (563) 382-5990. *www.seedsavers.org.*

RAP MAY 9 & 10. **Midwest Bonsai Society Spring Show & Sale.** The Midwest Bonsai Society. Chicago Botanic Garden. Glencoe, IL. (847) 835-5440. *www.chicagobotanic.org.*

SOUTH CENTRAL

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

RAP APR. 4. **Master Gardener Plant Sale.** LSU AgCenter Botanic Gardens. Baton

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Rouge, LA. (225) 763-3990. *www.lsu.edu/botanic-gardens.*

RAP APR. 4. **Spring Plant Sale.** Fort Worth Botanic Garden. Fort Worth, TX. (817) 392-5510. *www.fwbg.org.*

RAP APR. 4 & 5. **Spring Garden Show.** New Orleans Botanical Garden. New Orleans, LA. (504) 483-9488. *www.neworleanscitypark.com/botanical-garden.*

RAP APR. 5. **Docent-Led Tour: Spring Up!** Powell Gardens. Kingsville, MO. (816) 697-2600. *www.powellgardens.org.*

RAP APR. 10 & 11. **SpringFest at Woodward Park.** Plant sale. The Tulsa Garden Center. Tulsa, OK. (918) 576-5155. *www.tulsagardencenter.org.*

RAP APR. 18. **Spring Native Plant Sale.** Lady Bird Johnson Wildflower Center. Austin, TX. (512) 232-0100. *www.wildflower.org.*

RAP APR. 24 & 25. **Plant Sale.** Botanical Garden of the Ozarks. Fayetteville, AR. (479) 750-2620. *www.bgozarks.org.*

RAP APR. 24–27. **FloraKansas: Native Plant Festival.** Plant sale and garden tours. Dyck Arboretum of the Plains. Hesston, KS. (620) 327-8127. *www.dyckarboretum.org.*

Looking ahead

RAP MAY 1 & 2. **Herb Days Plant Sale.** The St. Louis Herb Society. Missouri Botanical Garden. St. Louis, MO. (314) 577-5118. *www.mobot.org.*

RAP MAY 3. **Flora Fest.** Family activities, garden walks, and butterfly release. Texas Discovery Gardens. Dallas, TX. (214) 428-7476. *www.txdg.org.*

RAP MAY 9. **OKC Garden Fest.** Myriad Botanical Gardens. Oklahoma City, OK. (405) 445-7087. *www.oklahomacitybotanicalgardens.com.*

SOUTHWEST

AZ, CO, NM, UT

RAP MAR. 21 & 22. **Spring Plant Sale.** Desert Botanical Garden. Phoenix, AZ. (480) 941-1225. *www.dbg.org.*

RAP MAR. 22. **Haru in the Garden.** Spring festival with family-friendly activities. Japanese Friendship Garden of Phoenix. Phoenix, AZ. (602) 274-8700. *www.japanesefriendshipgarden.org.*

RAP APR. 4. **Plants for the Santa Fe Area.** Lecture. Santa Fe Botanical Garden. Santa Fe, NM. (505) 471-9103. *www.santafebotanicalgarden.org.*

RAP APR. 11. **Wildflowers: What's Bloomin'?** Nature walk. Tohono Chul. Tucson, AZ. (520) 742-6455. *www.tohonochul.org.*

Looking ahead

RAP MAY 8 & 9. **Spring Plant Sale.** Denver Botanic Gardens. Denver, CO. (720) 865-3500. *www.botanicgardens.org.*

RAP MAY 9. **Spring Plant Sale.** Red Butte Garden. Salt Lake City, UT. (801) 585-0556. *www.redbuttegarden.org.*

WEST COAST

CA, HI, NV

RAP MAR. 21 & 22. **Spring Plant Sale.** Springs Preserve. Las Vegas, NV. (702) 822-7700. *www.springspreserve.org.*

RAP MAR. 27 & 28. **Incredible Edibles.** Lecture and plant sale. Los Angeles County Arboretum & Botanic Garden. Arcadia, CA. (626) 821-3222. *www.arboretum.org.*

RAP MAR. 28. **Fruit Tree Grafting.** Workshop. Mendocino Coast Botanical Gardens. Fort Bragg, CA. (707) 964-4352. *www.gardenbythesea.org.*

MAR. 28 & 29. **The Theodore Payne Native Plant Garden Tour.** Theodore Payne Foundation. Sun Valley, CA. (818) 768-1802.

www.theodorepayne.org.

APR. 2–5. **San Fran-Nor Cal Flower & Garden Show.** Cal Expo. Sacramento, CA. (559) 322-2211. *www.norcalgardenshow.com.*

RAP APR. 4. **Spring Plant Sale.** Turtle Bay Exploration Park's McConnell Arboretum and Botanical Gardens. Redding, CA. (530) 243-8850. *www.turtlebay.org.*

RAP APR. 4 & 5. **Got Green? & Tomatomania!** Festival and tomato sale. San Diego Botanic Garden. Encinitas, CA 92024. (760) 436-3036. *www.sdbgarden.org.*

RAP APR. 4 & 5. **Green Scene Plant & Garden Expo.** Fullerton Arboretum. Fullerton, CA. (657) 278-3407. *www.fullerton arboretum.org.*

RAP APR. 11. **Carnivorous Plant Workshop and Exchange.** Harold L. Lyon Arboretum. Honolulu, HI. (808) 988-0456. *www.manoa.hawaii.edu/lyonarboretum.*

RAP APR. 19. **Medicinal Plant Cultivation in Techtropolis.** Workshop. University of California Botanical Garden at Berkeley. Berkeley, CA. (510) 643-2755. *www.botanicalgarden.berkeley.edu.*

RAP APR. 25. **All About Air Plants.** Workshop. The Ruth Bancroft Garden. Walnut Creek, CA. (925) 944-9352. *www.ruthbancroftgarden.org.*

Looking ahead

RAP MAY 1– SEPT. 15. **Sculptura Botanica.** Exhibit. Sherman Library & Gardens. Corona del Mar, CA. (949) 673-2261. *www.thesherman.org.*

RAP MAY 9. **Plant Sale.** UC Davis Arboretum and Public Garden. Davis, CA. (530) 752-4880. *www.arboretum.ucdavis.edu.*

Mount Pisgah Arboretum's Wildflower & Music Festival

ON SUNDAY, May 17, Mount Pisgah Arboretum in Eugene, Oregon, will host its 40th annual Wildflower & Music Festival. Since 1980, this popular spring event has offered the local community a place to celebrate native flora with a family-fun day of guided nature walks, live music, arts and crafts, tasty food, a plant sale, and a spectacular display of more than 300 wildflower species that signals the end of winter. "We don't have terribly long or harsh winters in western Oregon, but we do contend with months of gloomy, gray skies," says Brad van Appel, the arboretum's executive director. "The pop of color that wildflowers bring to the landscape from March to May really grabs the attention of area residents and visitors alike."

Visitors enjoy an impressive display of wildflower species in Mount Pisgah's White Oak Pavilion.

This year's festival also coincides with the 40th anniversary of the Mount St. Helens eruption, which could be seen and heard by attendees at the first festival in 1980. Local ecologist and former Mount Pisgah board member Dave Wagner—who served as a volunteer during the first festival—will talk about the experience during a presentation to commemorate both events.

While the annual event has evolved over the years, its overarching goal has never changed. The festival continues to strengthen Mount Pisgah's mission by directly engaging people of all ages in learning about the ecoregion and the natural world, as well as serving to "broaden our support in the community, and increase the visibility of the work done by the Arboretum and other environmental organizations in the area," says van Appel. To learn more, visit *www.mountpisgaharboretum.com.*

—Charlene Chuquillanqui, Editorial Intern

NORTHWEST

AK, ID, MT, OR, WA, WY

RAP MAR. 27–29. **Spring Ephemeral Plant Sale.** Kruckeberg Botanic Garden. Shoreline, WA. (206) 546-1281. *www.kruckeberg.org.*

RAP MAR. 28. **Night Hike at The Garden!** Leach Botanical Garden. Portland, OR. (503) 823-9503. *www.leachgarden.org.*

APR. 4. **GardenPalooza.** Festival. Fir Point Farms. Aurora, OR. (503) 793-6804. *www.gardenpalooza.com.*

RAP APR. 8. **Early Detection for Invasive Pests & Pathogens Community Science Training.** Community science project. Hoyt Arboretum. Portland, OR. (503) 865-8733. *www.hoytarboretum.org.*

APR. 11 & 12. **Hortlandia 2020 Spring Plant & Art Sale.** The Hardy Plant Society of Oregon. Portland EXPO Center. Portland, OR. (503) 224-5718. *www.hardyplantsociety.org.*

RAP APR. 15. **The Pleasure Garden.** Lecture. Bellevue Botanical Garden Society. Bellevue Botanical Garden. Bellevue, WA. (425) 452-2750. *www.bellevuebotanical.org.*

Looking ahead

RAP MAY 9. **Digging in the Dirt.** Outdoor planting activity and brunch. The Oregon Garden. Silverton, OR. (503) 874-8100. *www.oregongarden.org.*

MAY 10. **Wildflower and Weed Show.** The Idaho Native Plant Society. Jim Hall Foothills Learning Center. Boise, ID. (208) 954-1092. *www.idahonativeplants.org.*

CANADA AND CAYMAN ISLANDS

MAR. 13–22. **Canada Blooms: The Flower & Garden Festival.** EnerCare Centre. Toronto, ON. (416) 447-8655. *www.canadablooms.com.*

RAP MAR. 28 & 29. **Annual Orchid Show.** Queen Elizabeth II Botanic Park. Grand Cayman, Cayman Islands. (354) 947-9642. *www.botanic-park.ky.*

RAP APR. 23. **The Schachen: A Secret Garden Nestled in the Bavarian Alps.** Lecture. Toronto Botanical Garden. Toronto, ON. (416) 397-1341. *www.torontobotanicalgarden.ca.*

RAP APR. 25 & 26. **Spring Plant Sale.** Horticulture Centre of the Pacific. Victoria, BC. (250) 479-6162. *www.hcp.ca.*

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PLANT LABELS

PRONUNCIATIONS AND HARDINESS ZONES

Most of the cultivated plants described in this issue are listed here with their pronunciations and USDA Plant Hardiness Zones. The hardiness zones are listed in the form of an approximate range in which year-round temperatures are appropriate for growing each plant. 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.

While the zones are a good place to start in determining plant adaptability in your region, factors such as soil type, light exposure, seasonal rainfall patterns, 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–C

Acis autumnalis AY-sis aw-tum-NAL-iss (5–9)
Actaea racemosa ack-TEE-uh ras-eh-MO-suh (3–8)
Adiantum pedatum ad-ee-AN-tum peh-DAY-tum (3–8)
Adonis amurensis uh-DOH-niss am-ur-EN-siss (4-7)
Allium sphaerocephalon AL-ee-um sfeer-oh-SEFF-uh-lon (4–11)
Ammi majus AM-ee MAY-juss (0-0)
Anemone ×hybrida uh-NEM-o-nee HY-brih-duh (4–8)
A. nemorosa A. neh-mor-O-suh (4–8)
Anethum graveolens uh-NEE-thum gruh-VEE-o-lenz (0–0)
Anthriscus sylvestris an-THRIS-kus sil-VES-triss (7–10)
Aralia racemosa uh-RAY-lee-uh ras-eh-MO-suh (5–9)
Arisaema sikokianum air-ih-SEE-muh sih-ko-kee-AN-um (4–9)
Asclepias syriaca ass-KLE-pee-us sih-rih-AY-kuh (3–9)
A. tuberosa A. too-bur-O-suh (4–9)
Astrantia major uh-STRAN-tee-uh MAY-jer (4–7)
Buxus microphylla BUCKS-us my-kro-FIL-luh (6–9)
B. sempervirens B. sem-pur-VY-renz (5–8)
B. sinica* var. *insularis B. SIH-nih-kuh var. in-soo-LAIR-iss (4–8)
Calamagrostis ×acutiflora kah-luh-mah-GROS-tiss ak-yew-tih-FLOR-uh (5–9)
Camassia leichtlinii kuh-MASS-ee-uh lykt-LIN-ee-eye (4–9)
Cardamine quinquefolia kar-DUH-mine kwin-kweh-FO-lee-uh (6–8)
Celtica gigantea SEL-tih-kuh jy-GAN-tee-uh (5–9)
Cephalaria gigantea sef-uh-LAIR-ee-uh jy-gan-TEE-uh (3–7)
Chaenomeles japonica kee-NOM-uh-leez jah-PON-ih-kuh (5–9)
Chaerophyllum hirsutum keer-ah-FIL-lum her-SOO-tum (6–9)
Corydalis solida kuh-RID-uh-liss SOL-ih-duh (5–7)
Cotinus coggygria ko-TY-nus ko-JEE-gree-uh (4–8)
Crambe cordifolia KRAM-bee kor-dih-FO-lee-uh (6–9)
Crocosmia ×crocsmiiflora kro-KAHZ-me-uh kro-kos-me-ih-FLOR-uh (6–9)
Crocus speciosus KRO-kus spee-see-O-sus (4–9)
Cydonia oblonga sy-DOH-nee-uh ob-LON-guh (5–9)

D–K

Dierama pulcherrimum dy-uh-RAH-muh pul-KER-rih-mum (8–10)
Digitalis ferruginea dih-jih-TAL-iss fair-oo-JIN-ee-uh (4–9)
Doronicum orientale doh-RON-ih-kum or-ee-en-TAL-ee (4–8)
Dryopteris celsa dry-OP-ter-iss SEL-suh (6–8)
Enemion biternatum eh-NEH-mee-ahn bee-TER-nah-tum (4–8)
Eryngium planum ee-RIN-jee-um PLAY-num (5–9)
E. yuccifolium E. yuk-ih-FO-lee-um (3–8)
Erythronium oregonum air-ih-THRO-nee-um or-eh-GAN-um (7–9)
E. revolutum E. reh-vo-LOO-tum (5–9)
Euphorbia corollata yew-FOR-bee-uh kor-o-LAY-tuh (5–8)
Galanthus reginae-olgae guh-LAN-thus REJ-in-ee-OL-gee (6–8)
Geranium libani juh-RAY-nee-um LIH-ban-eye (6–9)
Gypsophila paniculata jip-SOF-ih-luh pan-ik-yew-LAY-tuh (4–9)
Hacquetia epipactis ha-KWEE-shee-uh eh-pih-PAK-tiss (5–7)
Helictotrichon sempervirens hel-ik-toh-TRY-kon sem-pur-VY-renz (4–9)
Heliopsis helianthoides hee-lee-OP-siss hee-lee-an-THOY-deez (4–9)
Hibiscus moscheutos hy-BISS-kus mos-KOO-tos (5–10)
Ilex crenata EYE-leks kreh-NAY-tuh (6–9)
I. glabra I. GLAB-ruh (5–9)
I. vomitoria I. vom-ih-TOR-ee-uh (7–9)
Kirengeshoma palmata kee-reng-geh-SHO-muh pal-MAY-tuh (5–8)
Knautia macedonica NAW-tee-uh mass-uh-DON-ih-kuh (5–9)

L–O

Lamprocapnos spectabilis lam-pro-KAP-nos spek-TAH-bih-liss (3–9)
Lathyrus vernus LATH-ih-rus VER-nus (5–9)
Leucojum aestivum lew-KO-jum ES-tih-vum (3–9)
Lewisia rediviva loo-ISS-ee-uh reh-dih-VY-vuh (4–8)
Matteuccia struthiopteris muh-TEW-key-uh strew-thee-OP-tur-iss (2–8)
Mertensia pulmonarioides mur-TEN-see-uh pul-mon-air-ee-OY-deez (3–7)
Molinia caerulea moh-LEEN-ee-uh see-ROO-lee-uh (5–9)
Muhlenbergia capillaris mew-len-BUR-jee-uh kap-ih-LAIR-iss (6–9)
Narcissus cyclamineus nar-SIS-sus sy-kluh-MIN-ee-us (4–9)
Nassella tenuissima nah-SEL-luh ten-yew-ISS-ih-muh (7–11)
Oenothera lindheimeri ee-NOTH-ur-uh lind-HY-mur-eye (5–9)

P–Z

Patrinia scabiosifolia pah-trin-EE-uh skay-bee-o-sih-FO-lee-uh (5–8)
Persicaria microcephala pur-sih-KAIR-ee-uh my-kro-SEF-uh-luh (5–8)
Phygelius capensis fy-JEE-lee-us kuh-PEN-sis (7–9)
Physocarpus opulifolius fy-so-KAR-pus op-yew-lih-FO-lee-us (3–7)
Pittosporum tobira pit-toh-SPOR-um toh-BIR-uh (8–11)
Primula sieboldii PRIM-yew-luh see-BOL-dee-eye (4–8)
Prunus maritima PROO-nus muh-RIT-ih-muh (3–6)
Pulsatilla patens pull-suh-TIL-uh PAY-tenz (3–8)
P. vulgaris P. vul-GAIR-iss (4–8)
Salvia yangii SAL-vee-uh YANG-ee-eye (4–9)
Sanguinaria canadensis san-gwi-NAIR-ee-uh kan-uh-DEN-siss (3–9)
***Sanguisorba tenuifoli*a** san-gwi-SOR-buh ten-yew-ih-FO-lee-uh (9–7)
Saxifraga granulata sak-sih-FRAY-guh gran-yew-LAY-tuh (4–8)
Stachys byzantina STAY-kiss bih-zan-TY-nuh (4–8)
Succisa pratensis suk-CIS-suh pruh-TEN-sis (4–7)
Symphyotrichum novae-angliae sim-fy-o-TRY-kum NO-vee-ANG-lee-ay (4–8)
Talinum paniculatum tuh-LY-num pan-ik-yew-LAY-tum (0–0)
Thalictrum thalictroides thal-IK-trum thal-ik-TROY-deez (4–8)
Thuja occidentalis THEW-yuh ahk-sih-den-TAL-iss (3–7)
Trillium grandiflorum TRIL-ee-um gran-dih-FLOR-um (4–7)
Verbena bonariensis ver-BEE-nuh bo-nair-ee-EN-siss (6–11)
Veronicastrum virginicum ver-on-ih-KASS-trum vir-JIN-ih-kum (4–8)

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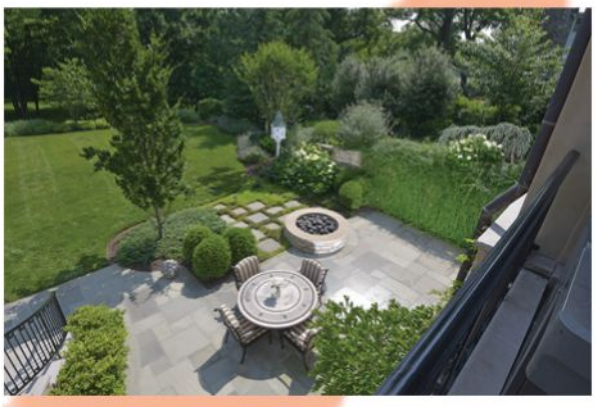

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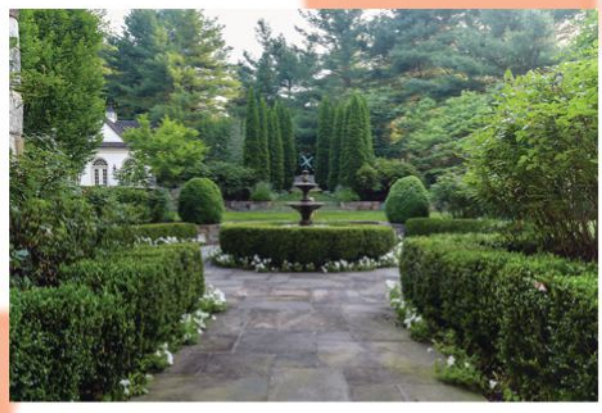

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Summer Snowflake (*Leucojum aestivum*)

by Margene Whitler Hucek

A ROBUST BULBOUS perennial often found in old cemeteries and abandoned homesteads, summer snowflake (*Leucojum aestivum*, USDA Hardiness Zones 3-9) makes a charming presence in the early-season garden. Don't let its name fool you: It actually blooms for two to three weeks in mid- to late spring, several weeks after its relative, spring snowflake (*L. vernum*). Unlike many other spring bulbs, it can be grown successfully in the South and other mild-winter regions; there, however, it may bloom in January or February.

Summer snowflake's erect, strap-shaped leaves grow to 16 inches tall in glossy green clumps. Leafless stems rising above the foliage bear two to eight white, nodding, three-quarter-inch-long, bell-shaped flowers, each petal marked at the tip with a green spot. The flowers have a fragrance that reminds some of chocolate, yet deer and rodents don't find the plant appetizing.

Summer snowflake grows in clumps that naturalize well.

A MOISTURE-LOVING BULB

Native to Europe and western Asia, summer snowflake needs reliably moist, organically rich, well-draining soil with a neutral pH. It tolerates summer droughts but needs adequate water during its springtime period of flowering and growth. In fact, it grows well near ponds and streams. Plants look best in drifts and are excellent in a border or naturalized in grass.

Plant bulbs four to six inches deep and the same distance apart in the fall after the ground temperature has chilled to about 55 degrees Fahrenheit—normally after a killing frost—in an area with bright indirect sunlight. Topdress with bone-meal or a bulb fertilizer.

After the flowers fade, the foliage begins to droop and look worn, so interplanting summer snowflake in a bed with ferns or other moisture-loving plants will maintain an attractive display throughout the growing season. As with all bulbs, you can remove spent flower stalks, but leave foliage intact while it is still green. A summer mulch will control weeds and help keep roots cool. Plants typically go dormant by late summer.

Summer snowflake prefers to be left undisturbed, naturalizing well by bulb offsets. Apply a top-dressing of bone meal or fertilizer each spring. If you wish to move some to another area or share with friends, propagate by division in early autumn.

'Gravetye Giant' is a commonly available heirloom selection that is more robust than the species and can grow three feet tall, especially when planted near water.

A FEW PESTS TO LOOK OUT FOR

Summer snowflake is generally problem free. Snails and slugs may be attracted to the plant; if you see their slime trails, set out traps in the spring.

Being in the same family as daffodils, summer snowflake is susceptible to narcissus bulb fly infestation, which cause plants to produce few leaves and no flowers. If you notice this, check the bulbs for the fly's larvae. Often they will have eaten away much of the bulb. Destroy any affected plants. There is no pesticide available to home gardeners that will control the larvae. The best defense is to buy firm, good-quality bulbs from reputable sources and practice good planting and maintenance techniques.

Easy to grow and fun to share, summer snowflake is a worthy addition to any garden.

Sources

Brent and Becky's, Gloucester, VA. *www.brentandbeckysbulbs.com.*
John Scheepers, Bantam, CT. *www.johnscheepers.com.*
White Flower Farm, Litchfield, CT. *www.whiteflowerfarm.com.*

Margene Whitler Hucek is a freelance writer who gardens in Keswick, Virginia.

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