The American GARDENER.

The Magazine of the American Horticultural Society

May / June 2019

Tips for a Bountiful Cut-Flower Garden

Designing with Daylilies

Plants for Soggy Sites Pretty Prickly Pears

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ONLY YOU CAN PREVENT WILDFIRES.

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NOTES FROM RIVER FARM

LMOST EVERY DAY, I make sure I have something blooming on my desk here at River Farm. As renowned plant breeder Luther Burbank said, "Flowers always make people better, happier, and more helpful; they are sunshine, food, and medicine for the soul." They don't have to be fancy, or even very many—just a handful of blossoms can suffice.

Store-bought flowers are certainly lovely, but I especially enjoy homegrown bou-

quets. My cutting garden keeps me well supplied, though toward the end of summer, its earlier exuberance may start to flag. This year I'm eager to try some of the tips that flower farmer Lisa Mason Ziegler shares in this issue for keeping the blooms coming in strong all season long. Follow her advice starting on page 20, and you, too, could enjoy abundant blossoms that also benefit pollinators.

Speaking of pollinators, National Pollinator Week is coming up from June 17 to 23. Organized by our friends at the Pollinator Partnership, this celebration began 12 years ago to increase awareness of pollinator population decline and encourage actions we all can take to reverse this trend. Visit *www.pollinator.org/pollinator-week* for related events in your area.



That same week, the American Public Gardens Association (APGA) will hold its annual conference in Washington, D.C., not far from River Farm. As a partner organization of this gathering for garden professionals, we are looking forward to welcoming the staff and leadership from public gardens and arboreta across the country here at our Virginia headquarters for an afternoon tour. Many of the APGA member sites participate in our Reciprocal Admissions Program, which allows you, our members, to visit them for free and receive other discounts. Check *www.ahsgardening.org/rapgardens* for the most up-to-date list of participating gardens and the benefits they offer.

Then on June 21, we'll honor the horticultural luminaries who will receive our 2019 Great American Gardeners Awards and Book Awards during a ceremony in our gardens overlooking the Potomac River. One of these award-winners is superlative septuagenarian Ira Wallace, who shares a few thoughts with us in this issue on her lifetime of preserving heirloom seeds of edible, ornamental, and other useful plants while working to create a more equitable agricultural future (page 38).

Another upcoming highlight on our calendar is our 27th annual National Children & Youth Garden Symposium, held this year from July 10 through 13 in Madison, Wisconsin. Anyone interested in engaging the next generation with plants and gardens will find value in this event, which will have sustainability as this year's special focus. Registration is open now at *www.ahsgardening.org/ gardening-programs/youth-gardening/ncygs/2019-registration-rates*. Get the scoop on what we have planned by turning to page 12.

As you can see, we have a lot of activity going on, and we hope you'll join us at one or more of these events. For now, please enjoy another stimulating issue of this magazine, and don't forget to stop and smell the flowers when you have the chance.

Beth Tuttle AHS President & CEO

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EDITORIAL INTERN Laken Burns

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CONTACT US The American Gardener 7931 East Boulevard Drive Alexandria, VA 22308 (703) 768-5700 EDITORIAL editor@ahsgardening.org

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A PLUM WORTH A MENTION

In the article on *Prunus* species in the March/April 2019 issue, author Andrew Bunting didn't mention the native Mexican plum *(Prunus mexicana)*. For us in Texas and the south-central United States, this is a deciduous tree that reaches 20 to 25 feet at maturity. It blooms precociously in early March with a profusion of bright white, intensely fragrant flowers that our native bees love. It handles our erratic climate, with its intense heat, drought, flooding rainy seasons, with ease.

Peter Schaar Dallas, TX

Andrew Bunting's response: If space had allowed, I would have included Mexican plum. In addition to the lovely flowers, it bears yellow-orange summer fruits that are attractive to a host of birds and mammals. This versatile *Prunus* species grows best in full sun, but tolerates a wide range of soil conditions.

BUTTERFLIES INSPIRE

I enjoyed the January/February issue, especially the article on butterflies. I had no idea they see the ultraviolet portion of the light spectrum. Now I will plant in blocks of colors! Because we are limited on water in northern California, I mix the butterfly plants in with my existing beds. It makes for a wonderful eclectic look and the insects love it.

In addition to working in my own garden, I volunteer at the Gardens of Heather Farm in Walnut Creek which is a six-acre, nonprofit public garden. I share your magazine's gems with all of the volunteers, staff, and Board members. *Christy Wilson Lafayette, CA*

LESS TIDINESS MEANS MORE WILDLIFE

Just a comment on Scott Aker's advice in "Garden Solutions" (January/February 2019) that it is okay to cut back the perennial border in winter, having skipped it in the fall. Although removing dead stalks might provide some benefits to the perennial garden, there are also costs that should not be overlooked. For example, American or black swallowtail butterflies overwinter in a chrysalis attached to plants like fennel, carrots, and Queen Anne's lace. Some other species overwinter inside legume seedpods or on shrubs or grasses. Some native bees overwinter as pupae in their nests, but young bumblebee queens overwinter



Black swallowtail butterflies and other insects often overwinter on dead vegetation.

in a protected spot in the garden, waiting for spring to start a new colony.

So, while clearing away does give us a tidy garden, the potential cost is losing important wildlife in the process. Sure, clean up a potato patch so Colorado beetles don't overwinter in the litter. But a healthy perennial border with no pest problems can overwinter naturally just fine, with a tidy up in the spring after insects have had a chance to emerge.

> Kate McLynn Washington, DC

I would like to respond to Scott Aker's advice to a reader to clean up the perennial border in winter. Over the past five years or more, the University of Rhode Island Cooperative Extension/Master Gardener Program has worked hard to inform the public that fall/winter garden cleanup is no longer the best practice because of the potential loss of insects/ butterflies and food/cover for birds. We encourage all gardeners to leave the dead stalks of perennials (except any diseased leaves) in the garden until early spring. An immaculate garden is not always the best for the environment and, as you already know, leaves are your best mulch. *Mary Malouin, URI/MGP Cumberland, RI*

Scott Aker's response: It is never a bad idea to consider the ecology of your garden when making decisions about whether to cut back dead foliage, or when this task should be done. I'm glad that you made a distinction about pests and diseases, however, because for the overall health of the garden it's important to remove plant parts that can harbor pests and diseases. This can certainly be limited to the most pest-prone plants.

BACK MAGAZINE ISSUES HIT THE SPOT

Your magazine is just fabulous! I just picked up an old issue (September/October 2017) and can't put it down. I'm sure I read it when it arrived nearly two years ago, but it seemed *s0000* new and relevant to my mid-Atlantic garden today. I found myself highlighting so many articles: Arisaemas, gates, native shrubs....even the "letter to the editor," which I always read, in which Jim Jones expounds on *Acanthus*, which we also have loved for years. Many of your past issues find their way to my easy chair during the bleak, snowy months, which makes me so glad I save them.

> Katie Peddy Phoenix, MD

CORRECTION

Alert reader Louise Teubner-Rhodes of Towson, Maryland, spotted that we had misidentified the plant shown with a daylily on page 32 of the March/April issue. It is a balloon flower (*Platycodon* grandiflorus), not a bellflower.

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.



Markey State AMERICAN HORTICULTURAL SOCIETY TRAVEL STUDY PROGRAM **UPCOMING TOURS**

III



SOLD OUT IRELAND (June 10-19) hosted by Jane and George Diamantis

> DENMARK & SWEDEN (July 15–26) hosted by Terry Hayes

VANCOUVER, SALT SPRING ISLAND & VICTORIA (September 5–12) hosted by Erich Veitenheimer and Drew Cariaso

DESTINATIONS IN 2020

Morocco with Antonia Lloyd Owen and Terry Hayes (March 17–26) Bhutan with Susie Orso and Katy Moss Warner (April 13-25) **Provence, France** with Frances Roxburgh (May 1–10) Ponant Cruise to Japan with Holly and Osamu Shimizu (May 28-June 7) **Bavaria, Germany** with Harriet Landseer (September 4–12)

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."







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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. Information and application forms can also be found in the Gardening Programs area of *www. ahsgardening.org.*

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

RECIPROCAL ADMISSIONS PROGRAM The AHS Reciprocal Admissions Program offers members free admission and other discounts to over 320 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 yearround (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 member's-only sections.

News from the AHS

May / June 2019 PROGRAMS • EVENTS • ANNOUNCEMENTS

NEW GARDENING PODCAST SERIES AVAILABLE

IF YOU'RE A FAN of podcasts, we hope you'll enjoy the gardening podcast series the American Horticultural Society (AHS) has launched in collaboration with **Green Industry Leaders Network**, supported by AHS Corporate Member **Corona Tools**. The debut podcast features a conversation between AHS President and CEO **Beth Tuttle** and **David Mizejewski**, a naturalist with the National Wildlife Federation, about creating gardens for pollinators and other wildlife.

In another episode, Seattle-based garden communicator **Debra Prinzing** discusses the Slow Flowers movement with **David J. Ellis**, AHS director of commu-



AHS podcast guests David Mizejewski, Debra Prinzing, and Kayri Havens

nications. Prinzing, a 2018 AHS Great American Gardeners Award winner, is the founder of the movement, which aims to develop and promote a more sustainable domestic cut flower industry. Ellis and Prinzing speak about cultivating cut flowers in home gardens and Prinzing's upcoming Slow Flowers Summit (see the "Regional Happenings" section on page 54 for more information).

The most recent podcast focuses on the work of **Kayri Havens**, director of plant science and conservation and senior scientist at the Chicago Botanic Garden (CBG) in Illinois. Havens is the winner of the 2019 AHS Liberty Hyde Bailey Award for her work establishing CBG's acclaimed plant conservation department. In a conversation with Tuttle, Havens addresses the effects of climate change on plant conservation and how citizen science projects are helping researchers track changes in ecosystems.

These podcasts can be accessed at *www.ahsgardening.org/gardening-resources/ gardening-podcasts*. They are also available on iTunes and Google Play by searching under "Green Industry Leaders Network."

AHS ENVIRONMENTAL AWARD WINNERS

SIX EXHIBITS at spring flower shows across the country received the AHS Environmental Award, which recognizes exhibits of horticultural excellence that demonstrate the bond between horticulture and the environment, and inspire people to beautify home and community through skillful design and appropriate plant selection. Here are the regional award winners:

At the Northwest Flower & Garden Show in Seattle, Washington, "Patterns of Peace on Earth," a Ghana-inspired exhibit designed by West Seattle Nursery, picked up the award.
The winning exhibit by Urban Gardens, Inc., at the spring Maryland Home & Garden Show in Timonium incorporated garden rooms using natural materials and ecologically sound plant selections.



Among the 2019 recipients of the AHS Environmental Award were West Seattle Nursery's Ghana-inspired exhibit at the Northwest Flower & Garden Show, top, and Mark Cook Landscaping's display at the Philadelphia Flower Show, shown above with AHS judges (left to right) Beth Tuttle, Holly Shimizu, and Kay Davison.

■ "Breaking Out" by Mark Cook Landscaping received the award at the Philadelphia Flower Show in Pennsylvania.

■ "Earth Tones," created by Native Plant Nursery, was the winner at the Connecticut Flower & Garden Show.

A design that featured coral-bark maple and stone sculpture by Southern Showplace Landscapes received the award at the Southern Spring Home & Garden Show in Charlotte, North Carolina.

Clearwater Landscape Design created "A Fire-Resistant Garden," which was the award recipient at the San Francisco Flower & Garden Show in California.



AHS NATIONAL EVENTS CALENDAR

AMERICAN HORTICULTURAL SOCIETY

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.

JUNE 10–19. Ireland: Legendary Gardens & Castles of the Emerald Isle. AHS Travel Study Program.

JUNE 17-21. American Public Gardens Association Conference. Washington, D.C.

JUNE 17–21. International Master Gardener Conference. Valley Forge, PA.

JUNE 21. Great American Gardeners and AHS Book Awards Ceremony. River Farm, Alexandria, VA.

JULY 10–13. National Children & Youth Garden Symposium. Madison. WI.

JULY 15–26. Summer Gardens & Castles in Denmark & Sweden. AHS Travel Study Program.

SEPT. 5–12. Gardens, Cuisine and Royal Treasures of Vancouver, Salt Spring Island & Victoria, BC. AHS Travel Study Program. SEPT. 21. AHS Annual Gala. River Farm, Alexandria, VA. OCT. 3-5. America in Bloom Symposium and Awards Program. St. Charles, IL. (AHS partner event.) OCT. 10-24. 11th Annual AHS Online Auction. National. OCT. 26. Fall Festival. River Farm, Alexandria, VA.

DEC. 2–31. Indoor Holiday Display. River Farm, Alexandria, VA.

CELEBRATING NATIONAL POLLINATOR WEEK IN JUNE

AS AN ACTIVE partner in the National Pollinator Garden Network, the AHS helps spread the word about the importance of



pollinators, promotes pollinator gardening and preservation of habitat, and models best practices at its 25acre River Farm headquarters in Alexandria, Virginia. In support of this effort, we recently introduced several new honeybee hives to River Farm. Thousands of bees are now

Beekeepers set up River Farm's new hives.

busily pollinating plants in River Farm's gardens.

During the week of June 17 to 23, we will celebrate National Pollinator Week (www.pollinator.org/pollinator-week) at River Farm by participating in the Parks for Pollinators' BioBlitz-a citizen science event designed to engage, educate, and help more people understand the importance of pollinator habitats in their local communities. Visitors are invited to take pictures of wildlife at River Farm using the iNaturalist app, so more can be learned about the presence and vital role of pollinators at the gardens. For more information about the BioBlitz, visit www. nrpa.org/parks4pollinators-bioblitz.

PRESIDENT'S COUNCIL TRIP TO TUCSON, ARIZONA

DURING A FEBRUARY trip to Tucson, Arizona, members of the AHS President's Council (PC) toured a wide range of destinations with horticultural and historical significance, including the Tucson Botanical Gardens, the historic San Xavier del Bac Mission, AHS Reciprocal Admission Program garden Tohono Chul Park, and the Controlled Environment Agriculture Center



Participants in the AHS's President's Council trip to Arizona in February visited the San Xavier del Bac Mission, top, and experienced the beauty of snow in the desert landscape, above.

at the University of Arizona. Visits to private gardens and art museums were also on the agenda. "Seeing the natural beauty of the desert gardens in bloom while at the same time experiencing an unexpected snowfall was magic," says **Beth Tuttle**, AHS president and CEO. "The trip provided an ideal opportunity for PC members to reconnect or forge new relationships with one another through a stimulating learning experience."

The President's Council is comprised of AHS members who make annual donations of \$1,000 or more to the Society. In addition to their regular AHS membership benefits, PC members receive special recognition, exclusive invitations to certain AHS events, and are eligible to attend the annual PC trip to garden destinations around the country. Learn more about the President's Council at *www.ahsgardening.org/pc*.



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 March 1 and April 30, 2019.

\$1,000+ Gifts

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Ms. JoAnn R. Luecke

In honor of Dean Norton Ms. Catherine Mayton

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

COFFIELD NAMED HONORARY GALA CHAIR

KRISTEN COFFIELD, author, speaker, culinary coach, and founder of the Culinary Cure, has been named honorary chair of the 2019 AHS Gala, which will be held at the Society's River



Culinary Cure founder Kristen Coffield

theme of the 26th annual Gala is "Harvest of Health & Happiness," aligning with Coffield's mission to increase awareness of the benefits of a balanced lifestyle and a healthy, plant-based diet to overall wellness and longevity.

Farm headquarters on Saturday, September 21. The

This elegant evening of fine dining overlooking

the Potomac River in Virginia includes a silent auction of oneof-a-kind items such as exclusive travel packages, jewelry, and garden-themed items. For tickets, or to learn about sponsorship opportunities and advertising, please contact **Susan Klejst**, director of development and engagement, at (703) 768-5700 ext. 127 or at development@ahsgardening.org.

News written by AHS staff.

THE AMERICAN HORTICULTURAL SOCIETY'S 27TH ANNUAL



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AHS NEWS SPECIAL

National Children & Youth Garden Symposium Goes to Wisconsin

by Katherine Somerville



The Goodman Youth Grow Local Farm will be a destination for the symposium tours.

I N RESPONSE to an increasing need to reconnect children with plants and nature, in 1993 the American Horticultural Society created a symposium focused on how gardens can encourage play, exploration, and beneficial interaction with the natural world. The National Children & Youth Garden Symposium (NCYGS) continues to be the only national professional development event aimed at engaging those who work with—or are interested in work-



ing with—young people in garden settings and other outdoor environments. This year, the 27th annual NCYGS will take place July 10 to 13 in Madison, Wisconsin.

"The Madison area is home to a vibrant, flourishing community network of educational garden programs at schools, early care and education centers, community gardens, community and youth centers, museums, and nature centers," says local host **Nathan Larson**, director of the Wisconsin School Garden Network and the Cultivate Health Initiative, a joint project of Community GroundWorks and the Environmental Design Lab at the University of Wisconsin (UW) at Madison. Larson, who has attended NCYGS several times in the past, adds, "We are very excited to host the Symposium this summer in Madison!"

BUILDING A SUSTAINABLE FUTURE

Climate change, pollinator-species decline, and environmental degradation have become all too familiar subjects in our lives and communities. However, as citizens and as educators, the strategies we deploy, the choices we make, and the values and messages we communicate have the potential for real impact. The focus for the 2019 NCYGS will be about providing the next generation with the knowledge and tools to create a sustainable environmental future and also about finding ways to maintain and grow the gardens and programs that nurture our youth. This year's peer-led educational sessions will explore topics such as innovative sustainable gardening curriculum and practices, "green" career resources, and model partnerships for attracting the human, financial, and intellectual capital needed to sustain youth gardening endeavors.

Pashon Murray, environmentalist, entrepreneur, and founder of Detroit Dirt, will give a keynote presentation on her work in waste reduction, recycling, and reuse of materials, especially food waste for compost. Detroit Dirt's novel closed-loop model—taking food waste, repurposing it, and putting it back into the community—was designed by Murray to help revitalize Detroit and contribute to its urban farming movement.

In 2016, Murray established the Detroit Dirt Foundation, a 501(c)(3) organi-



Pashon Murray

getting them to understand why we need to teach composting to young people," she says. "They're going to be managing the future technology in this field. This really is about the next generation."

A model community, organization, or garden should be both sustainable and resilient. Carrying forward the interest and momentum from NCYGS 2018's dynamic panel discussion about equitable access to garden spaces and the community forum celebrating the power of nature and plants to heal, this year's pre-symposium work-

on environmental projects through education, research and public programs on sustainable practices and improved waste-to-resources management practices. "I've started helping out at public schools and

zation that works

shop explores resilience—looking at food justice through the lens of garden-based education. This workshop will be led by **Amani Olugbala**, community educator at Soul Fire Farm in Grafton, New York. Olugbala combines artistic expression, project-based learning, and outdoor education tools to facilitate social justice-based workshops and discussions with individuals, groups, and organizations. This workshop will be hosted in partnership with Community GroundWorks and Whole Kids Foundation.

THE CITY AND CAMPUS OF MADISON

NCYGS takes place in a different location each year in order to provide participants with the chance to explore new programs and diverse communities. Madison, the capital city of Wisconsin, is an ideal setting for a sustainability-themed NCYGS. Situated between two sparkling lakes, Madison is home to 260 parks, more bikes than cars, and a long list of environmental pioneers like Aldo Leopold, an environmentalist and UW professor who helped create the modern concept of wildlife management.

This year's NCYGS tours will include visits to several of Madison's exemplary sites, among them **Spring Harbor Middle School**. Here, numerous gardens and outdoor learning spaces, including a student-constructed greenhouse, enable





students to conduct research, monitor the environment, and observe the ecological interactions that occur between plants, soil, weather, and animals.

OPTIONAL ACTIVITIES

WEDNESDAY, JULY 10. The University of Wisconsin-Madison's Allen Centennial Garden will host NCYGS attendees for ice cream and casual networking before the main event kicks off. Allen Centennial is the artful living laboratory and public botanical garden of the Horticulture Department and serves as an outdoor classroom for UW–Madison students and the surrounding communities.

SATURDAY, JULY 13. Participants can pay homage to one of Wisconsin's native sons, Frank Lloyd Wright, during a tour of the 800 acres of gardens, farmland, and natural



areas around Taliesin, Wright's former home and studio in southwestern Wisconsin. The gardens and natural areas reflect the master architect's profound connection to nature and serve as a stunning backdrop to the building, which is a National Historic Landmark. Following a guided tour of the estate, refreshments will be served on Taliesin's terrace. —K.S. Above: One of the gardens on the campus of the University of Wisconsin in Madison. Left: Kids enjoy playtime on the rooftop garden at the Madison Children's Museum.

NCYGS attendees may choose to tour the award-winning **Madison Children's Museum**, which includes the spectacular Rooftop Ramble and the three-season Urb Garden.

Concurrently, a group will tour garden and greenhouse facilities on the UW campus. The botany department's garden and greenhouse feature more than 1,500 species of plants; eight greenhouse rooms take you through a journey of the tropics, desert, bog, and fern forest.

Other participants will have the opportunity to assist with a conservation and restoration project within the **Lakeshore Nature Preserve**, a 300-acre natural area situated on the south shore of Lake Mendota on the UW campus.

The **Troy Kids' Garden**, managed by Community GroundWorks, will host attendees for a special afternoon reception. The garden program provides gardening, arts, nutrition, and environmental education to over 1,000 young people from the Madison area annually, helping them develop a connection with nature that is often difficult to establish in an urban setting.

For additional information about the symposium and to register to attend, visit *www.ahsgardening.org/ncygs* or send an e-mail to education@ahsgardening.org. ~

Katherine Somerville is member programs associate for the American Horticultural Society.



Designing with Daylilies

BY DANIEL MOUNT

Daylilies are one of the most common garden perennials, but using them effectively in design requires strategic placement.

Daylilies such as 'Grey Witch', foreground, and red-and-yellow-flowered 'Aabaachee', center right, stand out in the Northwest Perennial Alliance's display border in Seattle. AYLILIES (Hemerocallis spp.) are one of the most commonly used perennials in American gardens. Yet, as a landscape designer and a gardener myself, I have come to the realization that daylilies are not always used effectively in garden design. This prompted me to take a closer look at why "the perfect perennial"—as authors Lewis and Nancy Hill dubbed daylilies in the title of their seminal 1991 book—can be difficult to work into a landscape, and to offer some advice on how, with proper placement and a few cultural shortcuts, some of their perceived shortcomings can be turned into positives.

So why are daylilies difficult to design with? Well, for starters, more than 52,000 daylily cultivars are registered, and although only a fraction of those are readily available, I believe this bewildering plethora of choices may be partly to blame. Another challenge is their habit of dropping their foliage when they begin flowering, which can leave you with a bunch of bare stems in late summer. And in temperate





Left: Daylilies such as 'Barnegat Light', whose flowers bloom aloft on tall scapes, are suitable for the interior of mixed borders. Above: A few daylilies, such as 'Malja', foreground, and 'Kwanso', background, have variegated foliage worth showcasing along the edge of a bed.

Here in the Pacific Northwest, where I garden, daylilies can begin to emerge as early as January. The fresh green tufts are much appreciated at that time of year. And as spring starts transitioning into summer, daylilies can help mask the fading foliage of spring bulbs and ephemeral wildflowers. The classic combination of daffodils and daylilies has been well documented, for example.

Once the scapes begin to emerge from the fans of leaves, the older leaves often begin to collapse and die. And some daylily species lose their foliage before the scapes begin to emerge. This "failing" foliage syndrome, which seems to be hardwired into the genus, is one of the primary reasons why daylilies require careful garden placement.

Over time, I have developed a few techniques for working around this inevitable late-summer garden disaster. First, I plant daylilies behind late-emerging perennials such as warm-season grasses and milkweeds (Asclepias spp.) so I get to enjoy the fresh

regions, they die completely back to the ground in winter. Different daylily species and selections bloom at different times of the season—and even at different times of day (or night)—so that's another important characteristic to consider when selecting plants for the garden.

I'd be remiss if I didn't mention the issue of deer, which find daylily flower buds particularly tasty. If deer regularly visit your garden, your choices are to continually apply repellents or put in fencing.

FOLIAGE AND FORM

As a seasoned garden designer, I know color is the first thing most gardeners want to address, yet it is the last thing you should think about when designing a garden. I will get to flower color later, but first let's talk about form. When I speak of form, I'm referring to the overall shape of the plant. Each plant has a specific shape, and understanding and appreciating that shape is key to a good garden design. The form of a daylily is made up of two components, the leaves and the scapes the leafless stems that emerge from the foliage and bear the flowers. Though foliage is not the primary concern of most daylily hybridizers, creating a balance between these two parts is important to the overall look of the daylily. For instance, daylilies with short foliage and tall scapes look gangly or tipsy; those with tall foliage and short scapes look squat.

I polled a few colleagues on their daylily likes and dislikes and discovered I am not the only one who admires daylily foliage. Kit Haesloop, president of the Northwest Perennial Alliance and curator of the organization's display border at the Bellevue Botanical Garden near Seattle, also finds the foliage attractive. The 80 cultivars they grow in the 22,000-square-foot border are as important for their foliage as for their flowers. Haesloop notes 'Malja' and the variegated 'Kwanso' are two cultivars grown primarily for their foliage. young foliage. Then, by the time the plant is crashing, the foreground plants are covering any unsightly mess. Second, having tired of the task of stripping the old foliage off which inevitably leads to a total collapse—I now cut the daylilies back hard instead. While this does shorten the overall bloom period, it forces the growth of fresh new foliage that looks good well into autumn. This is especially effective with early bloomers, but I have also tried it successfully with late bloomers. Evergreen daylilies can be treated this way almost any time of year, since they are continually producing new foliage.

The other aspect of a daylily form is the scape. There are three types of scapes: top-branched, well-branched, and lowbranched. Top-branched tends to crowd all the flowers near the top, while lowbranched can have some flowers opening low in the foliage. Well-branched types have evenly spaced branching set above the foliage. A well-branched, open scape to my eye is the ideal, allowing flowers plenty of room to develop. "For us, a daylily needs to be three feet or taller to have much garden merit," says Tony Avent, owner of Plant Delights Nursery in Raleigh, North Carolina. Among the taller cultivars he recommends is 'Autumn Minaret', a selection that can top out near six feet tall, and one of my own favorites. Haesloop concurs, saying she finds the flowers more visible when they are held high above the foliage. Recent trends among hybridizers also seem to favor selections with taller, well-branched scapes.

Two of my favorites—'Barnegat Light' and 'Peak Experience'—come from daylily hybridizers Margo Reed and Jim Murphy of Woodhenge Gardens in North Garden, Virginia. I love the way both, planted midway in the border, send their flowers above the other perennials where they float like butterflies.

Of course, not all of us have gardens with the scale for borders that can accommodate towering daylilies. Smaller gardens call for something a little more reasonable, petite even, so here's where the sheer diversity among daylily cultivars comes in handy. Low-growing or dwarf selections, whose tight habit gives them an almost formal effect, make terrific edge-of-the-border plants. I usually don't like daylilies planted *en masse*, but small daylilies are perfect for lining borders and walkways.

FACTORING IN BLOOM TIME

Daylilies come with a surprising range of bloom times, starting with the extra-early ones that will bloom as early as March in the South and May in the North, to very late bloomers, which will bloom in late summer in the South and fall in the North.

We all know a daylily flower, as its common name suggests, only lasts a day. But when those flowers open, and how long they stay open, is another key factor in selection. The American Daylily Society (ADS) divides daylilies into three categories: diurnal, opening in the morning and closing in the evening; nocturnal, opening in the evening and closing in the morning;



A good place to see daylilies effectively used in design is at the Northwest Perennial Alliance border at Bellevue Botanical Garden in Seattle. Here, statuesque 'Autumn Minaret', left foreground, and shorter 'Hyperion Elite', right rear, grow in mixed beds flanking a gravel path.



Left: Compact or dwarf daylilies like 'Mighty Chestnut' should be planted at the front of a border or with low-growing companions like *Alchemilla mollis*. Bottom left: The brightly colored flowers of some daylilies can be hard to match, but here the orange flowers of 'Flasher' complement the burgundy foliage of surrounding shrubs in landscape designer Karen Chapman's garden in Duvall, Washington.

and extended bloomers, which stay open 16 hours no matter when they've opened.

I learned a lesson about paying attention to daylily bloom time the hard way. I had planted daylilies as part of a design at a client's house and was invited over to attend an evening party. Just as the party got started, the daylilies closed up shop for the day. Chastened by this experience, the following year I replaced those with nocturnal daylilies, which open at the perfect time for evening entertaining.

If you like to spend evenings outdoors, be aware that many nocturnal daylilies come with the bonus of fragrance. My favorite is *H. citrina* var. *vespertina*, a six-foot-tall species with luminous yellow-green flowers that seem to glow at twilight. The flowers often stay open well into the next morning.

COORDINATING COLOR

There were no daylilies in my mother's garden back in the 1960s, when I was growing up in Wisconsin. The only one I knew was the tawny daylily *(H. fulva)*, an invasive weed not only in Wisconsin, but throughout the eastern half of this continent, and in isolated pockets further west. So, before I knew better, I thought of daylilies as wildflowers.

Perhaps that explains why in my early days as a designer I always chose orange daylilies. Once I got over my initial obsession with orange, however, I went wild buying daylilies of all hues. And what colors there are: bloody reds and delicious peaches, prudent purples and screaming yellows, and of course, a whole range of oranges. And these colors can be blended or bicolored; they can be picoteed, tipped, or dotted; they can have an eye, a band, a halo or a watermark; their irregularities may appear as flakes, flecks, speckles, or stipples.

Appealing as all these choices are, the danger lies in impulse ordering of gorgeously colored flowers that don't match up with the garden's prevailing scheme. As my space for daylilies has shrunk and my designer's

Sources

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eye has improved, I've learned to hone my appetite. In recent years I have gravitated toward a softer color palette. I now count pale pink 'Pale Ale' and near white 'Lime Frost' among my favorites for their muted and amenable coloration. A restricted color scheme has certainly helped me get past the obstacle of limitless choices.

Another lesson I learned was to be wary of creating combinations based on photos in catalogs. I ordered a daylily called 'Big Blue' many years ago because the flowers looked really blue in the catalog photo. Yet when it bloomed in my garden it turned out to be a dull purple. I have moved that clump of "blue" daylilies seven times in the last five years—sometimes while in full bloom—trying to find a place where the odd color works. Finally, in near desperation, I plunked them in the background with some bear's breeches (*Acanthus mollis*). The next summer when they bloomed the pairing was perfect, so they are there to stay.

MOVEABLE FEAST

That last story illustrates one of daylilies' greatest assets in the garden: their portability and adaptability. Their fibrous to fleshy roots are a storehouse of energy, which makes them among the easiest perennials to divide or transplant. I move my daylilies every few years, not just for the health of the plants but for the sheer fun of experimenting with new color combinations or more dramatic foliar effects.



The author moved the daylily cultivar 'Big Blue' seven times in his garden before he finally found an appropriate color pairing with bear's breeches (*Acanthus mollis*).

In my experience, daylilies seem to be okay in just about any garden situation, except full shade. They are often touted as drought tolerant, but many are adaptable to soggy sites and can be used "as marginal aquatics in bogs and along pond edges," says Tony Avent. My personal collection of over 60 cultivars is growing in the Snoqualmie River flood plain in western Washington, which is regularly inundated during the rainy season and just plain wet the rest of the time. There is not one unhappy plant in the bunch. That said, not all daylilies will take these conditions, so some advance research is required.

RESEARCH FIRST

Indeed, research is probably the best advice I can give if you are considering adding daylilies to your garden. With tens of thousands of garden-worthy daylilies out there, it is impossible for one resource or article to provide all the answers for which ones will work best in your garden. Visit local botanical gardens and nurseries and take notes on growth habits, color combinations, and bloom time. There are over 300 official ADS Display Gardens in the United States, Canada, and Europe, and you can locate these via the ADS website.

I have seen daylilies in parking lots and in home gardens; I have seen them in public gardens and collector's gardens. I have even seen them in the wild, growing as weeds along the fencerows of Wisconsin and as wildflowers in the mountain bogs of Japan. I feel like I know a lot about them, but there is still so much to learn.

A landscape designer and writer, Daniel Mount lives on a small farm in the Snoqualmie River Valley of Washington.













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Grow a Cutting Garden Like a Pro

These tips and tricks gleaned by an urban cut-flower grower over 20 years of trial and error will guarantee a floriferous cutting garden all season long.

DIDN'T SET OUT to fill my gardens with pollinators, beneficial insects, and other good things. You might say they all came as a welcome side effect of all-natural cut-flower farming. Once I finally gave up messing with the ecosystem and instead gave it a hand up and helped it along, the result was a garden teeming with beautiful, healthy plants producing abundance with little intervention from me—a garden just the way it was meant to be.

There are a few specific steps to take to ensure an easy-keeper cut-flower garden that will keep on going throughout the season. That process starts with the selection of plants to grow, moves on to preventing the tall flowers from falling over, and ends with the best part—harvesting.



Opposite page: The author, accompanied by her dog, makes the day's harvest in the garden. Above: Selecting tall varieties, such as these colorful 'Benary's Giant' zinnias, is best for a cutting garden. Harvesting flowers on a regular basis keeps the plants producing.

IT'S ALL ABOUT VARIETY

I give space in the cutting garden only to proven cut-flower varieties of plants. In general, this means that the variety produces prolific blooms when harvested, has long stems with stiff necks, and continues to look good in a vase for at least seven days. In catalogs, you will often see a scissors icon placed next to plants to indicate they are good cut flowers. If I come across an irresistible flower but am not sure how it will hold up as a cut flower, it goes in another garden space for its first growing and harvesting season. Only when it proves worthy does it warrant space in the working cutting garden.

Don't be fooled by the look of a flower when making variety selections for the cutting garden. The blooms within a genus can appear the same, but the characteristics between varieties can differ. Take zinnias, for example. There are several varieties with large, beautiful flowers, but their height varies. Some grow 18 inches tall, and others grow 48 inches tall. The 18-inch plants would be a sad disappointment in a cutting garden.

SPACING OUT

The thing about a cutting garden is that once it starts to bloom, it must be harvested nonstop. To a plant, harvesting is like receiving a hard pruning a couple of times a week. This is why it is possible to space plants closer together than in a landscape setting. For spacing in my garden, I tend to err on the side of placing plants closer together rather than farther apart unless the plants show signs of pressure, such as disease or pests.

When starting a new garden space, or if there are difficult conditions to overcome in an existing bed, I would recommend erring on the side of wider spacing. In a 30- to 36-inch-wide raised bed, I plant four rows of most annuals I grow for cutting. The rows are spaced equally apart across the width of the bed. In the row, plants are spaced six to 12 inches apart. Most often I follow the six-inch spacing.

SUPPORT SYSTEM

Cut-flower-variety plants grow tall. This characteristic, coupled with potentially heavy flower heads, makes the stems vulnerable to toppling over in the garden. Even those plants that don't grow so tall can still get bent in the garden, resulting in unusable stems.

Installing flower support early in the life of the cutting garden can prevent crooked



This is an adapted excerpt from *Vegetables Love Flowers* by Lisa Mason Ziegler, published by Cool Springs Press, Minneapolis, MN, 2018. Used with permission of the publisher.



To accurately space plants, the author uses 6-by-6-inch square flower support netting that will ultimately be raised and attached to stakes to support the flower stems as they grow.

stems and prevent heavy flower heads from going down in the garden. While there are several methods of support available, I have found in my windy and frequently rainy setting that the plastic flower-support netting with sturdy stakes works best. It is easily installed, useable for more than one season, and provides great support to even the most abundant canopy of flowers.

It's best to install support netting while the plants are under 12 inches tall. This allows the plants to naturally grow up through the netting. It will practically disappear from sight as the plants mature. I prefer to use either metal T-posts or two-inch-square wooden garden stakes, installed every six feet on both sides of the bed. The netting should rest on the stakes at half of the mature height of the planting. Make sure it's pulled taut to keep it at the desired height. For a mixed cutting garden, a 20-inch netting height works well.

HARVESTING HABITS

The success of the cutting garden will depend on your harvesting habits. In fact, its very life depends on them. This simple truth goes for vegetable and herb gardens as well. The garden, no matter how big or small, must be harvested on a regular basis. Sadly, a common occurrence is to harvest only when a need arises, which leads the garden to its untimely end.

The potential of a cutting garden can only be realized if the harvesting is done when and where the plant needs it. This encourages the plants to continue producing new growth throughout the season, and new growth in turn leads to more flowers. This continuous act of cutting keeps annual plants on their toes, producing fresh foliage and flowers and in the very best of health.

The frequency of the recommended harvesting practice is actually the opposite of what most folks imagine. This misconception has led many a gardener astray and is responsible for the common demise of cut-flower gardening dreams. I find gardeners either are reluctant to cut for fear that more flowers will not grow or just can't bear to cut the flowers because



Flower-support netting will prevent flowers from going over in rain and wind. Install when plants—such as these celosias—are young, and they will easily grow up through the netting.

they are enjoying how beautiful they look in the garden viewed from indoors. Make sure you follow a cutting-garden setup from the get-go to avoid these traps!

Harvesting flowers twice a week is a good habit to establish. On my farm, Monday and Thursday are the harvest days, and it happens like clockwork. Make a date with the cutting garden and stick to it. It's a fun habit to establish and won't take long if you stick to the job at hand: only harvesting. It is very easy to get distracted in other directions, such as pulling a few weeds or checking up on the tomato plants. Harvesting is a job that needs to be completed on time to keep the garden in good shape. Finish harvesting and then go back to other chores if needed. Frequent harvesting also preserves the quality of the blooms. Flowers that sit out in the garden for an extended period of time are at risk of being damaged by insects and weather. Timely harvesting minimizes the chances of that happening. The more often you harvest, the better the quality of the blooms will be.

WHERE TO MAKE THE CUT?

When harvesting, a natural tendency is to not make the harvesting cut as deep on the plant as it needs to be. This is especially true for that first cut on an annual plant, which establishes the branching of the plant for the entire season. The next sprout of growth on a plant will come from where a cut is made on the plant. The strongest and sturdiest stems grow from near the bottom of the plant, so by making the first cut deep in the plant, the plant will branch and produce more stems of better quality throughout the season.

The first cut on an annual plant with a central stem should be made near ground level, just above three to four side shoots. Make all the subsequent harvest cuts at or near the end of the stem being cut. Harvesting with support netting installed will be frustrating when you are first learning how to do it, especially for that first cut. Without the netting, however, there will be few straight stems to harvest! The subsequent cuts are far easier to manage, and it goes more smoothly as you become more familiar with the technique. Do your best to not pull the support netting up and off the bed when harvesting. Sometimes it is easier to pull that multibranched first cut down under

COMMON HARVESTING PITFALLS TO AVOID FOR BEST RESULTS

■ Making the first cut too high on the plant. This mistake will plague the plant all season. The regrowth will be short and vulnerable to breaking. The plant quickly becomes top heavy with all the sprouting going on in the canopy instead of at the base of the plant. The base of the plant also becomes old and worn, whereas it could have been popping with new growth.

■ Not stripping enough foliage from the cut stem. Every piece of foliage left on the stem takes a toll on the vase life of the flower. Removing all that does not contribute to its end use can add days of life to the cut flower.

■ Harvesting at the wrong time of day. The best time to harvest is either before or after the heat of the day. Directly after harvesting, place the harvested flowers in a cool spot for at least four hours to recover. (Overnight is preferred.)

■ Using a bucket with a wide opening for just a few flowers. If you are expecting to cut a couple of handfuls of flowers, use a plastic container with a narrower neck. This does the best job of keeping the stems upright and not allowing them to slide down the side of the bucket. Stems that get crooked in the bucket seldom return to straight.

■ Jumbling various stem lengths together in one bucket. To prevent crushing blooms in the harvest container, group similar lengths together. My aim is to cut stems to similar lengths so the blooms are shoulder to shoulder. This allows any bloom moisture to dry and prevents smooshed blossoms. When harvesting flowers that are shorter, such as sweet peas, I take a special container to the garden just for them.

■ Leaving the harvest container sitting in the sun. Setting the harvest container in the shade is always the first choice, but it's not always practical. Having it in the garden close at hand is the most convenient, but that usually means it stays in full sun. That is okay if you harvest and then move it indoors as soon as possible.

—L.M.Z.



To establish branching on zinnias, celosias, basils, and other annual plants that grow from a single stem, the first cut must be made low on the plant as shown, above left. For the following cuts, the branching stems should be cut at the base of their stem, above right. The lower the harvest cuts are made, the stronger the stems will regrow.

the netting versus pulling it up through the netting, but keeping the netting in place beyond the first cut makes the rest of the season so much easier!

WHICH BLOOMS TO CUT?

A flower's stage of opening when it is harvested plays a role in the quality of the bloom and how long it will last in a vase. Some flowers continue to open after they are cut, while others stop dead in their tracks the minute the cut is made. Knowing how the flowers you are growing react will dictate what flowers to cut on each harvest day.

For example, peonies are ready to harvest when the buds go from feeling hard like a marble to soft like a marshmallow. The buds will open indoors out of the hot sun and drying winds, which makes for longer-lasting, more pristine blooms.

THE GREATEST GIFT OF THE GARDEN

Sharing bouquets with family and friends is one of the greatest gifts the garden can give. Even the smallest cutting garden will give an abundance of weekly long-lasting cut flowers. If you resist the urge to share the blooms, you may find your home taking on the look of a funeral parlor by the height of the growing season! Or, worse, if you stop harvesting as recommended because you have too many cut flowers, your cutting garden will begin its premature spiral to the end.

I like to drop a rubber-banded bouquet into an inexpensive plastic bucket with a short note saying "Thinking of you" and leave it on the unsuspecting receiver's porch. I don't use vases because they are too easy to break. I don't even knock normally—it's having the ability to make this practice quick and easy that allows me to exercise it so much. Grow the love of flowers in others by sharing the bounty of your garden.

Lisa Mason Ziegler, the author of Vegetables Love Flowers (Cool Springs Press, 2018), has been a flower farmer in Newport News, Virginia, for over 20 years. Find her at www. thegardenersworkshop.com.





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Ruggedly Elegant Prickly Pears

Despite their often ferocious spines, these native North American cacti are valuable for contributing form and color to gardens in many regions. BY JESSIE KEITH

ITH THEIR paddlelike stems, magnificent flowers, and edible fruits, few cacti are as familiar as prickly pears *(Opuntia* spp.). They are a symbol of the desert with their bold, structural looks that easily lend themselves to southwestern landscapes. But many species are also hardy, making them equally amenable to northern and eastern gardens. Though they are decidedly prickly, many a gardener has come to appreciate the appeal of these elegant cacti.

Prickly pears are found throughout North America. There are over 200 spe-

Prickly pears—like this *Opuntia engelmannii* var. *lindheimeri*—are characterized by spine-studded, fleshy paddlelike stems.

cies and natural variants of these true cacti that can be found from the Canadian Rockies down to the Mexican valley of Tehuacán-Cuicatlán. Most exist in deserts, but others can be found in prairies, dry woodsides, mountainsides, and dunes. Soil with excellent drainage is essential to their survival because it protects them from excess moisture in the winter months, when they are most susceptible to rot.

The most attractive prickly pears have bold habits and lots of showy flowers and fruits. Some are remarkably hardy, while others are best reserved for southwestern gardens or grown as houseplants.

"I enjoy the genus for its extravagant flowers and contribution to the garden architecture," says David Salman, chief horticulturist at High Country Gardens in Santa Fe, New Mexico. "Here in the Intermountain West, we use them in combination with winter-hardy *Agave* and *Yucca* mixed with other xeric ornamentals."

Prickly pear pads (technically cladodes) and fruits (aka "tunas" or "pears") have been vital Native American foods for centuries and are commercially cultivated today. "The fruit are delicious juiced," says Andrea DeLong-Amaya, director of horticulture at Lady Bird Johnson Wildflower Center in Austin, Texas. The young, tender pads ("nopalitos") are edible and can be boiled and mixed with pico de gallo. Some species are more valuable for consumption than others, so be choosy with your selections for harvest.

The wildlife value of these cacti is an added appeal. Native bees are their primary pollinators, though a couple of species are largely pollinated by hummingbirds. Many animals rely upon the fruits and young pads as food.

ABOUT THOSE PRICKLES

A characteristic of all *Opuntia* species is their ferocious spines. They are adorned usually



TOP: BRINDA MANDELLA. BOTTOM: JUDYWHITE, GARDENPHOTOS.COM

Most prickly pears bear long, needlelike spines as well as finer, hairlike glochids.



Barbary fig's treelike structure makes it an impressive specimen plant in Southwestern gardens.

with two kinds. The most obvious are the large spikes designed to ward off herbivores from the tasty, juicy pads, but those are not the spines to fear most. The clusters of fine prickles, called glochids, at the base of the larger spines cause far more pain and can wheedle their way through all but the thickest garden gloves. Each hairlike spine has retrorse-or downward-curving-barbs that resist removal and instead dig deeper into the skin. Thick gauntlet gloves are a necessity. Raul Puente-Martinez, curator of living collections at the Desert Botanical Garden in Phoenix, Arizona, suggests using old carpet pieces to hold plants and avoid damaging the pads, and metal tongs for planting individual pads.

ARBORESCENT PRICKLY PEARS

Some of the most prized Southwestern prickly pears form treelike candelabras of pads that become laden with spring flowers and summer fruit. In arid gardens, these living sculptures make striking architectural statements.

Reaching an impressive six to eight feet tall, dollarjoint prickly pear *(O. chlorotica,* USDA Hardiness Zones 8–11, AHS Heat Zones 12–8) is native to desert landscapes from California to New Mexico and adjacent Mexico. Its pale green pads have fine, coppery spines. After spring rains, it bears many two-inch, pale yellow flowers followed by deep red fruits. Favoring rockier soils, it is well suited for planting among ornamental rocks and boulders.

The nearly spineless cochineal nopal prickly pear (O. cochenillifera, Zones 9–10 12–9) is even more treelike—maturing to an impressive nine to 12 feet tall. It is named for the cochineal scale insects it attracts, which produce a natural carmine dye. Wild populations grow in the dry forests of Mexico and the Bahamas, but this commonly cultivated species also grows well in the American Southwest. The bright red winter flowers are hummingbird-pollinated. Birds and bats relish its red, fleshy fruits. Puente-Martinez considers O. cochenillifera, "one of the friendliest prickly pears perfect for planting near patios."

One of the finest culinary prickly pears is the Barbary fig *(O. ficus-indica,* Zones 8–10, 12–9). It is widely cultivated in Mexico and the Southwest both for its tangy yellow, orange, or purplish fruits and edible grayish-green pads. Its height of nine to 15 feet and good looks make it a quality landscape specimen. In late spring, it produces large yellow and orange flowers; fruits mature by mid- to late summer.

Velvety prickly pear *(O. tomentosa*, Zones 8–10, 10–8) is a striking Mexican species that reaches a maximum of 15 feet. Its nearly spineless pads are covered with grayish tomentum, giving them a velvety appearance. In late spring, it produces three-inch red, orange, or yellow flowers, followed by cheery red fruits.

The shrubbier, spring-blooming cactus apple (O. engelmannii, Zones 8–10, 12–9) is a southwestern native that can reach five feet tall, producing yellow, orange, or magenta flowers in spring. By summer, its bright green, sparsely spined pads become laden with bright red fruits. In winter, or when under heat stress, the pads develop a purplish color.

SMALLER TENDER PRICKLY PEARS

More compact prickly pears often have a tendency to form wide clumps, so reserve enough space for them to prosper in arid rock gardens.

Named for its seemingly fuzzy tufts of orange glochids, chenille prickly pear *(O. aciculata*, Zones 8–10, 10–8) is a south Texas native with orange-red spring flowers and purplish fruits. It forms spreading clumps that reach two to three feet tall.

Indoor cactus growers are most familiar with bunny ears cactus (*O. microdasys*, Zones 9–11, 12–9), which sports oblong pads that resemble bunny ears dotted with showy white (*O. microdasys* var. *albaspina*) or coppery orange (*O. microdasys* ssp. *rufida*) glochids. On occasion, yellow flowers appear, but these are rarely produced on indoor specimens. Outdoor specimens can reach three to four feet tall; potted ones stay more compact.

The southwestern violet prickly pear (O. gosseliniana, Zones 9–11, 12–9) has showy pads blushed with violet-purple or pink, particularly in the cooler months. Its handsome, upright, three- to four-foot-tall clumps bear yellow spring flowers that contrast with the pads. The closely related Santa Rita prickly pear (O. santarita, syn. O. gosseliniana var. santa-rita, Zones 7–11, 12–5) is hardier and has several beautiful cultivars. Tubac™ is one of the best with





Above: Bunny ears cactus makes an easycare houseplant. Left: Opuntia fruits like these on chenille prickly pear are also known as tunas. Opposite page: Tubac™, a cultivar of Santa Rita prickly pear, boasts blue-gray pads that flush purple in winter.

its almost iridescent blue-gray pads that take on royal purple tones in winter.

HARDY PRICKLY PEAR SPECIES

"Hardy opuntias may lack the stature of some of their more tropical cousins, but they lack nothing when it comes to form and flowers," says Dan Johnson, associate director of horticulture at the Denver Botanic Gardens in Colorado. Plant these for bees, which visit the flowers in extraordinarily high numbers. Sharp drainage is absolutely necessary if they



Sources

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Resources The Cactus & Succulent Society of

America, www.cactusandsucculent society.org.

are to survive winters in colder, wetter climates. Raised rock or trough gardens with sandy or pebbly soils work well.

The diminutive golden prickly pear also called the spineless prickly pear—(O.aurea, Zones 5-10, 10-5) is a favorite of Jeff Thompson, owner of Stoney Creek Cacti in Pueblo, Colorado, who has been working to develop new hybrids. "An Opuntia without spines would be more popular to a broader group of gardeners, especially knowing how hard spine types are to clean," says Thompson. This western species reaches just six inches tall but spreads to three feet. In late spring it bears unusually large three-inch, bright pink or yellow flowers. The spineless fruits are brownish-gray. The nearly spineless 'Golden Carpet' is a low-growing, heavy bloomer with lemon-yellow flowers.

Beavertail prickly pear (O. basilaris, Zones 5–10, 10–5) is one of the finest spineless species. It produces tidy clumps of attractive green pads that reach one to two feet tall. "At Desert Botanical Garden beavertail prickly pear is one of the earliest to bloom with its large, spectacular magenta flowers," says Puente-Martinez.

Extreme hardiness is one of the remarkable features of devil's tongue (O. humifusa, Zones 4–10, 12–5) Its low, wide-spreading clumps become laden with golden yellow flowers in spring, which by midsummer yield purple-red fruits. In winter, its pads appear to deflate and shrivel, but don't worry. This natural defense mechanism protects plants from winter moisture. By spring, the pads will look normal once again.



'Peachy' beavertail prickly pear produces light pink flowers in spring atop clumps of spineless pads.

Though a western species, tulip prickly pear (*O. phaeacantha*, Zones 5–10, 10–5) inhabits colder regions of Colorado and South Dakota, so it is quite hardy in other parts of the country. In warmer climates, it reaches two to three feet tall, but in colder areas, it often grows no more than one foot tall. The rambling, spiny plants can create large clusters reaching several feet in diameter. In early summer, tuliplike yellow, orange, or pink flowers appear, followed by purplish fruits. 'Plum' is a choice cultivar bred by the famed



Hardy and low-growing tulip prickly pear spreads to form an effective groundcover.



Many prickly pears, such as this Santa Rita, can be grown in containers indoors and out.

Opuntia hybridizer Claude A. Barr (see "Hybrid Prickly Pears," right); it has rosy-apricot flowers, extra-large pads, and tasty red fruits.

Brittle prickly pear (O. fragilis, Zones 4-10, 10-4) is the hardiest species with populations extending well into Canada and the western mountain ranges. The low, spreading plants are very prickly and bear subdued yellow flowers in spring. The small, roundish pads are brittle and break off easily, rooting where they fall. Many wild forms are not visual showstoppers, but there are several cultivars well worth growing. The adorable 'Nevada Cushion' reaches just four inches tall, forming a tidy cushion with pale yellow spring flowers. An odd little cultivar dubbed the potato cactus (O. fragilis var. denuda 'Potato') forms three-inch-tall clumps of spineless, spud-shaped pads that produce deep yellow flowers in late spring.

CULTIVATION GUIDELINES

All prickly pears require very porous, welldrained soil and grow best in raised gardens that ensure excellent drainage. Knowing the natural habitat of a given species will help gardeners better understand their soil requirements, whether rocky, sandy, or more organic soils are needed. Prickly pears grow best in full sun, but a few hardier species, such as devil's tongue, will withstand part sun. And there are times when high sun in the warm-season can stress plants, resulting in dark purple or pink pads and slowed growth. Extra water may be helpful when summer heat is at its height. During the winter months, very little or no supplemental water is needed. Be mindful of this with houseplant specimens.

"Opuntias here [central Texas] are great in landscapes that are not irrigated. They do just fine without it," says DeLong-Amaya.

Propagating prickly pears is easy. Their pads are designed to naturally break off and readily root at the breaking point. If propagating at home, Puente-Martinez suggests allowing the pads to dry out in a shaded spot for one or two weeks before planting to avoid rot. Then fill pots with cactus mix and place the pads halfway down in the mix, base down, and wait for a month before watering. In this time, they should develop roots.

The world of *Opuntia* is so much greater than the few selections highlighted here, and it's a world that's well worth exploring. So respect—but don't fear—the prickles, and give one or more of these diverse cacti a try in

HYBRID PRICKLY PEARS

There are hundreds of cultivated prickly pear selections and hybrids available at specialty nurseries. Some of the finest were bred by Claude A. Barr (1887– 1982), a Great Plains cattleman and noted Southwest-native plant hybridizer from South Dakota. His love of *Opuntia* led him to breed some classic varieties that are still sought by enthusiasts, including the cold-hardy, deep-fuchsiaflowered 'Dark Knight', the compact 'Super Rutila', which has elongated pads and rosy pink flowers, and the super hardy 'Grand Mesa Peach' with its pale peachy pink flowers.

Kelly Grummons, owner of Cold Hardy Cactus nursery, is a contempo-



Walk in Beauty 'Garden Glow'

rary *Opuntia* breeder who has focused on long-blooming hybrids. According to Dan Johnson, Denver Botanic Gardens' associate director of horticulture, "Kelly Grummons has taken the simple prickly pear where no opuntia has gone before, creating spectacular hybrids with amazing flower power with his Walk in Beauty[™] series. Many even re-bloom up to three or four times in one season." —J.K.

your garden. Once established, these rugged beauties grow effortlessly and impart a little desert flavor to rock gardens, containers, raised beds, and depending on the selection, to the dinner table as well.

Horticulturist, garden communicator, and photographer Jessie Keith is based in Wilmington, Delaware.

Solutions for Soggy Sites

Rather than struggling to "fix" seasonally wet garden sites, try these plant and design tips instead.

BY KRIS WETHERBEE

HEN I WAS a child growing up in Southern California, my dad taught me a lot about the lush, drought-tolerant plants he had planted in our yard. Yet there was one shady spot where a slightly leaky hose connection always kept the area damp. My dad's solution? He planted a patch of moss lawn.

Since then, my experience with plants for wet places has expanded tremendously. I moved to Oregon over 25 years ago, and I have become quite familiar with plants that can handle wet sites; our native clay soil is often soggy in spring due to an abundance of winter rainfall.

There are many solutions for dealing with wet sites. These often take a mechanical approach: installing drainage systems or dry creek beds, heavily amending the soil, constructing raised beds, or building a patio overtop the problem area. I prefer the simpler and less expensive approach of selecting trees, shrubs, and perennials that are already adapted to those sites.

CAUSE AND EFFECT

Soggy soil can result from numerous causes, and there is often more than one factor involved. In addition to the amount and timing of precipitation, specific site issues such as slope; surrounding plants, structures, and hardscaping; soil texture (relative ratio of sand, silt, and clay); soil compaction; high water table; and amount of sun or shade all influence moisture retention.



Aptly named river birches (Betula nigra) are well adapted to seasonally moist areas of the garden.

Water from higher elevations and surrounding hardscapes—streets, driveways, rooftops—may collect in a low spot in the yard. Water from rooftops can be collected in rain barrels for use elsewhere in the yard. Excess water can be diverted to a lower area of the landscape by installing a French drain, or by directing the flow into an open swale—a depression that helps capture and redirect runoff. Planting the swale with shrubs and perennials that tolerate wet soil increases infiltration of the runoff into the surrounding soil. Of course, a low, soggy area is the perfect spot for a wetland or rain garden.

Biodegradable textiles can help prevent erosion, especially on slopes or hillsides, and mulch is key to weed suppression and helping new plantings become established. William Cullina, president and CEO of Coastal Maine Botanical Garden in Boothbay, warns that washouts are a challenge when establishing plants in wetlands, as is the potential for frost heaves, where the freezing of the soil pushes plants out of the ground. Planting in early spring allows plants the entire season to become established before the threat of winter frost heaves arrives, and a layer of organic mulch helps moderate soil temperatures and reduce heaving.

Soils that have a high percentage of clay are typically slow to drain. These soils are also commonly deficient in oxygen, which most plants need for healthy root growth. "Low-oxygen soils favor certain root pathogens," says Cullina, "but you can select plants that are able to tolerate that type of environment."

Exposure has a significant impact on wet soils. If the soggy area is exposed to full sun and winds, evaporation will help the soil dry out. On the other hand, a shady



Among perennials suited to wet sites is swamp milkweed (Asclepias incarnata), including its white-flowered selection 'Ice Ballet'.

spot—particularly one that is protected from winds—tends to stay wet longer.

Depending on the cause, wet areas may be quite soggy, moderately and consistent-



Scarlet rosemallow tolerates wet soils and provides a splash of color to the late-summer garden.

ly wet, or intermittently or seasonally wet. Fortunately, there are plants that thrive in each of these conditions. The following provides suggestions of native North American plants suited to each type of wet site. (For more recommended plants for wet soils, see the chart on page 35.)

PLANTS FOR SOGGY SITES

This type of site is consistently wet and spongy with high water saturation. The soil is damp underfoot, but never swampy. In nature, this type of soil is often found beside a brook, pond, or stream.

Black gum (*Nyssa sylvatica*, USDA Hardiness Zones 5–9, AHS Heat Zones 9–7), thrives in wet, soggy soil, growing to a height of 30 to 50 feet. This tree is particularly attractive in fall with its fissured dark gray bark, brilliant orange and red autumnal leaves, and blue-black fruit that provides food for many birds and mammals. It grows best in full sun to part shade, in acidic to slightly alkaline soil.

Buttonbush (Cephalanthus occidentalis, Zones 5–10, 12–3) grows in average moist soil but in full sun will tolerate standing water. This large shrub matures to eight feet tall and wide, but compact selections like Sugar Shack[®] are available. "Its dark green leaves are handsome, and it produces amazing white flower clusters that look like spherical pin cushions and attract butterflies in midsummer," says Larry Mellichamp, retired botany professor and former director of the Botanical Gardens at the University of North Carolina, Charlotte.

Cardinal flower *(Lobelia cardinalis,* Zones 2–8, 8–1) is a classic wetland plant for moist-to-wet spots, in full sun or part shade. "Planted in masses, it makes an amazing show," says Mellichamp. "This midsummer bloomer grows three feet tall, with spikes of brilliant red flowers." He adds that the short-lived perennial easily self-sows in moist soil.

Scarlet rosemallow (*Hibiscus coccineus*, Zones 6–11, 12–1) grows six to eight feet tall or more, with large, deeply cut leaves. Its bright red blooms attract butterflies and are six inches or more across. "A new flower or two opens each day on this longlived, multi-stemmed perennial," Mellichamp says. "It can take constant wet feet or average garden soil in full sun."

Another wildlife favorite is swamp milkweed (Asclepias incarnata, Zones 3–9,

9–2), a clump-forming perennial native to much of eastern North America and parts of the mountain west. Site it in full sun, where its fragrant pink to purple summer flower clusters will delight you and a variety of wildlife, including monarchs. A cultivar called 'Ice Ballet' with beautiful pure white flowers is worth seeking out.

River oats or Indian woodoats (*Chasmanthium latifolium*, Zones 5–9, 9–1) thrives in medium to wet soil in full sun or part shade. This clump-forming, upright ornamental grass can be found in rich woodlands, moist bluffs, and along streams. Notable characteristics include bright green bamboolike leaves and attractive silvery green seeds that resemble flattened oat clusters. The large, graceful seedheads turn purplish-bronze to copper in fall; these can self-sow vigorously under ideal conditions, so deadhead if self sowing is not desired.

PLANTS FOR MODERATELY WET SITES

The following plants are well suited to soil that is consistently moist—but not waterlogged.

Atlantic white cedar *(Chamaecyparis thyoides,* Zones 3–8, 8–1) is a beautiful coniferous evergreen, native to eastern North America. With cultivars ranging from four to 50 feet tall, it's a good choice for gardens large or small. It thrives in moist to average soil with moderate acidity, and full sun to light shade. The winter foliage color is especially striking, ranging in hues from plum-purple to a deep bronze.

American hornbeam or musclewood (Carpinus caroliniana, Zones 3-9, 9-1) is a dense, pyramidal tree growing 30 to 40 feet tall. "It grows on the edges of swamps and wetlands and adapts beautifully to moderately well-drained soil in full sun to part shade," says Neil Diboll, president of Prairie Nursery in Westfield, Wisconsin, and a consulting ecologist. It makes an ideal living screen when planted six feet apart. Autumn attractions include fruiting clusters for birds, and leaves of mottled yellow and red. "The Firespire™ variety has excellent red fall color and does best in northern climates. For the southern Midwest, Native Flame[®] is a good choice," says Diboll.

Native to eastern North America, wahoo *(Euonymus atropurpureus*, Zones 3–8, 8–1) grows from 12 to 25 feet tall. It can be pruned as a single-stemmed tree or allowed to grow as an informal hedge or screen. The



American hornbeam is a medium-size tree with attractive bark and good fall foliage color. Here, several specimens thrive in a Maryland garden.

attractive red berries—relished by birds and its dark purple fall foliage combine to make this a great replacement for the invasive non-native burning bush *(E. alatus)*. It's best in full sun and well-drained sites that rarely dry out. Smooth hydrangea (Hydrangea arborescens, Zones 4–9, 9–1) is a dense, upright shrub that grows 10 feet tall and wide. "It is very pH-adaptable but prefers moist soil and may require supplemental watering in hot, dry summers," notes James E. Klett, professor and Extension landscape horticulture specialist with Colorado State University in Fort Collins. Its white, midto late summer blooms age to pale green. Massed plantings are extremely striking.

Summersweet (*Clethra alnifolia*, Zones 3–9, 9–1) is a hardy, deciduous native of eastern North America that grows two to eight feet tall, depending on the cultivar. It features fragrant, showy summer flowers that attract butterflies. White-flowering 'Hummingbird' makes an attractive low hedge; 'Ruby Spice' with its pink flowers is stunning as a specimen for the border. Summersweet thrives in moist, organic, slightly acidic soil and part shade, although it will tolerate full sun with consistent moisture.

Seashore mallow (*Kosteletzkya virginica*, Zones 6–9, 9–5) is a close relative of the eastern hibiscus. Native to the eastern seaboard and Gulf Coast, this elegant perennial grows up to five feet tall, with butterfly-attracting pink flowers that typically bloom in mid- to late summer. "Plant it in a good sunny spot that can be moist to very moist, but not soggy," suggests Mellichamp.



The showy flowers of 'Ruby Spice' summersweet are fragrant and attract butterflies.

MORE PLANTS FOR WET SITES

The following plants are adaptable to soggy, moderately wet, or seasonally wet soil conditions, depending on where the garden is located. The regions of the United States where they perform well are specified in the chart using the following abbreviations: NE (Northeast), SE (Southeast), MW (Midwest), PNW (Pacific Northwest and Northern California), and MTW (Mountain West). Since soggy conditions are rarely a concern in the Southwest, it has not been included. —K.W.

Name	Appropriate Regions	Height/Spread (feet)	Exposure	Comments US	USDA Hardiness Zones, AHS Heat Zones	
TREES						
Acer rubrum (red maple)	NE, SE, MW	40–70/30–50	Full sun	Superb shade tree with good fall coll tolerates occasional flooding	olor;	3–9, 9–1
Asimina triloba (pawpaw)	NE, SE, MW	15–20/15–20	Full sun to shade	Often multi-trunked; bears interesti purple flowers in May followed by ea fruit 2 to 5 inches long	ing dark dible	6–8, 8–6
Betula occidentalis (water birch)	MTW, PNW	20–30/10–20	Full sun to part shade	Multi-trunked tree with rounded form bark adds winter interest, flood tole	n, coppery erant	4–6, 6–1
<i>Cornus nuttallii</i> (Pacific dogwood)	MTW, PNW	20–40/20–25	Part shade to shade	Prefers growing as an understory pla cool, moist location; showy white flo in spring	ant in a ower bract	7–8, 8–6 s
<i>Magnolia virginiana</i> (sweetbay magnolia)	NE, SE	10-35+/10-35	Full sun to part shade	Grows larger in the South; bears frag white flowers in summer	igrant	6–9, 9–6
SHRUBS						
Cornus sericea syn. Cornus stolonifera (red-osier dogwood)	NE, SE, MW MTW, PNW	6–10/6–12	Full sun to part shade	Multi-stemmed, stoloniferous shrub vivid red stems in winter	o with	3–8, 8–1
<i>llex decidua</i> (possumhaw)	SE, MW	7–15/5–12	Full sun to part shade	Deciduous, multi-stemmed large sh attractive gray stems and red to oran in fall and winter	nrub with nge fruit	5–9, 9–1
<i>Itea virginica</i> (Virginia sweetspire)	NE, SE MW	4–6/4–6	Full sun to shade	Four-inch clusters of white flowers in summer; leaves provide excellent fa can form large colonies in moist soi	n 6 all color; ils	6–9, 10–7
Rhododendron viscosum (swamp azalea)	NE, SE	2-8/3-8	Part shade	Open habit, forms thicket with age; white flowers in early summer	fragrant	3–9, 9–1
Salix purpurea (purple-osier willow)	NE, SE, MW MTW, PNW	8–15/8–15	Full sun to part shade	Rounded form, good for stabilizing along streams; stems mature from purple-red to light gray	banks	4–7, 7–1
			PERENNIALS			
Astilbe ×arendsii (astilbe)	NE, SE, MW, PNW	2–3/2–3	Part shade	Mounding habit with fernlike foliage feathery plumes of tiny flowers in sp summer	e and pring or	4–8, 8–2
<i>Carex muskingumensis</i> (palm sedge)	NE, MW, MTW	1–2/2–5	Full sun to part shade	Clump-forming sedge with green or variegated grasslike foliage can be u as a groundcover. Look for named so like 'Ice Fountains' and 'Oehme'.	used selections	4–8, 8–1
<i>Chelone glabra</i> (turtlehead)	NE, SE, MW	1–3/1–3	Full sun to part shade	Erect, clump-forming perennial with to white flowers in late summer and	h pink 1 fall	3–8, 9–1
<i>Iris ensata,</i> syn. <i>Iris kaempferi</i> (Japanese iris)	NE, SE, MW PNW, MTW	2-4/1-2	Full sun to part shade	Flattened flowers 3 to 6 inches across summer; thrives in standing water of growing season but needs dryer soil	ss in during I in winter	3–9, 9–1
Veronicastrum virginicum (Culver's root)	NE, SE, MW, MTW	2–6/1–2	Full sun to part shade	Erect habit with densely clustered s white flowers from summer to fall	spikes of	4–8, 8–3

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Joe Pye weed *(Eutrochium fistulosum,* syn. *Eupatorium fistulosum,* Zones 3–8, 8–2) comes to life in late summer when many other blooms have faded. It grows from two to nine feet tall with 12-inch-diameter flowerheads favored by many butterfly species, particularly swallowtails. It thrives in full sun to light shade and moist to wet soil.

PLANTS FOR SEASONALLY WET SITES

Many gardeners encounter this type of site; it might be a small spot within a bed, a band at the base of a border situated on a slope, or a large area in the landscape. The site may become saturated during the rainy season and dry out reasonably well between rainfalls, or the soil may be dry for several months once the rainy season is over.

While wet soils may not be as relevant in much of the Southwest due to minimal rainfall, Nan Sterman, a Southern California-based garden designer, writer, and horticultural consultant says that swales are just coming onto the scene in her area, with most being dry water courses filled with cobbles. "It's a challenge because under these conditions plants could stand in water for maybe a week, then dry for a month, then be wet for a week again, then dry for another month and by then, the rainy season is over....with no rain for potentially another nine or 10 months," she says. Deer grass (*Muhlenbergia rigens*), alkali sacaton (*Sporobolus airoides*), and a variety of sedges (*Carex* spp.) and rushes (*Juncus* sp.) are good choices for such seasonally wet swales in Mediterranean climates.

For gardeners in less dry climates, plants that do well in rain gardens—which alternate between wet and dry—fall into this category. These plants are typically hardy, non-invasive, drought-and-floodtolerant selections that are adapted to the region, the light exposure in the garden, and the variable moisture conditions.

American elm *(Ulmus americana*, Zones 3–9, 9–1) is a large, impressive tree, with both upright and pendulous branches, gray furrowed bark, and leaves that turn yellow in autumn. "There are now selections of American elm that are highly resistant to Dutch Elm disease, including 'Princeton', 'Jefferson', and 'Valley Forge', so you can once again enjoy the magnificence of this classic tree," says Diboll. "It's highly adaptable to a variety of soil types and tolerates moist sites and even fairly dry soils, reaching its maximum glory when planted in full sun with plenty of room to spread its crown."

Hackberry (*Celtis occidentalis*, Zones 2–9, 9–1) grows naturally near floodplains, wet woods, drainage ditches, and other seasonally wet places. This elm family member adapts to a wide range of soils—whether clay or rocky, rich or poor, acidic or alkaline, wet or dry. It's also very pollution tolerant. Diboll calls hackberry "one of the most under-appreciated of all our North American native trees. It grows to 80 feet tall in full sun. The bark has a unique corky character, and birds love the seeds."

River birch *(Betula nigra*, Zones 4–9, 9–1) is a relatively fast-growing, generally multi-trunked tree with graceful leafy branches. Growing from 30 to 60 feet tall, it is commonly grown in moist soils in full sun. "This is a classy wetland tree that naturally grows on riverbanks that regularly flood, but not where there is continuous standing water," says Mellichamp. "The trunks are covered with a salmon-colored peeling bark that looks great all year."

Swamp white oak (Quercus bicolor, Zones 4–8, 8–1) is a magnificent south-



Deer grass can grow well in intermittently moist and dry sites such as swales and drainage ditches.



Garden designer Ana Hajduk combined moisture-tolerant perennials such as cardinal flower and Joe Pye weed in this rain garden in Wassaic, New York, that is often wet with overflow from a nearby brook. The garden also doubles as a haven for pollinators and other wildlife.

eastern United States native tree that grows at a relatively slow pace, eventually reaching 50 to 80 feet tall. "This long-lived hardwood is tough as nails and tolerates compacted soil, poor drainage, and full sun to moderate shade," says Diboll. "It makes an excellent street tree as well as a fine specimen in the home landscape." It tolerates wet soil and thrives where soil is well drained.

Mountain alder *(Alnus incana* ssp. *te-nuifolia*, Zones 6–8, 8–6) is a western North American native that makes a great choice for wet areas subject to erosion. It grows 20 to 25 feet tall and wide, and its leaves turn yellow in fall. It can be grown as a multi-stemmed shrub or pruned to a single trunk with a rounded crown. It prefers some shade, and adapts well to stream banks or seasonally moist mountain slopes.

Black chokeberry (Aronia melanocarpa, Zones 3–8, 8–1) is a tough shrub that grows three to eight feet tall. Native to the eastern United States, it's well suited to informal plantings and woodland edges, or as a hedge when planted four feet apart. "This is a great shrub for moist soils as well as well-drained situations—it even grows in dry rock ledges," says Diboll. It grows in sun or part shade, but fruiting and fall color are best in full sun.

Fox sedge (*Carex vulpinoidea*, Zones 3–8, 8–3) is a clump-forming perennial that grows one to three feet tall in almost any soil when provided adequate moisture. In midsummer, it produces elongated flower spikes with 10 or more spikelets. "This amazing plant is right at home in continu-

ously damp soils, but also tolerates dry conditions during summer's heat," says Diboll.

DESIGNING GARDENS IN WET LOCATIONS

Design ideas and strategies that work for other areas of a landscape apply equally well to gardens in wet places: combining plants in attractive groups, incorporating textural layers within the vertical space by arranging plants with good visual hierarchy, mixing a variety of colors and textures for visual interest, and finding a common thread that ties everything together through a consistent style. "The combination of good garden design and appropriate plants can create beauty and inspirational space," says Ann English, a RainScapes program manager with the Montgomery County, Maryland, Department of Environmental Protection.

Wet areas provide a wonderful opportunity for creating high-impact designs. For example, you might turn a poorly drained, fairly sunny site into a wet meadow with appropriate bird- and butterfly-attracting wildflowers and grasses. "Native plants for wet places represent the opportunity to have novel and unexpected beauty in the garden that will be animated with birds, butterflies, and other pollinators that welcome the feast," says English.

A rain garden utilizes runoff in a way that not only beautifies your space, but also benefits both wildlife and the environment. By employing a few rainscaping techniques, more water will filter into the soil or be contained for future use rather than being lost as runoff.

Swales offer another opportunity for utilizing wet spaces. Swales between property lines or other low-lying areas offer an ideal environment for growing moisture-loving plants such as Louisiana irises or sedges within the swale or along its edges.

While there are many ways to transform a wet space from unusable to beautifully functional, the key to making it work is to carefully examine your site and its conditions, then select plants that will thrive in those conditions. When you put all the pieces of the puzzle together, a problematic wet area becomes an asset with a purpose.

Kris Wetherbee is a freelance writer based in Oakland, Oregon. This is an updated version of an article that was originally published in the November/December 2012 issue of The American Gardener.

BY VIVEKA NEVELN

Ira Wallace seed-saver extraordinaire

One of the most respected and recognized voices in sustainable agriculture today, Ira Wallace champions heirloom seed varieties and promotes the importance of preserving our seed-saving traditions for a healthier future.

RA WALLACE is the recipient of the American Horticultural Society's Paul Ecke Jr. Commercial Award this year, in recognition of her efforts in commercial horticulture that have improved gardening practices everywhere. As a worker and owner of the cooperatively-managed Southern Exposure Seed Exchange (SESE), she has spent the last two decades seeking out special and unusual seed varieties that have been passed down through generations or traditionally bred to offer superior traits.

SESE has trialed thousands of these varieties on 72 acres of certified organic land in central Virginia to identify the ones with the best flavors and adaptability to the Southeast. It also relies on a network of more than 70 small farms around the region, which Wallace helped build, to sustainably produce the best of these seed varieties. Currently, SESE's catalog contains over 700 openpollinated and heirloom varieties of vegetables, fruits, herbs, grains, flowers, and other plants.

Here, Wallace shares what motivated her to start saving seeds as a career, and her thoughts on why seed diversity matters.



How did you become interested in gardening?

My grandmother got me interested. She raised me in a small town in Florida, where we grew our own food year-round. In college, it was my fun thing, not something I thought of as a career. It was also something I did to keep the memory of my grandmother close after she died the year I started college.

What initially inspired you to focus on heirlooms and seed saving for edible plants?

There were a lot of little steps leading to the right thing at the right time. After college, I traveled internationally and had experiences that pushed me in that direction, such as visiting a Kibbutz in Israel, where I worked on recreating a desert oasis. I moved to Twin Oaks, a cooperative community in Virginia, and began operating a CSA [community-supported agriculture farm] in 1993. I became involved with Southern Exposure around 1999 after its original founders decided to sell it. There were so many wonderful flavors and colors and stories with these seeds—I was fascinated!

What appeals to you about cooperatively operated enterprises?

There's always help to be had in hard times. And I grew up during the Civil Rights Movement; I was one of the kids experiencing de-segregation, which made a lasting impression on me. In some ways, people working together cooperatively for this cause represented to me how you can change the world. My grandma would say, "It might not make a difference what we do, but if we don't try, it definitely won't make any difference."

How do you decide which varieties to offer through SESE?

We focus on varieties that do well in the Mid-Atlantic and Southeast regions. We look to our customers to introduce us to varieties they are interested in. Then we trial the varieties and pick the ones that perform well. We also have a seed bank to maintain genetics. We've seen historic varieties of corn, for example, with resistance to blight but maybe not very productive, but they still could be useful for breeding disease-resistant corn.

Which seed varieties are you currently most excited about?

I've begun curating a collection of heirlooms from the African diaspora. Roselle *(Hibiscus sabdariffa)*, for example, is a favorite plant for this community of seed-savers. I'm also trying to track down some varieties of watermelon developed by black and enslaved people in the Carolinas.

What gives you the most satisfaction from your work?

I love when I hear from someone with an interesting variety from their family. I'm honored that people trust us to carry these trea-

The American Horticultural Society's Great American Gardeners Awards are given each year to honor individuals, organizations, and businesses that have made outstanding contributions to fields such as plant research, garden communication, landscape design, youth gardening, teaching, and commercial horticulture. For more information, visit *www.ahsgardening.org/awards.* sures into the future. I am also very proud of cofounding the annual Heritage Harvest Festival in 2007 at Monticello [Thomas Jefferson's estate in Charlottesville, Virgina]. Our workshops, demos, special tours, SESE Tomato Tasting, and Seed Swap are among the best events related to heirloom education and advocacy that I have organized, touching thousands of people every year. My grandmother would be proud, too.

What are the biggest challenges you see facing seed-saving and gardening?

Modern life takes people away from gardening and seeing physical work as something positive, so there's a big reduction in the number of seed-savers out there. We need to make people more aware of the value of this work. There's a double benefit to our health from both the labor and the raising of healthy food to eat. We need to give people a positive experience with gardening at a young age in a way that sticks with them through life.



Ira Wallace shows heirloom tomatoes at the Heritage Harvest Festival.

How do you feel that SESE and your work are helping to address these challenges?

We are telling the stories of our varieties and the farmers that produce them, especially about the young farmers who want to raise heirloom, nutrient-dense food. And it's not just about the heirlooms of the past, but also open-pollinated, modern varieties that bring new flavors and colors to our world.

What do you hope for SESE's future?

When younger generations realize facts like not all collards are created equal, they will keep our seed-saving traditions going. So, I hope that we'll continue to commit to educating people, and providing seeds to customers who value flavor and nutrition, and then want to save seeds. And I hope that one of these varieties will become a treasure for them to pass down to their grandchildren.

Viveka Neveln is associate editor of The American Gardener.



Grappling with Groundhogs

by Scott Aker



Thanks to voracious appetites, groundhogs can make short work of a lettuce patch like this one.

ROUNDHOGS, also known as woodchucks, may not be the largest animal visitors you will deal with in your garden, but they can do more damage in a short time than most others, aside from deer. They have voracious appetites, and consume a wide variety of vegetation. To better understand how to manage them, it helps to learn about their niche in the food web.

NATURE'S EXCAVATORS

Found across forested areas of Alaska and Canada, into the northeastern United States and parts of the Upper South, groundhogs *(Marmota monax)* are a type of marmot, a group of ground-dwelling members of the squirrel family. They are adept excavators with powerful front feet equipped with claws that rip into soil with ease. Most groundhogs dig summer and winter burrows. All that digging helps to improve soil by aerating it and mixing in organic matter. Solitary except when mating or raising their young, they are territorial and don't stray far from the safety of their burrow. Abandoned burrows provide homes for rabbits, foxes, and a variety of other animals.

In late autumn, groundhogs begin hibernation in their burrows and subsist on stored fat until spring arrives. Mating takes place in March or April, and litters of two to four young are born about a month later. After they reach maturity in late summer, the offspring scatter to build their own burrows.

EVICTING A GREEDY GROUNDHOG

If a groundhog has begun damaging your garden beyond what you will tolerate, try to locate its burrow and evict it. The best time of year to do this is in late summer, after any young have left the burrow but early enough so adults can dig a new burrow elsewhere before winter arrives.

If you find a burrow but aren't sure it's inhabited, use straw, grass clippings, or newspaper to cover the entrances usually there will be two to five. Monitor daily to see if they are disturbed. If they are, you likely have a resident groundhog. Live trapping and relocating the creature may be an option, but it is not allowed in all areas. Check with your wildlife regulatory agency before hiring a wildlife control service or trapping.

Another option is to clear all vegetation away from the burrow area and dig away soil at the entrances. Groundhogs are not comfortable in the open and will usually abandon burrows with entrances that become exposed. If that doesn't work, placing used cat litter just inside burrow holes and lightly covering up the entrances to trap the odor usually will persuade more stubborn groundhogs to leave.

When there has been no activity for three to five days, seal the entrances with a four-foot diameter section of wire mesh—it must have openings no more than three inches wide. Anchor the edges into the ground around the burrow and cover the area with soil.

FENCING IS YOUR FRIEND

If you can't find any burrows, or in addition to eviction, fencing is also an effective option. Groundhogs are good climbers, so your fence must be four to five feet high. It's helpful to have the top 18 inches of fence unsecured so it will wobble, discouraging any groundhogs that try to climb over it. Because they



For small beds used to grow shorter plants, covering the entire area with chicken wire can help discourage groundhogs as well as other foraging animals.

will try to dig under the fence, bury its bottom edge six inches below the ground, and bend the fencing at a right angle to extend two feet away from the fence line. If you don't want to bury the bottom of the fence, a single low-voltage electrical wire placed about four inches above the ground surface will discourage digging.

OFFEND THEIR SENSES

Naphthalene crystals, used for repelling moths, are often recommended as a material to place in the entrance of burrows, but there are human health concerns with naphthalene exposure. Spraying plants with blood meal or concoctions with spicy ingredients may temporarily discourage groundhogs, but these must be applied more frequently; besides, foliar sprays won't prevent foraging on roots and bulbs.

Wind chimes or other shiny objects that move and make noise in a breeze, such as pie plates tied to the fence, can also help to frighten away more skittish groundhogs. You could even try motion-activated sprinklers to spook them away from your garden.

A WORD ABOUT SHEDS AND STRUCTURES

When groundhogs look for somewhere to dig a new burrow, they prefer a place that stays dry. The area under the floor of a shed or gazebo fits the bill nicely. For this reason, it's best to place garden structures on a foundation of cinder blocks or large stones and then fill the entire area under the floor with loose gravel. If they attempt to dig a burrow under the shed, it will fill with gravel. The gravel will also make the area inhospitable to other pests. If you garden where groundhogs are abundant, consider placing wire mesh underground around the perimeter of garden structures as you would for a fence.

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

Gardening Q&A with Scott Aker

REPAIR FOR FERTILIZER BURN

I spilled some fertilizer in the lawn last fall, and though I tried to rake it up, there is a burned spot there that won't grow anything—even weeds. I tried cutting out some sod and planting it there, but it died, too. How do I get grass to grow here again?

Fertilizers act like salt in pulling moisture out of things, so the key lies in dilution. Rain may eventually do the job, but if you can't wait, water the area thoroughly to move the nutrients down into the soil profile and reduce the concentration at the surface. If the area is small, you can also dig the soil out of the area and replace it with fresh soil before planting new sod.

DWINDLING SNOWDROPS

Many of my snowdrops (Galanthus nivalis) failed to grow or bloom this spring in my Mid-Atlantic garden. These are established clumps growing in part shade that have bloomed and expanded for decades, and only a few bulbs grew and bloomed this spring. What might have happened, and is there something I should do to protect the remaining bulbs?

Snowdrops are generally not troubled by pests and diseases, but the record rainfall last year in your region likely favored fungi that cause widespread rot. Normally, hot, dry weather in summer would stop the progression of the disease. Dig the remaining bulbs as their foliage fades and remove any infected parts of the outer papery layer of the bulbs along with the spent foliage and any soil. Soak the bulbs in a one percent solution of bleach or hydrogen peroxide for 15 minutes. Replant them immediately in a different location.

—S.A.

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



Growing Sunflowers for Seeds

by Karan Davis Cutler



'Pikes Peak' is a tall-growing sunflower that produces loads of seeds ideal for snacking.

S UNFLOWERS MAY "showeth marveilous faire," as one 16th-century writer put it, but classic sunflowers are towering and top-heavy, a challenge to incorporate into ornamental beds and borders. Breeders have eased those design problems by producing shorter and multi-stemmed cultivars, some with double or pollenless flowers. But the tall, single-stem varieties are the best for growing seeds for snacks. Planting them in the food garden eliminates the problem of blending with neighbors and you needn't regret covering the blooms to discourage birds and other seed-seekers.

Wherever you plant, you'll be cultivating *Helianthus annuus*, a North American native that first journeyed to Europe around 1500. Breeders there, especially in Russia, refined the job begun by Native Americans of turning a small-flowered, multi-stemmed species into a soaring, single-stalked annual bearing one large bloom—the archetypal sunflower.

Sunflowers are composites, cousins of asters and other daisylike plants in the Asteraceae. Each flower is really many flowers: The outer ring of petals are sterile ray flowers, designed to attract pollinators, and the center eye is made up of hundreds of seed-producing disk flowers.

There are two forms of sunflowers grown for consumption: confection and oilseed. All sunflower kernels are edible, but confection varieties have larger, striped seeds, the best for snacking. Oilseed types have smaller seeds with black hulls that are pressed for oil for cooking and industrial applications, and used for livestock and bird food. The largest confection sunflowers are openpollinated heirlooms, and saved seeds will come true. Sunflowers bred for ornamental value are usually hybrid blackseed types. If they produce any seeds, plants grown from them will not be true to type.

GROWING GUIDELINES

A sunflower garden needn't be large. The largest sunflower in my test plot was a 12-foot-tall 'Titan' cultivar that produced over 800 seeds. With that kind of yield, six plants may be more than enough.

Gardeners with bird feeders know that sunflowers grow without human help. To guarantee healthy, sturdy plants, however, provide well-drained, moderately rich soil with a near-neutral pH, and even moisture. Full sun is imperative for success. Avoid too much fertilizer, especially a lot of nitrogen, which encourages big plants but delays and reduces flowering. Once established, sunflowers are reasonably drought-tolerant and largely unbothered by pests and diseases. Most confection varieties mature about 100 days after planting, so short-season gardeners should start seeds indoors two to three weeks before the last frost by sowing one to three seeds in four-inch pots. Thin to one plant per pot, use artificial lights to avoid spindly stems, and don't disturb the developing taproot when transplanting outdoors after the danger of frost has passed.

Sow seed outdoors after the last-frost date, once the soil has warmed to 50 degrees Fahrenheit. Set seeds an inch deep, six inches apart, and expect them to sprout in a week. When the seedlings are six inches tall, thin to one to two feet apart. Since they will shade other plants, locate sunflowers on the northern edge of the garden.

Though most sunflowers attain heights well short of the world record—over 30 feet—they are often tall enough to be toppled by wind. If your garden is exposed to gusts and gales and lacks a wind barrier to plant against, stake individual plants (bamboo canes are ideal) or use twine to loosely loop several stalks together.

RECOMMENDED VARIETIES

'Titan', recommended by ornamental products manager Michael Wells at Harris Seeds, was just as he claimed: 12 to 14 feet tall with heads up to 24 inches across and large seeds. Names overlap, but other large-seeded candidates include 'Mammoth Russian' (syn. 'Mammoth, 'Giant Russian'); 'Mammoth Grey Stripe' (syn. 'Grey Stripe', 'Giant Grey Stripe'); 'Mongolian Giant'; 'Pikes Peak'; and 'Jumbo'. All are skyscrapers, as are the hybrids 'Kong' and 'Sunzilla'.

Although the biggest seeds come from the biggest plants, you may want to choose a shorter confection sunflower. Hybrid **'Super Snack'** is the favorite of Robin Ruether, ornamental project manager at Burpee, and grows five to seven feet tall; open-pollinated **'Sunspot'** is a three-footer.

ENJOYING THE HARVEST

Sunflowers are ready to harvest once the backs of the heads turn brownish. To protect the maturing seeds from birds and



VANCY J. ONDR.

'Mammoth Russian' sunflowers can grow to 12 feet tall and may need staking in windy locations.

Sources

Baker Creek Heirloom Seeds,

Mansfield, MO. *www.rareseeds.com.* Harris Seeds, Rochester, NY. *www.harrisseeds.com.* W. Atlee Burpee & Co., Warminster, PA. *www.burpee.com.*

PLANTING BASICS

Getting Started Sow seeds outdoors after the last frost, or start indoors two to three weeks before the last frost. **Spacing** Plant seeds one to two inches deep, six inches apart in rows two to three feet apart. Thin plants to one to two feet apart.

Days to Maturity 80 to 120 days, depending on variety.

squirrels, cover each seed head with fine nylon mesh or cheesecloth, securing it with twine. Let the seed heads dry on the stalk or cut them and hang them upside down in a dry, well-ventilated indoor location. Once the seeds are completely dry, rub them off the head by hand, and store in airtight containers.

To hull the seeds, place a half cup of seeds in a plastic bag and run over them several times with a rolling pin. Empty the bag into a bowl of water and remove the shells that float to the top. (The hulls contain chemicals that may affect the growth of other plants, so don't add them to the compost pile.) Drain the kernels in a colander, air dry completely, and store in airtight containers until you are ready to roast them.

To roast, cover seeds with salted water (one cup salt per gallon of water) and soak overnight. Drain seeds, dry on paper towels, and spread them on a baking sheet. Bake at 300 degrees Fahrenheit, stirring occasionally, until golden brown, 30 to 45 minutes. Cool and store in an airtight container.

Sunflower kernels are high in protein, fiber, essential minerals, and vitamin E and B-complex vitamins; they also contain healthful polyunsaturated fatty acids. So grow some of these garden giants and enjoy guilt-free snacks throughout the year.

Karan Davis Cutler is a freelance garden writer living in Bridport, Vermont.



Recommendations for Your Gardening Library

Gardens of the Arts & Crafts Movement (revised ed.) Judith B. Tankard. Timber Press, Portland, OR, 2018. 300 pages. Publisher's price, hardcover: \$45.

GARDENS OF THE ARTS & CRAFTS MOVEMENT is a "mustread" book for experienced hands at garden-making as well as newbies seeking to create their personal expression of paradise.



The former will have their knowledge of design history refreshed and expanded, while the latter will gain new insight into the past, as well as understand that the current trend toward a layering of structure and "naturalness," with an emphasis on suiting plant to site, is not as revolutionary as they might think.

The greater part of the book—a revision of the original 2004 edition—covers the major figures of

British Arts and Crafts garden design, from William Morris to Thomas Mawson by way of Gertrude Jekyll and William Robinson, with many illustrious stops along the way. This provides a solid grounding in what began in the 19th century as a British movement in the decorative arts, as a search for a national language of design.

Added value in this edition comes in new sections devoted to the impact of Arts and Crafts on American gardens. Author Judith B. Tankard considers the contributions of numerous 19th- and early-20th-century American artists and designers in the context of Louise Shelton's rhetorical question, posed in her 1915 book *Beautiful Gardens in America*, "Just as there are gardens peculiar to other nations...might we not give serious consideration to evolving someday a type particularly American...?" And in these pages we learn that the answer was—then as now—regional. "The many differences in climate, plant palette and heritage," explains Tankard, prevented the evolution of a truly national style. However, she points out that the aesthetics and philosophy of Arts and Crafts era still exert influence on our gardens, seen particularly in a dependence on nature as the muse for all aspects of plan and planting.

The book is richly illustrated with archival and contemporary photos. There are also many garden plans, so it's easy to follow the principles being described. That in itself makes the book a valuable source of inspiration, but Tankard takes it further by closing with chapters devoted to "getting the look," so that today's gardeners can use the lessons of the past to fashion home landscapes that are in tune with contemporary mores.

—Ethne Clarke

Ethne Clarke is the author of several best-selling books on garden design including Hidcote: the Making of a Garden.

Gardentopia: Design Basics for Creating Beautiful Outdoor Spaces

Jan Johnsen. The Countryman Press, New York, NY, 2019. 240 pages. Publisher's price, hardcover: \$29.95.

IN Gardentopia: Design Basics for Creating Beautiful Outdoor Spaces, Jan Johnsen shares her wisdom on landscape design



gleaned over more than 40 years of practice. It introduces readers to both basic and advanced concepts, presented in the form of 135 tips that will empower readers to, as Johnsen puts it, "turn your backyard into...an outdoor space of delight and serenity."

The tips are organized into five sections: Garden Design and Artful Accent Tips; Walls, Patios, Walks, and Steps; Theme Gardens; Color in the Garden; and Plants and Planting. Johnson sum-

marizes the role each of these elements play in creating a harmonious garden space, then provides appropriate tips for implementation.

In the first section on design concepts, Johnsen focuses on the framework that every garden needs by offering tips on how "to look at your yard's layout with fresh eyes." Along the way, she explores topics such as the ancient Japanese design technique known as *miegakure*, which "involves partially screening a view or section of a garden with a strategically placed shrub or wall to create the illusion of distance." She continues, "This popular garden design technique is used for making smaller yards appear larger than they are." She then gives specific advice on how to achieve the effect. Two photographs clearly illustrate the enticing benefits of a garden where all is not revealed at once.

Along with her suggestions for creating effective landscapes, Johnsen also points out common pitfalls to avoid. Her observation that placing outdoor light fixtures every few feet along the side of a front walk creates the effect of an airport runway, for instance, may make you think better of such an arrangement.

Johnsen's writing is often witty, and sometimes even waxes lyrical. In the chapter on color, she writes about the psychological and emotional benefits of flowers, comparing them to music: "flowers add sweet tones to the symphony of a garden. It is their soaring melody, with notes of blue, pink, white, and more that we all enjoy."

Both novice gardeners and pros will find valuable ideas and information in this book, inspiring them to go forth and create their own gardentopias.

—Catriona Tudor Erler

Photographer and author of nine garden books, Catriona Tudor Erler lives in Charlottesville, Virginia.

GARDENER'S BOOKS: TOOLS AND TECHNIQUES

W HEN IT COMES to gardening, there is always something new to learn. The following books, all updated versions of trusted guides, combine tried-andtrue methods with the most modern tricks of the trade. Learn how to propagate a wide variety of plants, create your own compost, and use organic methods to develop and maintain your ideal garden.

Propagating Plants (DK Publishing, 2019, \$35) will help gar-



deners of any skill level learn how to create new plants from ones they already have. This most recent edition provides tutorials on grafting, divisions, seed-starting, layering, and taking cuttings, as well as the intriguing history and development of these practices. In addition to covering the basic techniques, the book includes profiles of over 1,500 specific plants. Featuring 1,800 instructional illus-

trations and photographs, this book is a comprehensive guide to every facet of plant propagation.

Originally published in 1979, The Rodale Book of Compost-



ing (Rodale Books, 2018, \$18.99) details the benefits, materials, and methods of composting organic yard and kitchen waste, and how to incorporate this time-honored practice into your garden. This edition of the comprehensive reference has been updated to include cutting-edge research on the organic food industry and information about the history of composting, dating back to its use by Indigenous people.

Eliot Coleman has spent the past 50 years farming, research-



ing, and educating the public on the benefits of organically grown food. In the 30th anniversary edition of *The New Organic Grower* (Chelsea Green Publishing, 2018, \$29.95), Coleman describes the most current approaches to crop rotation, using cover crops and green manures, and organic pest management, among other concepts. This manual is a must-have for anyone interested in

sustainable agriculture, whether your focus is on growing field crops or maintaining a home vegetable garden.

—Laken Burns, Editorial Intern

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Horticultural News and Research Important to American Gardeners



Planting marigolds with tomatoes can deter whiteflies.

TOMATOES GOT WHITEFLIES? PLANT MARIGOLDS

Encountering clouds of whiteflies around one's prize tomato plants may send any gardener into a panic, but a new study published in the scientific journal *PLoS One* in March indicates that marigolds could provide an effective alternative to pesticides. When researchers at Newcastle University's School of Natural and Environmental Sciences in northern England interplanted tomatoes with French marigolds (*Tagetes patula*) in a greenhouse, they found that the development of whitefly populations was significantly slowed. They confirmed that limonene, a chemical given off in abundance by these marigolds, is what repels whiteflies.

However, planting marigolds as an "emergency" measure after tomatoes became heavily infested with whiteflies did not significantly reduce the infestation. Interestingly, hanging containers of limonene around the plants had more of an effect on the whitefly population, though it took about a month to do so. The researchers point out that planting marigolds among tomatoes in outdoor settings also would help to draw natural predators of whiteflies and other common tomato pests as well as support pollinators, so would still be worthwhile from that perspective.

Find the full study results at *www.ncbi.nlm.nih.gov/pmc/ articles/PMC6396911*.

MOWING MILKWEED FOR MONARCHS

Monarch butterfly populations have been decreasing for decades, largely caused by decreasing populations of milkweed (Asclepias spp.) that they require during their larval stage. But these iconic insects are making a bit of a comeback now that gardeners, farmers, and other land managers have begun planting more milkweed. Researchers at Michigan State University (MSU) are now advising people to start mowing back that milkweed to increase its benefit to monarchs.

According to a study published in the May issue of *Biological Conservation*, monarchs prefer to lay their eggs on young milkweed. When the MSU researchers mowed back a third of a patch of milkweed, then allowed it to regrow, they found three to 10 times the amount of eggs per stem on the new growth than on the undisturbed milkweed in their experiment. So even though cutting back milkweed to help the butterflies may seem counterintuitive, this forces the plants to produce the new growth preferred by monarchs.

The key is to wait until the plants are beginning to flower, around mid-June, then cut back about a third of the milkweed patch. When the previously cut stems start to produce flowers again, around mid-July, trim or mow another third of the patch. For further information, visit *https://msutoday.msu.edu/news/2019/mowing-for-monarchs*.



Students at Michigan State University record data from a field of mowed milkweed for a study on monarch butterfly populations.

THOREAU'S OBSERVATIONS REVEAL THREAT TO WILDFLOWERS FROM EARLIER SPRINGTIME TREE LEAF-OUT

In the 1850s, naturalist and philosopher Henry David Thoreau kept meticulous records on the spring leaf-out times for numerous trees and wildflowers in Concord, Massachusetts. Now his observations are providing valuable insight into the environmental impacts of climate change on these plants. In a study published in *Ecology Letters* in February, a team of researchers from several universities note that over the past century, average temperatures in Concord have increased by five degrees Fahrenheit. Comparing the coinciding shifts in leaf-out dates to those observed by Thoreau revealed differing impacts on trees versus wildflowers.

"Wildflowers are now leafing out about one week earlier than 160 years ago, but the trees are leafing out two weeks earlier," says Caitlin McDonough MacKenzie of Boston University. Earlier tree leaf-out may reduce the amount of sunlight available to wildflowers beneath the canopy, decreasing their ability to photosynthesize. Wildflower abundance and bloom frequency will likely continue to diminish as the amount of time between tree leaf-out and wildflower appearance decreases. The study is available at *https://onlinelibrary.wiley.com/doi/abs/10.1111/ele.13224*.



In the woods at Walden Pond in Concord, Massachusetts, Henry David Thoreau recorded many nature observations in the mid-19th century.



NEW ENGLAND WILD FLOWER SOCIETY CHANGES NAME

The New England Wild Flower Society recently announced it is changing its name to Native Plant Trust, a name selected to more accurately represent its mission to conserve and promote



regionally native plants. The organization has gone through several name changes since it was founded in 1900 as the Society for the Protection of Native Plants. Based at Garden in the Woods, its headquarters in Framingham,

Massachusetts, Native Plant Trust works to protect and preserve plant biodiversity in New England through collecting seeds, monitoring endangered plants, controlling invasive species, hosting educational programs, and conducting research.

"This new name clearly conveys our identity as the nation's first plant conservation organization and the only one solely focused on New England's native plants," says its Executive Director Debbi Edelstein. As part of their preservation efforts, Native Plant Trust maintains six sanctuaries in Vermont, New Hampshire, and Maine, as well as its Nasami Farm native plant nursery in Whately, Massachusetts.

Learn more at www.nativeplanttrust.org.

GREENPRINTS TURNS 30

GreenPrints magazine, which its founder and editor Pat Stone wryly refers to as "the Weeder's Digest," celebrates its 30th anniversary this



year. Each issue contains essays, artwork, and poems that offer a very personal and often heartfelt viewpoint on gardening and otherwise interacting with the natural world. In the anniversary issue of *GreenPrints*, Stone reflects on how this publication came to be: "After I was laid off from a "real" magazine in 1990, I just thought of this very strange idea—a magazine that shares the personal side of gardening—and chased it." Stone, who's based in Fairview, North Carolina, credits all the "terrific writers,

talented artists, faithful advertisers, and, most of all, wonderful, kind-hearted readers" for his 30-year success.

For more information on *GreenPrints*, visit *www.green* prints.com.

News written by Editorial Intern Laken Burns.

NATIVE BEE POPULATIONS IN DECLINE ACROSS NORTH AMERICA

Bumblebees and other native bees play an important role in pollination, not only in wild plants but among major fruit and vegetable crops. So when a number of recent studies by different research groups confirm that native bee populations and diversity have declined steeply in many regions of North America over the past 10 years, it raises red flags.

Scientists at York University in Canada are warning of "cascading impacts," as 42 of the 850 species of native bees found in Canada have decreased in number. The American bumblebee (*Bombus pensylvanicus*) specifically has decreased in relative



Endangered Bombus terricola on goldenrod

abundance in Canada by 89 percent, and its area of occurrence is down 70 percent from 2007 to 2016. American bumblebee populations have declined by 98 percent in Michigan as well, according to research from Michigan State University (MSU).

The American bumblebee is not the only species that's in trouble. Fourteen species of wild bees native to the northeastern United States are in decline as well. Researchers from the University of New Hampshire used museum records from 1891 to 2016 to compare changes in the wild bee populations. Their results showed that half of the bee species in decline once densely populated the southern regions of New Hampshire near sea-level, but now are found almost exclusively in the northern parts of the state. This indicates that climate change is a factor in such a broad shift of habitat.

MSU researchers have noticed an additional trend: "Species that declined collected pollen from fewer species of plants and seem to have a narrower range of plants they visit for pollen," says Thomas Wood, leader of the MSU study. "In contrast, the stable species visit a much wider variety of plants. This suggests that picky eaters are less able to switch if a favorite plant isn't available." A reduction in the variety of plants available to bees is likely contributing to their decline.

In addition to climate change and reduced plant diversity, native bee populations are threatened by loss and fragmentation of habitat, diseases, and overuse of pesticides. To reverse some of these trends, home gardeners can help native bees and other pollinating insects by planting a variety of regionally native and adapted plants, choosing plants that extend the season of bloom, keeping small areas of the garden "wild," providing water sources, and reducing or avoiding the use of pesticides, especially those containing neonicotinoids. Gardeners can also participate in a citizen science project tracking bumblebees by visiting *www.bumblebeewatch.org*.

For more information on how to help bees of all kinds, visit the Xerxes Society at www.xerxes.org.









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RAP GARDENS IN FOCUS

Explore Sites That Participate in the AHS Reciprocal Admissions Program

Norfolk Botanical Garden

by Laken Burns



N 1938, the Works Progress Administration (WPA) assigned a group of African American workers to establish a public garden—with a focus on azaleas—on 175 acres of swampland in Norfolk, Virginia. Three years later, 5,000 azaleas, along with thousands of other shrubs, trees, and bulbs had been planted. This garden has evolved into what is known today as the Norfolk Botanical Garden (NBG), which now comprises an even broader range of plants and gardens.

SHOWCASING HORTICULTURAL DIVERSITY

Among the 60 plus themed gardens at NBG is a **WPA Memorial Garden** that commemorates the 220 African Ameri-



Top: The Sarah Lee Baker Perennial Garden in May. Above: Azaleas bloom in the WPA Memorial Garden in late spring.

can laborers who originally created the garden. An additional legacy is that many of the azaleas they planted still bloom around nearby Mirror Lake. More azaleas fill the Rhododendron Glade, where they mingle with other woodland shrubs and trees. Visitors also can admire several other significant collections of specific plants such as hydrangeas, camellias, hollies, and roses. And NBG's crape myrtle (Lagerstroemia spp.) collection is "the only collection of this genus in North America accredited by the American Public Gardens Association Plant Collections Network," says Les Parks, NBG's director of horticulture.

Examples of various design styles include the grand **Renaissance Garden**,



Above: Boat tours during the summer months provide a relaxing way for visitors to experience the gardens. Right: Kids enjoy cooling off in the fountains in the World of Wonders Children's Garden.

featuring a reflecting pool, fountain, and symmetrical lines; the **Sarah Lee Baker Perennial Garden**, a formal circular garden bisected by terraced canals flowing away from a central fountain; and the traditional **Japanese Garden**, honoring Norfolk's sister city of Kitakyushu.

EDUCATION AND EXPLORATION

Other areas in NBG focus on providing educational experiences, especially the **World of Wonders Children's Garden**. Spanning over three acres, this gar-

Additional Information

Norfolk Botanical Garden

6700 Azalea Garden Road Norfolk, VA 23518. (757) 441-5830 www.norfolkbotanicalgarden.org

Hours: April 1–Oct. 15: 9 a.m. to 7 p.m.
Oct. 16–March 31: 9 a.m. to 5 p.m.
Fees: Adult \$12; Seniors, Military, and Children (ages 3–17) \$10. Toddlers 2 and under free with parent or guardian.
RAP benefits: AHS members receive

free admission.



den engages youngsters with hands-on learning about plants, soil, and insects, and allows them to explore biomes from around the world. Beginning June 14, this garden area will feature special programs and exhibits around the theme of "Hip Habitats & Happening Homes," designed to encourage kids and their families to take conservation-minded actions in their communities.

Visitors of all ages will be captivated by some of nature's loveliest pollinators in the **Bristow Butterfly Garden**. Opening June 15 for the summer months, the enclosed **Butterfly House** allows upclose observation of several butterfly species. On July 13, NBG and the Butterfly Society of Virginia will hold their annual Butterfly Festival, which will feature family-friendly demonstrations and activities.

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 320 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/rap* gardens. This list is also published in a booklet. To order, visit *www.ahsgarden* ing.org/RAPGuideHelp.

■ 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.

YEAR-ROUND BEAUTY

NBG's diverse gardens and plantings ensure that every season has something to offer to visitors. "Norfolk Botanical Garden is both a place where the horticulturally minded can see several plant collections and unusual species, and where everyone can simply enjoy the beauty of nature," says Parks. "To the local community, it is an oasis, a refuge, and the green heart of Coastal Virginia."

Laken Burns is an editorial intern for The American Gardener.



Horticultural Events from Around the Country

NORTHEAST

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

RAP MAY 25. A New Perspective on Container Gardening. Class. Hollister House Garden. Washington, CT. (860) 868-2200. *www.hollisterhousegarden.org.*

RAP JUNE 1. Native Bee Walk. Merryspring Nature Center. Camden, ME. (207) 236-2239. *www.merryspring.org.*

RAP JUNE 1 & 2. **Bonsai Show.** Buffalo Bonsai Society. Buffalo and Erie Botanical Gardens. Buffalo, NY. (716) 827-1584. *www.buffalogardens.com.*

RAP JUNE 7. Roberto Burle Marx: A Total Work of Art. Symposium. New York Botanical Garden. Bronx, NY. (718) 817-8700. *www.nybg.org.*

RAP JUNE 7 & 8. **Grandiflora Garden Tour 2019.** Greenwich Botanical Center. Cos Cob, CT. (203) 869-9242. *www.greenwichbotanicalcenter.org.*

RAP JUNE 8. **The Fells Public Plant Sale.** The Fells Historic Estate and Gardens. Newbury, NH. (603) 763-4789. *www.thefells.org.*

RAP JUNE 9. Annual Rose Show. Long Island Rose Society. Planting Fields Arboretum. Oyster Bay, NY. (516) 922-8600. *www.plantingfields.org.*

RAP JUNE 21–23. Newport Flower Show. Newport Mansions. Newport, RI. (401) 847-1000. *www.newportmansions.org.*

Looking ahead RAP JULY 7. Multiplying Plants: Propagation

101. Class. Brooklyn Botanic Garden. Brooklyn, NY. (718) 623-7220. *www.bbg.org.*

JULY 12–21. **Cape Cod Hydrangea Festival.** Cape Cod, MA. (508) 362-3225. *www.capecodchamber.org.*

MID-ATLANTIC DC, DE, MD, NJ, PA, VA, WV

MAY 30. **Marvelous Morphology: Flowers.** Tour. United States Botanic Garden. Washington, DC. (202) 225-8333. *www.usbg.gov.*

RAP JUNE 5. Earthbox Container Gardening. Class. West Virginia Botanic Garden.

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.*

Morgantown, WV. (304) 322-2093. *www.wvbg.org.*

JUNE 5–8. Native Plants in the Landscape Conference. Millersville Native Plants at Millersville University. Millersville, PA. (717) 871-4636. *www.millersvillenative plants.org.*

RAP JUNE 6. Power of Plants: Insects, Critters, and Your Plants. Class. Delaware Center for Horticulture. Wilmington, DE. (302) 658-6262. *www.thedch.org.*

RAP JUNE 9. Native Alternatives to Invasives. Class. Adkins Arboretum. Ridgely, MD. (410) 634-2847. *www.adkinsarboretum.org.*

RAP JUNE 15. **Richmond Daylily Society Show and Sale.** Lewis Ginter Botanical Garden. Richmond, VA. (804) 262-9887. *www.lewisginter.org.*

JUNE 17–21. International Master Gardener Conference. Valley Forge Casino Resort. Valley Forge, PA. (610) 354-8118. www.internationalmastergardener.com.

RAP JUNE 19. **Propagation for Beginners: Making More Roses.** Class. Reeves-Reed Arboretum. Summit, NJ. (908) 273-8787. *www.reeves-reedarboretum.org.*

RAP JUNE 20. Hershey Horticulture Society Flower Show. Hershey Gardens. Hershey, PA. (717) 534-3492. *www.hersheygardens.org.*

RAP JUNE 26. Young Voices for the Planet Workshop. Pittsburgh Botanic Garden. Oakdale, PA. (412) 444-4464. www.pittsburghbotanicgarden.org.

Looking ahead

RAP JULY 9. **The Cutting Garden.** Tour. Hillwood Estate, Museums & Gardens. Washington, DC. (202) 686-5807. *www.hillwoodmuseum.org.* **RAP** JULY 13. **Butterfly Festival.** Norfolk Botanical Garden. Norfolk, VA. (757) 441-5830. *www.norfolkbotanicalgarden.org.*

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

RAP MAY 25. **Plant Invaders Workshop.** Huntsville Botanical Garden. Huntsville, AL. (256) 830-4447. *www.hsvbg.org.*

RAP MAY 25 & 26. **Blue Ridge Rose Society Convention.** North Carolina Arboretum. Asheville, NC. (828) 665-2492. *www.ncarboretum.org.*

RAP MAY 30–JUNE 2. **Native Plant Conference.** Birmingham Botanical Gardens. Birmingham, AL. (205) 414-3950. *www.bbgardens.org/npc.php.*

RAP JUNE 7 & 8. Southeastern Plant Symposium. JC Raulston Arboretum and Juniper Level Botanic Garden. Raleigh, NC. (919) 515-3132. *https://jcra.ncsu.edu.*

RAP JUNE 8. Herbal Insect Repellents. Class. Memphis Botanic Garden. Memphis, TN. (901) 636-4100. *www.memphis botanicgarden.com.*

RAP JUNE 11. Gardening for Small Spaces. Class. South Carolina Botanical Garden. Clemson, SC. (864) 656-2836. *www.clemson.edu/scbg.*

RAP JUNE 15. Waterlily Celebration. McKee Botanical Garden. Vero Beach, FL. (772) 794-0601. www.mckeegarden.org.

RAP JUNE 22–29. **Dazzling Daylily Festival.** Western Kentucky Botanical Garden. Owensboro, KY. (270) 993-1234. *www.wkbg.org.*

Looking ahead

RAP JULY 13 & 14. Mango & Tropical Fruit Festival. Fairchild Tropical Botanic Garden. Coral Gables, FL. (305) 667-1651. *www.fairchildgarden.org.*

JULY 16–20. Cullowhee Native Plant Conference. North Carolina Native Plant Society. Western Carolina University. Cullowhee, NC. (828) 227-7211. https://northcarolina nativeplantsociety.wildapricot.org.

RAP JULY 18. Dogwood Society Annual Event. Lockerly Arboretum. Milledgeville,

GA. (478) 452-2112. www.lockerly.org.

AUG. 2 & 3. **Speaking of Gardening.** Symposium. DoubleTree by Hilton. Asheville, NC. (828) 274-1800. *www.speakingofgardening.org.*

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

RAP MAY 23. **Spring Bulb Sale.** Cantigny Park. Wheaton, IL. (630) 668-5161. *www.cantigny.org.*

RAP MAY 31. Garden Fair. Green Bay Botanical Garden. Green Bay, WI. (920) 490-9457. *www.gbbg.org.*

RAP JUNE 1 & 2. Garden Fair Weekend. Klehm Arboretum & Botanic Garden. Rockford, IL. (815) 965-8146. *www.klehm.org.*

RAP JUNE 1 & 2. Kingwood Spring Flower Show. Kingwood Center Gardens. Mansfield, OH. (419) 522-0211. www.kingwood center.org.

RAP JUNE 1 & 2. Northern Illinois Hosta Society Show & Sale. Chicago Botanic Garden. Glencoe, IL. (847) 835-5440. *www.chicagobotanic.org.*

RAP JUNE 15 & 16. Rose Show. Frederik Meijer Gardens & Sculpture Park. Grand Rapids, MI. (888) 957-1580. www.meijer gardens.org.

RAP JUNE 18. **Growing Microgreens.** Class. Greater Des Moines Botanical Garden. Des Moines, IA. (515) 323-6290. *www.dmbotanicalgarden.com.*

RAP JUNE 25. **The Wondrous World of Lichens.** Class. Secrest Arboretum at The Ohio State University. Wooster, OH. (330) 263-3761. *https://secrest.osu.edu.*

RAP JUNE 29. Special Access Tour: Rare Plant Conservation. Minnesota Landscape Arboretum. University of Minnesota. Chaska, MN. (612) 301-1210. www.arboretum.umn.edu.

Looking ahead

RAP JULY 12 & 13. Home Garden Tour. Olbrich Botanical Gardens. Madison, WI. (608) 246-4550. *www.olbrich.org.*

JULY 13–16. **Cultivate '19.** Convention. AmericanHort. Greater Columbus Convention Center. Columbus, OH. (614) 487-1117. *www.cultivate19.org.*

RAP JULY 14. **Garden Art Fair.** Reiman Gardens at Iowa State University. Ames, IA. (515) 294-2710. *www.reimangardens.com.*

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

RAP MAY 10–SEPT. 19. **Nature Connects.** Exhibit. Botanica Wichita Gardens. Wichita, KS. (316) 264-0448. *www.botanica.org.*

RAP MAY 31–JUNE 2. New Orleans Orchid Society's Show & Sale. American Orchid Society. Metairie, LA. (225) 205-8181. *www.aos.org.*

RAP JUNE 15. **Propagation of Ferns.** Class. Fort Worth Botanic Garden. Botanical Research Institute of Texas. Fort Worth, TX. (817) 332-4441. *www.brit.org.*

RAP JUNE 15. **Tulsa Area Daylily Society Show & Sale.** Tulsa Garden Center at Woodward Park. Tulsa, OK. (918) 576-5155. *www.tulsagardencenter.org.*

RAP JUNE 16. **Garden Fest.** Louisiana State University AgCenter. Baton Rouge, LA. (225) 763-3990. *www.lsu.edu.*

RAP JUNE 22. **Planting for Pollinators: Container Design.** Workshop. Powell Gardens. Kingsville, MO. (816) 697-2600. *www.powellgardens.org.*

Looking ahead

RAP JULY 11. Native Plant School: Gardening for Insects. Class. Missouri Botanical

The Summer of Your Life

Festival of Fountains On View

May 9–September 29



LONGWOOD GARDENS

longwoodgardens.org

Slow Flowers Summit During American Flowers Week

AMERICAN FLOWERS WEEK, from June 28 to July 4, is a national campaign created in 2015 by Debra Prinzing to promote locally and sustainably grown



Debra Prinzing, left, and a summit attendee with a crowning floral arrangement at last year's event

cut flowers. She also organizes the Slow Flowers Summit during this week in a different city each year. St. Paul, Minnesota, will host this year's conference and lecture series on July 1 and 2. Referring to it as a "floral mindmeld," Prinzing says, "this is a great event for flower-lovers as well as professionals working in all channels of the pipeline for producing domestic flowers."

In addition to offering presentations by floral experts on a broad range of cutting-edge topics, the Slow Flowers Summit will include farm tours and

floral demonstrations. To view a complete schedule and to register, visit *www. slowflowerssummit.com.* And to find other events, such as farm-to-table dinners, design workshops, and pop-up sales, taking place during American Flowers Week, visit *www.americanflowersweek.com.*

Garden Walk Buffalo in New York Celebrates 25th Anniversary

ORIGINALLY an urban beautification and community engagement project, Garden Walk Buffalo is celebrating its 25th anniversary on July 27 and 28. As one of the larg-



est self-guided garden tours in the United States, Garden Walk Buffalo invites visitors to experience the artistry, horticulture, and history of over 400 urban gardens large and small. Approximately 65,000 people each year attend the free event, which stretches across nearly five miles of Buffalo, New York.

Most of the gardens on the tour are privately owned and maintained, though several nearby community centers participate as well. Green spaces of all designs, from the meticulously landscaped to more naturalized cottage gardens, will be open to the public.

"Gardening is a form of community service here in Buffalo," says Gardens Buffalo Niagara vice president Jim Charlier. "There's a Buffalo style of garden-

ing, and it comes from an individual's own creative expression in their gardens," he adds, likening the walk to experiencing eclectic and memorable art installations.

Maps and shuttle services are available free of charge. For more information, visit www.gardensbuffaloniagara.com.

—Laken Burns, Editorial Intern

Garden. St. Louis, MO. (314) 577-5100. www.mobot.org.

RAP JULY 13. Baton Rouge Orchid Society Show. Louisiana State University AgCenter. Baton Rouge, LA. (225) 763-3990. *www.lsu.edu/botanic-gardens.*

SOUTHWEST AZ, CO, NM, UT

RAP MAY 26. Spring Plant Sale. The Arboretum at Flagstaff. Flagstaff, AZ. (928) 774-1442. *www.thearb.org.*

RAP JUNE 8. **Tree Identification Class.** Santa Fe Botanical Garden. Santa Fe, NM. (505) 471-9103. *https://santafebotanical* garden.org.

RAP JUNE 22. Gardens on Tour. Durango Botanical Society.Durango, CO. (970) 880-4841. www.durangobotanicalsociety.com.

JUNE 22. **Urban Garden & Farm Tour.** Wasatch Community Gardens. Salt Lake City, UT. (801) 359-2658. *www.wasatch gardens.org.*

RAP JUNE 27. Changing 10,000 Years of Agriculture: Crops with Roots. Lecture. Betty Ford Alpine Gardens. Vail, CO. (970) 479-7365. *www.bettyfordalpinegardens.org.*

Looking ahead

RAP JULY 20. Lavender Festival. Denver Botanic Gardens. Littleton, CO. (720) 865-3500. *www.botanicgardens.org.*

WEST COAST

RAP MAY 25. La'au Lapa'au: Hawaiian Medicine. Class. Harold L. Lyon Arboretum. Honolulu, HI. (808) 988-0456. https://manoa.hawaii.edu.

RAP MAY 25. Palm, Cycad, Bamboo and Tropical Plant Sale 2019. San Diego Botanic Garden. Encinitas, CA. (760) 436-3036. *www.sdbgarden.org.*

RAP JUNE 7. **Bring the Wild Inside.** Floral arrangement class. Santa Barbara Botanic Garden. Santa Barbara, CA. (805) 682-4726. *www.sbbg.org.*

RAP JUNE 8. Los Angeles International Fern Society Show & Sale. Los Angeles County Arboretum & Botanic Garden. Arcadia, CA. (626) 821-3222. *www.arboretum.org.*

RAP JUNE 12. Succulent Flower Arrangement Workshop. Casa Romantica Cultural Center and Gardens. San Clemente, CA. (949) 498-2139. *www.casaromantica.org.*

RAP JUNE 22. Dye Making Workshop. Maui

Nui Botanical Gardens. Kahului, HI. (808) 249-2798. *www.mnbg.org.*

Looking ahead

RAP JULY 11–22. Flower Piano. Exhibit. San Francisco Botanical Garden. San Francisco, CA. (415) 661-1316. *www.sfbg.org.*

NORTHWEST AK, ID, MT, OR, WA, WY

RAP MAY 23. **Irises for Every Garden.** Class. Bellevue Botanical Garden. Bellevue, WA. (425) 452-2750. *www.bellevuebotanical.org.*

RAP MAY 25. Concrete Leaf Workshop. Idaho Botanical Garden. Boise, ID. (208) 343-8649. *https://idahobotanicalgarden.org.*

RAP JUNE 1 & 2. Bee Identification Workshop. Mount Pisgah Arboretum. Eugene, OR. (541) 747-3817. www.mountpisgah arboretum.com. **RAP** JUNE 4 & 6. Native Plant Walk. Bloedel Reserve. Bainbridge Island, WA. (206) 842-7631. *www.bloedelreserve.org.*

RAP JUNE 15. **Propagation by Cuttings Workshop.** Kruckeberg Botanic Garden. Shoreline, WA. (206) 546-1281. *www.kruckeberg.org.*

RAP JUNE 17-AUG 11. **Dig It: A Prehistoric Plant Exhibit.** W. W. Seymour Botanical Conservatory. Tacoma, WA. (253) 404-3975. *www.metroparkstacoma.org.*

RAP JULY 13. **Garden Tour.** Sawtooth Botanical Garden. Sun Valley, ID. (208) 726-9358. *www.sbgarden.org.*

RAP JULY 14–SEPT. 22. Art in the Garden. Exhibit. The Oregon Garden. Silverton, OR. (503) 874-8100. *www.oregongarden.org.*

JULY 20. Backyards of Broadwater. Garden

tour. Montana State University. Townsend, MT. (406) 266-9242. *www.montana.edu.*

CANADA

RAP MAY 29 & 30. **Music in Bloom Triennial Show.** The Garden Clubs of Ontario. The Royal Botanical Gardens. Burlington, ON. (905) 527-1158. *www.rbg.ca.*

RAP JUNE 1. Herbal Medicine Making Workshop. The Gardens at the Horticulture Center of the Pacific. Victoria, BC. (250) 479-6162. www.hcp.ca.

RAP JUNE 9. Ontario Iris Society Annual Flower Show and Sale. Toronto Botanical Garden. Toronto, ON. (416) 397-1340. *www.torontobotanicalgarden.ca.*

JUNE 15–23. **Ottawa Garden Days.** Canadian Garden Council. Ottawa, ON. (613) 301-4554. *www.gardensottawa.org.*



#1 Choice of Professional Foresters, Growers & Landscapers

PRONUNCIATIONS AND PLANTING ZONES

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

While the zones are a good place to start in determining plant adaptability in your region, factors such as exposure, moisture, snow cover, and humidity also play an important role in plant survival. The zones tend to be conservative; plants may grow outside the ranges indicated. A USDA zone rating of O–O means that the plant is a true annual and completes its life cycle in a year or less.



A-L

Acer rubrum AY-ser ROO-brum (USDA Hardiness Zones 3-9, AHS Heat Zones 9-1) Alchemilla mollis al-kem-ILL-uh MOLL-iss (4-7, 7-1) Alnus incana ssp. tenuifolia AL-nus in-KAN-uh ssp. ten-yew-ih-FO-lee-uh (6-8, 8-6) Aronia melanocarpa uh-RO-nee-uh mel-an-o-KAR-puh (3-8, 8-1) Asclepias incarnata as-KLEE-pee-us in-kar-NAY-tuh (3-9, 9-2) Asimina triloba uh-SIH-mih-nuh try-LO-buh (6-8, 8-6) Astilbe × arendsii uh-STILL-bee ah-RENZ-ee-eye (4-8, 8-2) Betula nigra BET-yew-luh NY-gruh (4-9, 9-1) B. accidentalis B. ahk-sih-den-TAL-iss (4-6, 6-1) Carex vulpinoidea KAIR-eks vul-pin-OY-dee-uh (3-8, 8-3) Carpinus caroliniana kar-PY-nus kair-o-lin-ee-AN-uh (3-9, 9-1) Celtis occidentalis SEL-tiss ahk-sih-den-TAL-iss (2-9, 9-1) Cephalanthus occidentalis sef-uh-LAN-thus ahk-sih-den-TAL-iss (5-10, 12-3)Chamaecyparis thyoides kam-ee-SIP-uh-riss thy-OY-deez (3-8, 8-1) Chasmanthium latifolium chas-MAN-thee-um lat-ih-FO-lee-um (5-9, 9-1) Chelone glabra chee-LO-nee GLAB-ruh (3-8, 9-1) Clethra alnifolia KLETH-ruh al-nih-FO-lee-uh (4-9, 9-1) Cornus nuttallii KOR-nus nuh-TAL-lee-eye (7-8, 8-6) **C. sericea** C. seh-RISS-ee-uh (3-8, 8-1) *Euonymus atropurpureus* yew-ON-ih-mus at-tro-per-per-EE-us (3-8, 8-1) Eutrochium fistulosum yoo-TRO-kee-um fis-tyew-LO-sum (3-8, 8-2) Galanthus nivalis guh-LAN-thus nih-VAL-iss (3-8, 8-1) Helianthus annuus hee-lee-AN-thus AN-yoo-us (0-0, 12-1) Hemerocallis citrina hem-er-o-KAL-liss sih-TRY-nuh (3-9, 9-4) Hibiscus coccineus hy-BISS-kus kok-SIN-ee-us (6-11, 12-1) H. sabdariffa H. sab-duh-RIF-fuh (8-11, 11-1) Hydrangea arborescens hy-DRAN-juh ar-bo-RES-enz (4-9, 9-1) Ilex decidua EYE-leks deh-SID-yew-uh (5-9, 9-1) Iris ensata EYE-riss en-SAH-tuh (3-9, 9-1) Itea virginica eye-TEE-uh vir-JIN-ih-kuh (6-9, 10-7) Kosteletzkya virginica ko-steh-LETZ-kee-uh vir-JIN-ih-kuh (6-9, 9-5) Leptodermis oblonga lep-toh-DERM-iss ob-LON-guh (5-8, 8-5) Lobelia cardinalis Io-BEEL-yuh kar-dih-NAL-iss (2-8, 8-1)

M-Z

Magnolia grandiflora mag-NOLE-yuh grand-dih-FLOR-uh (6–9, 9–6) *Muhlenbergia rigens* mew-len-BUR-jee-uh RIH-jenz (6–10, 10–4) *Nyssa sylvatica* NISS-uh sil-VAT-ih-kuh (5–9, 9–7)

Opuntia aciculata o-PUN-shuh uh-sik-yew-LAY-tuh (8–10, 10–8)

0. aurea 0. AW-ree-uh (5–10, 10–5)

- 0. basilaris 0. bas-ih-LAIR-iss (5-10, 10-5)
- 0. chlorotica 0. klor-0-tih-kuh (8-11, 12-8)
- 0. cochenillifera 0. koh-keh-nih-LIH-fur-uh (9-10, 12-9)
- 0. engelmannii O. en-gul-MAN-ee-eye (8-10, 12-9)
- **0. engelmannii var. lindheimeri** 0. en-gul-MAN-ee-eye var. lind-HY-mur-eye (6–9, 10–7)
- **0. ficus-indica** 0. FY-kus-IN-dih-kuh (8–10, 12–9)
- **0.** *fragilis* 0. FRAJ-iI-iss (4–10, 10–4)
- 0. fragilis var. denuda O. FRAJ-il-iss var. deh-NEW-duh (4-10, 10-4)
- 0. gosseliniana O. gah-seh-lih-nee-AN-uh (9-11, 12-9)
- 0. humifusa 0. hyew-mih-FEW-suh (4-10, 12-5)
- 0. microdasys 0. my-kro-DAYS-iss (9-11, 12-9)
- **0.** microdasys var. albaspina 0. my-kro-DAYS-iss var. al-bah-SPIH-nuh (9–11, 12–9)
- **0.** microdasys ssp. rufida O. my-kro-DAYS-iss ssp. ROOF-ih-duh (9–11, 12–9)
- 0. phaeacantha O. fee-uh-KAN-thuh (5-10, 10-5)
- **0.** santarita O. san-tuh-REE-tuh (7–11, 12–5)
- 0. tomentosa 0. toh-men-TOH-suh (8-10, 10-8)

Platycodon grandiflorus plat-ee-KO-don gran-dih-FLOR-us (4-9, 9-1)

- Prunus mexicana PROO-nus mex-ih-KAN-uh (4-9, 10-4)
- Quercus bicolor KWER-kus BY-kuh-lur (4-8, 8-1)
- Rhododendron viscosum ro-doh-DEN-dron viss-KO-sum (3-9, 9-1)
- Salix purpurea SAY-liks pur-PUR-ee-uh (4-7, 7-1)
- Sporobolus airoides spor-OB-o-lus air-OY-deez (4-9, 9-4)
- Tagetes patula tah-JEE-teez PAT-yew-luh (0–0, 10–1)
- **Ulmus americana** UL-mus uh-mair-ih-KAN-uh (3–9, 9–1)
- Veronicastrum virginicum ver-on-ih-KASS-trum vir-JIN-ih-kum (4–8, 8–3)



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PLANT IN THE SPOTLIGHT

Baby Lilac: Leptodermis oblonga

by Patricia A. Taylor



Growing two to three feet tall, baby lilac is well suited for the front of borders and as edging.

N 2006, while on a business trip to China, I was fortunate to be able to meet with Kang Wang, director of education at the Beijing Botanical Garden. During the course of our conversation, he told me about some of the plants being grown for the 2008 Beijing Summer Olympics, including one that was new to me called baby lilac (*Leptodermis oblonga*).

Intrigued by Kang's description of a very compact shrub that reaches no more than two to three feet tall and wide at maturity and bears clusters of slightly fragrant, tubular lavender flowers over a period of four months, I went into research mode when I got home to Princeton, New Jersey.

The research turned out to be a tough slog because not much information about the plant was available at the time. I learned that this native of western China is one of a small number of woody plants in the coffee or madder family (Rubiaceae) suited to cultivation in temperate gardens, but estimates of its hardiness ranged from as low as USDA Zone 4 to as high as Zone 8.

HOME TRIAL

When I spotted baby lilac in the Bluestone Perennials catalog that spring, I decided to conduct my own research. I purchased two and placed them in the little planting pockets attached to a large square wooden planter in the center of



The tubular flowers are mildly fragrant.

Sources

Digging Dog Nursery, Albion, CA. www.diggingdog.com. Sooner Plant Farm, Park Hill, OK. www.soonerplantfarm.com.

my courtyard. For the past 13 years, those shrubs have effortlessly produced flowers in bright morning shade and afternoon sun. And they have done it without fertilizer or any other care besides an occasional trim in early spring to maintain a pleasing, rounded shape.

The flowers, which some observers say have a scent reminiscent of true lilacs (Syringa spp.), bloom on both old and new wood, with a heavy flush in late spring and continued sporadic flowering well into October. And to top it off, baby lilac has not shown susceptibility to any pests or diseases and is described as deer resistant.

WORTH SEEKING OUT

The jury is still out on its hardiness, but given the experience in my garden, USDA Zone 6 is a safe bet and it may well succeed in Zone 5. I was surprised, however, to find that some of the nurseries that had once described it as a blooming machine were no longer carrying it. Likely this is due to the plant's tendency to stay dormant well into spring. This means that at peak mail-order shipping and retail nursery display season, it looks like a bundle of bare twigs.

That may be, but in my early May garden, baby lilac's grayish-white stems, which I underplanted with purple ajuga, are quite attractive. Fortunately, a few nurseries still carry the plant, so I believe you will find, as I have, that from late May often through October, baby lilac is an easy-care flowering treasure perfect for containers, low hedges, or the edge of mixed borders.

Patricia A. Taylor is a freelance writer based in Princeton, New Jersey.



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