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The Magazine of the American Horticultural Society

May / June 2014

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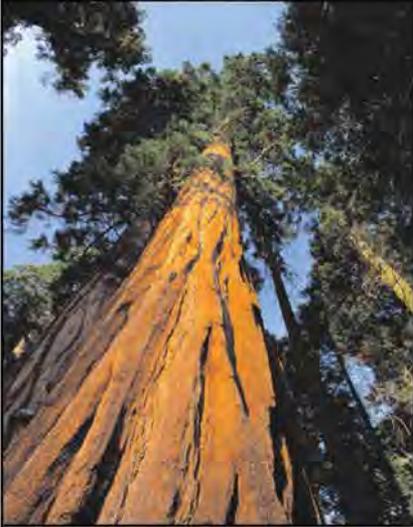
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ON THE COVER: Striking cherry-red flowers set 'Amethyst' apart from most other oakleaf hydrangeas. Photograph courtesy of the Scott Arboretum of Swarthmore College

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NOTES FROM RIVER FARM

DURING THE past four years, AHS Executive Director Tom Underwood and I have used this space to share information about the American Horticultural Society (AHS) and River Farm with you. This time, I'd like to share some parting thoughts because by the time you receive the July/August issue of this magazine, the organization will have a new Board Chair. The bylaws that provide for regular transition of leadership reflect a good deal of wisdom; succession helps ensure that the Society's Board of Directors serves as a continuous source of energy and creativity.

During my tenure, I have found the working relationship between the Board and staff to be collegial and reinforcing. The vision and mission of the organization have never been secondary to other agendas. Visions and missions are by nature aspirational; they are always beyond reach because their words only have meaning in relation to the contemporary culture. For instance, how does the AHS embrace changing technology, particularly in communications media? How does River Farm continue to reflect the principles of the AHS? What meaningful roles can—or should—the organization play in public and private horticulture?

Together, our committed Board and dedicated staff have made great strides toward keeping the AHS relevant and sustainable. One major focus of our efforts has been enhancing our online outreach. The cornerstone of the Society's digital presence is our recently redesigned website, through which we can deliver quality content to our members and the gardening public. We have been expanding our social media outlets to interact with a wider audience and raise the organization's visibility among younger generations. But perhaps the most apt example of embracing change in this arena is this very magazine.

We constantly hear from readers that its concisely presented, in-depth information on a diverse array of horticultural topics put it in a class by itself. Members also have been requesting greater access to its wealth of information online. To that end, we have digitized our entire archive comprising thousands of pages. This is a major step toward building a searchable online library that can be accessed through the members-only area of the website. We continue to explore other ways of leveraging new technology to better serve our readers, such as improving access from mobile devices.

Like most nonprofit organizations, the AHS is a work in progress; its success measured over time by the support of its members and the influence of its programs and outreach. For my part, it has been an honor and pleasure to have served as a leader of this organization over the last four years. In my new role as immediate past chair, I look forward to supporting the incoming slate of Board officers as we tackle new challenges and opportunities together.

Happy gardening,

Harry A. Risetto
AHS Board Chair



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MEMBERS' FORUM

MORE WAYS TO DETER SLUGS

Scott Aker's column on controlling slugs ("Garden Solutions," March/April 2014) was excellent. It offered some new techniques that I will put to good use. One useful home remedy I learned from gardening friends is to collect the spiny seedpods of the sweetgum (*Liquidambar styraciflua*) and place them around the base of vulnerable plants, especially hostas. However, as Aker pointed out in reference to copper liners, you have to make sure the barrier is placed so that slugs can't get to the plant by using draping leaves as a bridge.

I also wanted to mention a new slug repellent called "Slug Gone" I saw at this year's Philadelphia Flower Show. It is produced by Vitax Ltd. of the United Kingdom and is now being offered through a U.S. distributor. It comes in the form of pellets made from castoff wool threads and pieces. These pellets are placed around the base of plants, and swell up with rain or

watering. Apparently the scratchiness of the wool is what deters the slugs. The product is natural, biodegradable, and long lasting. This is my first season trying it, and the only downside I know of is the wet wool smell that you might expect.

Susan R. Yeager
Wyndmoor, Pennsylvania

PRAISE FOR PRE-EMPTIVE PRUNING

Thanks for publishing Carole Ottesen's article "Pre-emptive Pruning" (March/April 2014). Tracy DiSabato-Aust's *The Well-Tended Perennial Garden* has for years been my primary go-to perennial book, so I have used the pruning techniques Ottesen discussed with great success and satisfaction. I have also incorporated many of these techniques into classes and programs that I give, to the delight of those who are not familiar with them.

My favorite sculpting model is a large bed of Mexican petunia (*Ruellia brittoni-*

ana, syn. *R. simplex*). These shrubby perennials grow quickly to nearly four feet, so using hedge shears, I sculpt this large mass into a shaped "hedge" that rises from a couple of feet in gentle, upward swells.

Bob Hatton
Amarillo, Texas

CORRECTION

Peter Carrington, assistant curator at the W. J. Beal Botanical Garden of Michigan State University in East Lansing, pointed out that we listed the incorrect plant family for the genera *Saruma* and *Asarum* mentioned in "Plant in the Spotlight" (March/April 2014). The two wild gingers are members of the birthwort family (Aristolochiaceae).

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



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

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

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

News from the AHS

May / June 2014

PROGRAMS • EVENTS • ANNOUNCEMENTS

NEW FELLOWSHIP HONORS GENEROSITY OF FORMER AHS MEMBER

IN LATE 2013 the American Horticultural Society (AHS) received a \$500,000 gift from the **Wilma L. Pickard** Trust, the bequest of an avid gardener and longtime AHS member who died in 2008. An endowment created from a portion of the gift is being used to fund the Wilma L. Pickard Horticultural Fellowship, a new AHS educational program that will debut in 2015.

The fellowship will offer an intensive six-month experience each year, designed to prepare promising college seniors or recent graduates and graduate-school students for successful careers in horticulture. The program will feature a customizable combination of hands-on horticultural training at the AHS's River Farm headquarters, professional networking opportunities, and options for independent study and research.

"Our goal with this fellowship is to encourage careers in horticulture by providing in-depth learning experiences and access to a broader array of specialized training programs than would be available through a standard internship," says **Sylvia Schmeichel**, River Farm manager and horticulturist. A special stipend will allow participants to pursue independent study in their field of interest and participate in regional and national educational events through the AHS's national network of horticultural partners.

Detailed information about the fellowship program, and application forms for the initial 2015 fellowship, will be available on the AHS website later this summer. The application deadline for the 2015 fellowship will be September 15, 2014.

The fellowship will supplement the AHS's existing internship program, which includes annual internships in horticulture and communications.

Pickard, who died just a few months shy of her 94th birthday, was born in Greenville, Michigan, in 1915. She attended the University of Michigan, where she earned a bachelor's degree in economics and political science and a master's degree in economics with a focus on Far Eastern studies. She enjoyed traveling and lived all over the world, including Guam, Japan, Portugal, and Alaska. After settling in Washington D.C., she worked for a number of Federal agencies, including the Pentagon, where she was a decorated civilian employee engaged in economic analysis.

An AHS member for 18 years, Pickard grew roses, clematis, and annuals in the modest walled-in garden at her Washington, D.C., townhouse. "She liked to entertain and have fresh-cut flowers for the table," says **Richard Stepakof**, the administrator of the Wilma L. Pickard Trust, as well as Pickard's friend and colleague. "Her love of gardening, and her enjoyment of visiting gardens and seeing the beauty in nature, was a means of relaxation for her."

"Given Mrs. Pickard's passion for gardening, it seems very fitting that her generous gift will be making such a meaningful contribution to the ongoing care of our River Farm gardens while at the same time supporting the education and training of future horticultural leaders," says AHS Executive Director **Tom Underwood**.



The late Wilma L. Pickard

Raptors at River Farm



During the AHS's Spring Garden Market at its River Farm headquarters in April, the Raptor Conservancy of Virginia gave visitors a chance to get up close and personal with birds of prey like this great horned owl named Zeus, shown with its handler.

SAVE THE DATE: 2014 AHS GALA

MARK YOUR CALENDAR now to attend this year's AHS Gala, which will be held on Saturday, September 20, at the American Horticultural Society's River Farm headquarters in Alexandria,



Virginia. This annual event will feature an elegant evening of good company, fine dining, and a silent auction that supports the stewardship of River Farm and the Society's national outreach programs. The theme of this year's Gala is "The Glory of the Garden."

The Honorary Chairs for this year's Gala, **Susie and Bruce Usrey**, are well known for their lifelong leadership and dedication to American horticulture and gardening. The Usreys, who reside in Washington, have spent much of their careers with Monrovia, one of North America's foremost wholesale nurseries. More details about the Gala will be available on the AHS website, www.ahs.org, later this summer.

News written by Editorial Intern Hunter Stanford.



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

AHS 2014 NATIONAL EVENTS CALENDAR

JUNE 5. **AHS Great American Gardeners Awards Ceremony and Banquet.** River Farm, Alexandria, Virginia.

JULY 17-19. **AHS National Children & Youth Garden Symposium.** Columbus, Ohio.

AUGUST 15-17. **Homestead**

Resort's In the Garden Weekend. Hot Springs, Virginia.

SEPTEMBER 9-19. **Gardens of Normandy with Paris, France. AHS Travel Study Tour.**

SEPTEMBER 20. **AHS Annual Gala.** River Farm, Alexandria, Virginia.

DECEMBER 1-24. **Holiday Trees Display.** River Farm, Alexandria, Virginia.

DECEMBER 13. **AHS Holiday Open House.** River Farm, Alexandria, Virginia.



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The Gardener's Calendar - 2014

2014 "Gardener's" Calendar

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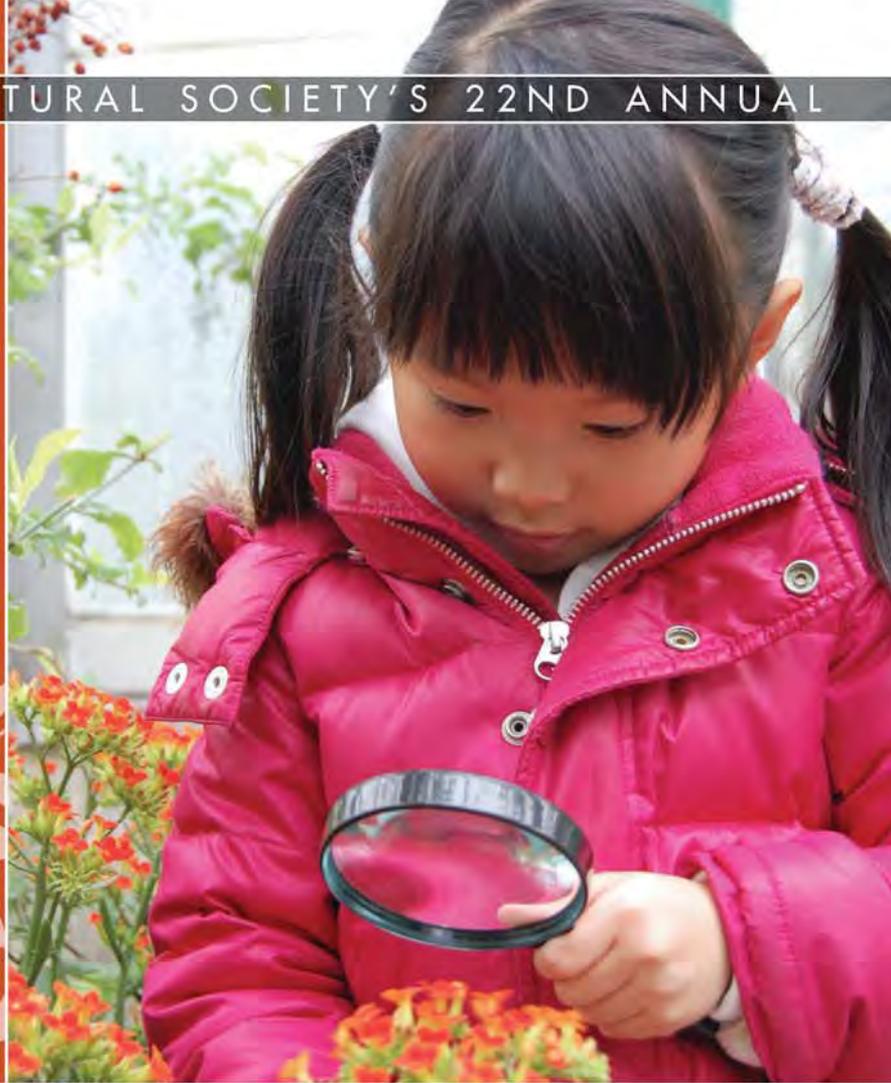
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- Gain insights from regional and national youth gardening experts during keynote presentations.
- Experience local cultural attractions such as the North Market in downtown Columbus, featuring more than 30 vendors of fresh and local food, flowers, baked goods, and more.
- See innovative models of programming and design at local school, community, and children's gardens during optional pre-symposium trips.
- Participate in the growing and energetic movement to get the next generation involved with plants.

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For more than two decades, the American Horticultural Society has brought together educators, landscape architects, and garden advocates of all kinds during the National Children & Youth Garden Symposium. Join us for three dynamic days devoted to advancing the movement to connect children to plants and the natural world.

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AHS MEMBERS MAKING A DIFFERENCE: Joan Calder

by Hunter Stanford



At a school lecture on pollinators, Joan Calder shows two students one of the bee blocks—nesting tunnels for bees—that she and her husband build for native carpenter and mason bees.

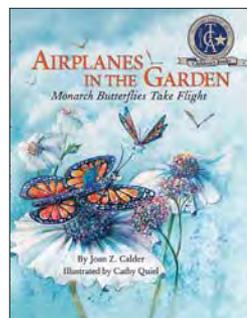
JOAN CALDER vividly remembers the encounter that led her to write an award-winning children's book about the importance of pollinators. As a public speaker, Calder travels to schools and garden clubs to speak about horticulture. After one of her presentations, she started chatting with a teacher who was excited about a passion vine she was growing because it had been recommended for attracting butterflies. But the teacher was distraught because caterpillars were eating the vine. Unaware that the caterpillars were the larvae of butterflies, she was killing them.

"It was at that moment I realized how important it is to teach people to identify each of the pollinator's life phases," explains Calder. "First come the eggs, then the caterpillar—and finally it transforms into the butterfly."

ACCIDENTAL ACTIVISM

From this experience, *Airplanes in the Garden: Monarch Butterflies Take Flight* was born. Published in 2011 by Patio Publishing and illustrated by Cathy Quiel, the book relates the experiences of

a young girl who discovers two monarch caterpillars and follows them through their metamorphosis into butterflies.



Calder creatively integrates scientific information about the life cycle of monarchs and their important role in pollination into the storyline, striking an appealing balance between informing and entertaining young readers.

Calder's own introduction to pollinators resulted from one of her first horticultural jobs as a greenhouse manager at the University of California–Santa Barbara. She recalls a groundskeeper telling her not to kill any monarch caterpillars she found.

"Being in that age group between 50 and 60," she says, "I was ashamed to admit I could not pick a monarch out of a lineup, so I learned all I could." From that point on, Calder gave every visitor to the greenhouse

a lesson on pollinators while pointing out the various stages of the monarch's life cycle, from fat caterpillars chomping on milkweed to a new chrysalis—the protective casing in which the transformation from caterpillar to butterfly occurs—hanging on a plant.

CHANGING DIRECTIONS

Calder, who grew up on a dairy farm in Wisconsin, spent the first part of her adult life in the corporate world of California. After working in real estate and the tech industry for a number of years, she decided it was time for something different. She enjoyed gardening at home, so she enrolled in a two-year horticulture program at a local college.

"I soon realized there was so much more to gardening than choosing a plant and putting it into the ground," Calder says. "The more you learn, the more you realize you don't know." And learn she did. Before long, her second career rapidly blossomed.

Currently, when she's not touring to promote her book or lecturing about pollinators, Calder is a freelance garden designer in the Santa Barbara area. In her design work, she continues to champion the importance of pollinators. Along with recommending site-appropriate plants, she encourages including areas for people to sit. "A bench or chair in a garden gives an aesthetic of joining humanity and nature," she notes. "Being seated to witness the dance between pollinators and blossoms is the essence of a garden."

Calder joined the American Horticultural Society in 2012 to connect with like-minded people, and she enjoys visiting public gardens through the Reciprocal Admissions Program. She also feels her gardening philosophy matches that of the Society's mission. "Through my garden endeavors," she says, "my goals are to open the eyes of all Americans to the vital connection between people and plants and to inspire all Americans to become responsible caretakers of the earth." 🌱

Hunter Stanford is an editorial intern with The American Gardener.

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THE FINEST GLASSHOUSES MONEY CAN BUY

FLOWERING TOBACCOS (*Nicotiana* spp.) are old-fashioned plants long beloved by cottage gardeners for their sweetly scented, evening-blooming flowers. Seen in full bloom in the garden, they create such a spectacle that it has inspired poets such as Edna St. Vincent Millay to compose paeans to their beauty.

Depending upon species or cultivar, nicotianas can stand anywhere from eight inches to 10 feet tall. All possess hairy, oval-ish, green to gray-green leaves, somewhat sticky stems, and tubular, trumpet-lipped flowers that open at dusk or on cloudy days. In the wild, the flowers range from greenish to white, pink, rose, and, very occasionally, yellow. In a few species, the blossoms are fragrant. Cultivation has extended the nicotiana color range to include salmon, lilac, ruby-red, and purple.

In addition to the flower display, there are many reasons for gardeners to appreciate nicotianas. For starters, they are deer resistant, probably because of their toxicity. Nicotianas are so beautiful that it's easy to forget that most of the 70-odd annual, perennial, and shrubby species in this genus contain nicotine, a toxic alkaloid that can be deadly if eaten in sufficient quantities.

Another compelling reason to grow them is that pollinators such as swallowtail butterflies and hummingbirds are strongly attracted to their blossoms. In northern New Mexico, where I live, they also draw hawk moths, which are important pollinators in the American Southwest.

JASMINE TOBACCO

The first nicotiana I grew was the jasmine tobacco (*Nicotiana alata*, formerly *N. affinis*, USDA Hardiness Zones 10–11, AHS Heat Zones 12–1). Native to Brazil, jasmine tobacco is a three- to four-foot tender perennial usually grown as an annual. In about 10 to 12 weeks from seed, it bears clusters of snow white, night-blooming trumpet flowers heavy with perfume, hence its common name. It is also called winged tobacco—*alata* means winged in Latin—for its flared leaf-stems.

I usually start my jasmine tobacco seeds in April or May. By July, the plants begin setting clusters of greenish-white buds that open in the evening to pour forth a delicious jasminelike perfume that travels far on the night breeze. By

charming Nicotianas

BY RAND B. LEE

Beloved for their fragrance and attractiveness for pollinators, these old-fashioned cottage-garden favorites are back in style.



'Lime Green', a hybrid of jasmine tobacco that has greenish to chartreuse flowers, regularly shows up on lists of gardeners' favorite nicotianas. It grows two to three feet tall with an upright habit.

MARK TURNER

mid-morning, the flowers lose their scent and hang limply from their branchlets, like discarded fairy tissues. But as soon as evening draws near, the blossoms perk up and release their scent again.

Jasmine tobacco is the parent of many hybrids, most classified as *N. ×sanderæ* or *N. ×hybrida* (Zones 10–11, 12–1). Unfortunately, during the breeding process, fragrance was sometimes sacrificed in pursuit of longer blooming periods (including daytime) and a more compact habit. Breeders seem to have realized the commercial value of perfumed annuals, and fragrance is now creeping back into nicotianas.



Nicotiana ×sanderæ ‘Cranberry Isle’ is an heirloom nicotiana for which I have only been able to find one American retail source, Select Seeds in Union, Connecticut (see “Sources,” page 16). It grows three to four feet tall with strongly fragrant, trumpet-shaped flowers in a range of colors from lilac to mauve, white, pink, violet, and dark purple, some decoratively patterned with darker veining. ‘Crimson Bedder’ is another long-blooming hybrid with unscented ruby flowers on two- to three-foot plants.

Another hybrid nicotiana worth mentioning is ‘Tinkerbell’. A half-hardy annual, it sprang from a cross between

a large-flowered red nicotiana and a slim-tubed wilding. Growing 12 to 30 inches tall, ‘Tinkerbell’ bears numerous small-cupped, dusky rose flowers with pale green tubes and backs and striking blue pollen from late spring through summer. The related ‘Baby Bella’ is a compact, disease-resistant hybrid that is said to produce hundreds of deep maroon-red blossoms from July to October.

A jasmine tobacco hybrid that often pops up on gardeners’ lists of the best nicotianas is ‘Lime Green’. “The color looks good with anything in the garden,” says Annie Hayes, owner of Annie’s Annuals

The ‘Avalon’ series was bred for display in grower packs but is also said to perform well in the garden. A true dwarf, growing up to 10 inches tall by 12 inches wide, the rounded plants bear scentless daytime blooms in pale pink, bright pink (this shade was an All-America Selections award winner in 2001), burgundy, lime green, lime- and-purple bicolor, pink picotee, red, and white.

‘Sensation Mix’ grows two-and-a-half to three feet tall, bearing mildly fragrant, day-blooming, pink, red, or white flowers. The ‘Domino’ series, 12 to 18 inches tall, comes in 13 different colors, including red, white, crimson, lime green, and bicolors. I can detect no scent from the blossoms.

The 10- to 12-inch-tall ‘Saratoga’ series blooms in seven different colors, including deep rose, white, pink, lime green, and a purple bicolor. The flowers stay open



fragrant nicotianas come in a range of flower colors from the pure white ‘Fragrant Cloud’, left, to the regal purple blossoms of Perfume ‘Deep Purple’, above, which is one of seven color options in the Perfume series.

& Perennials in Richmond, California. “It brings the plants around it into focus, setting off anything you plant with it. I particularly like it with *Scabiosa caucasica* ‘Fama’ and apricot snapdragons.”

Tim Pollak, outdoor floriculturist at the Chicago Botanic Garden in Illinois, is also a ‘Lime Green’ fan. “Given its height and color, it goes with many other flower and foliage hues,” he says. “And it lends so much structure and texture to a garden.”

HYBRID SERIES

If you’re shopping for nicotianas, you’ll come across lots of hybrid mixes, including some of the following series.

during the day, and are reportedly lightly scented in the evening.

The seven-color Perfume series was bred for easy care, daytime show, and as an attempt to reintroduce jasmine tobacco scent to nicotiana hybrids. Plants get 10 to 20 inches tall and 10 to 18 inches wide, and do not require pruning or deadheading to keep them looking good; furthermore, flowers are upward facing, which makes their colors stand out even more. The most famous color in the Perfume series is probably the dark violet Perfume ‘Deep Purple’, which won an All-America Selections Award in 2006. Perfume ‘Antique Lime’ bears pale lime-green flowers with a

Sources

Annie's Annuals & Perennials, Richmond, CA. (888) 266-4370.
www.anniesannuals.com.

Baker Creek Heirloom Seeds, Mansfield, MO. (471) 924-8917. www.rareseeds.com.

The Fragrant Path, Fort Calhoun, NB. www.fragrantpathseeds.com.

Select Seeds, Union, CT. (800) 684-0395. www.selectseeds.com.

Swallowtail Garden Seeds, Santa Rosa, CA. (877) 489-7333.
www.swallowtailgardenseeds.com.

Terroir Seeds/Underwood Gardens, Chino Valley, AZ. (888) 878-5247.
www.underwoodgardens.com.

Resources

Annuals and Tender Plants for North American Gardens by Wayne Winterrowd.
Random House, New York, NY, 2004.

Armitage's Manual of Annuals, Biennials and Half-Hardy Perennials
by Allan Armitage. Timber Press, Portland, OR, 2001.

Discovering Annuals by Graham Rice. Timber Press, Portland, OR, 1999.

2009: Year of the Nicotiana, National Gardening Bureau, Inc. www.ngb.org/year_of/index.cfm?YOID=27.



In full bloom, *Nicotiana langsdorffii* offers a firework-style burst of drooping pale green or chartreuse blossoms that are particularly showy when set off against a dark background. In this California garden it is paired with society garlic (*Tulbaghia violacea* 'Variegata'), bottom left, and *Limonium platyphyllum*, bottom right.

tan reverse. Perfume 'Blue' leans closer to periwinkle blue than azure, but it is a color breakthrough for the genus and stunning *en masse*. The scent is sweet and soft.

Burpee offers a slightly taller fragrant hybrid mix called 'Heaven Scent'. The plants get 20 to 24 inches tall and bloom in white, scarlet, rose, and pink.

MORE BEAUTIFUL NICOTIANAS

Nicotiana langsdorffii (Zones 10–11, 11–1) made such an impression on British gardeners when it was introduced to cultivation that the Royal Horticultural Society deemed it worthy of an Award of Garden Merit in 1819. Two to three feet tall, the densely bushy plants bear pendulous scentless chartreuse blossoms that look particularly attractive against a backdrop of dark-leaved plants. *N. langsdorffii* is a favorite of Hayes, who loves its "zillion little elongated lime-green bells."

"My garden is never without the arresting apple green tubular flowers of *N. langsdorffii*," says garden designer Lucy Hardiman of Portland, Oregon. "I plant them in beds and containers where they gracefully co-mingle with high season perennials and other annuals in shades of purple, shocking pink, and mid-range blue." A rare variegated selection known as 'Cream Splash' is sometimes available.

The woodland tobacco or star flower (*N. sylvestris*, Zones 10–11, 11–1), is a short-lived perennial, usually grown as an annual, that hails from the Andes of South America. It bears large leaves on plants up to seven feet tall. The three-inch long white flowers are borne in drooping clusters, like bursts of fireworks. The blossoms stay open during the day, but they release their sweet perfume mostly in the evening. Hardiman plants it "on the verge of partly shady areas in the garden where the panicles of pristine white trumpets exude a delicious scent, perfuming adjacent sitting spaces and illuminating the garden at twilight." She adds that in Oregon it may survive a mild winter if planted in freely-drained soil.

Woodland tobacco, which is largely found listed under the name 'Only the Lonely', is one of Pollak's favorite nicotianas. "I like that it can tolerate afternoon shade," Pollak says. "It's great in a woodland setting with filtered light. It's a tall plant, with a very large inflorescence, fragrant in the evening; I can place it in the back [of a bed] and let it naturalize." The plants are somewhat fragile,



Statuesque woodland tobacco, above, grows best in a partly shaded site, where its pendulous trumpet-flowers release a strong fragrance starting at dusk. Even taller is the unusual tree tobacco, right, which is perennial in warmer regions.

so site them where they will be protected from strong winds.

I look forward to growing *N. mutabilis* (Zones 9–10, 11–4), one of the latest nicotiana species to be discovered, officially classified by botanists as recently as 2002. A tender perennial from southern Brazil that can be grown elsewhere as an annual. *N. mutabilis* can grow up to eight feet tall. It bears small, airy flower-clusters that open white and fade to pink and rose, like clouds of white and pink butterflies. “It’s highly floriferous [for us in Chicago], with a long bloom period,” Pollak reports.

“It’s my favorite nicotiana,” says Hayes, “and definitely the most showy.

It blooms forever here in California. Our plants can get four to five feet across, with hundreds of flowers in three different colors fluttering in the wind. Visitors go ‘OMG!’ when they first see the plants.”

Nicotiana ‘Bella’ is a cross between the jasmine tobacco and *N. mutabilis* that occurred spontaneously in a New England garden some years back. ‘Bella’ gets up to six feet tall, and its large perfumed flowers go through a color change as they age, very much like those of *N. mutabilis*.

The award for the tallest nicotiana goes to tree tobacco (*N. glauca*, Zones 8–11, 12–5). This statuesque plant grows up to 30 feet tall in its native Argentina, but it’s likely

to reach only six to 10 feet in temperate regions. Plant Delights Nursery in North Carolina offers a selection called ‘Salta Blues’, which bears clusters of drooping yellow-green flowers that contrast beautifully with its striking glaucous, blue-green leaves. Unfortunately, tree tobacco has shown a tendency to naturalize in regions such as Hawaii, Florida, and California, so I would only recommend growing it as an annual in temperate regions where it is not hardy.

The Australian tobacco (*N. suaveolens*, Zones 0–0, 10–1) is an annual native to New South Wales and Victoria, where it grows on stony or sandy slopes and at the edges of woodlands. The species is highly variable, growing up to four-and-a-half feet tall with stems and leaves that can range from smooth



to hairy or woolly. Its thin, sparsely branched stems bear nodding, sweetly night-fragrant, trumpetlike white flowers.

GROWING TIPS

Nicotianas can be readily grown from seed started indoors four to eight weeks before the last frost, or outdoors after all danger of frost has passed. The seeds are very fine, and must be sown on top of rich, well-drained, slightly moist potting soil. Don’t cover the seeds because they require light to germinate.

In temperate areas, nicotianas thrive in full sun and tolerate light shade; woodland tobacco usually performs best with morning sun and some afternoon shade.

Pollak notes that in the Chicago area, “if you plant them in full sun, they can look a little tattered by August.” So he has started planting some nicotianas in the fall “to add

some fragrance.” He can do this because he has observed that established nicotianas will tolerate cooler temperatures. “That’s useful here, because in fall it can go down to 34 or 35 degrees Fahrenheit.”

Nicotianas flower best when regularly watered, especially if you are growing them in containers. The flip side of this is that they require a light, free-draining soil and resent “wet feet.” Getting the soil mix right can encourage them to overwinter in mild regions.

Hayes reports that nicotianas tend to be perennial in the San Francisco Bay area. “They self-sow, too, and they bloom like crazy here in the middle of winter. I tell California gardeners, cut it back to the rosette after it’s done blooming, give it a little compost boost, and in another month, you’ll have another flush of new flowers.”

Hayes adds, “Because I live in a coastal area, we can grow nicotianas in either sun or shade. Inland, however, where it’s hotter and drier, grow them in bright shade.”

Tall selections should be protected from strong winds, and may require staking. And while many of the new hybrids are self-cleaning, others benefit from the removal of spent blooms.

Remember that no matter how pretty or perfumed nicotiana flowers are, or how



A good choice for containers or summer bedding is the compact ‘Domino’ series, which comes in 13 different color choices.

handsome the leaves may be, ingesting any part of these plants can make you mortally sick. Be careful to plant them out of reach of young children and pets.

NICOTIANAS IN THE GARDEN

Fragrant nicotiana selections are wonderful additions to gardens designed for evening enjoyment. Place them near windows, along walkways, next to patios, or wherever you like to spend time relaxing

on a summer evening. And whether scented or not, the flowers will attract butterflies and hummingbirds to your garden.

Green-flowered selections such as *N. langsдорffii* and *N. alata* ‘Lime Green’ are especially stunning when paired with plants that have dark purple foliage, such as Diabolo ninebark (*Physocarpus opulifolius* ‘Monlo’), Black Lace elderberry (*Sambucus nigra* ‘Eva’), or ‘Purple Ruffles’ basil.

Compact varieties can be massed in beds or mixed with other annuals in containers. Hayes says, however, that she and her customers love the taller nicotianas. “People are sick of what I call ‘gas-station gardens’, where everything is the same height,” she says. “They love the feeling of being surrounded by the beauty and fragrance that the taller nicotianas give them.”

With their wide range of heights and intriguing flower colors—not to mention their attractiveness to pollinators—flowering tobaccos bring a lot of old-fashioned charm to your summer garden. By choosing selections with sweetly scented evening blossoms you can enjoy your garden well into the close of day.

A writer and cottage garden expert, Rand B. Lee lives in Santa Fe, New Mexico.

THE DEMON WEED: A BRIEF HISTORY OF SMOKING TOBACCO

The most infamous nicotianas are the smoking tobaccos. Cultivated tobacco (*Nicotiana tabacum*) is no longer found in the wild, and may have resulted from domestication of wild tobacco (*N. rustica*), its far more potent cousin that can contain up to 18 percent of the alkaloid chemical nicotine. Humans have been drying and smoking the leaves of *N. tabacum*, *N. rustica*, and other nicotianas at least as far back as 6000 B.C.E. Historians and linguists are still debating the origin of the word “tobacco,” which may be derived from a Caribbean word *haboq*, or from the Arabic word *tabbaq*, which was used to denote various herbs.



At Chanticleer garden in Pennsylvania, a mass planting of smoking tobacco creates an intriguing effect.

Europeans, of course, knew nothing of tobacco until Christopher Columbus stumbled upon the West Indies in the late 15th century. Columbus brought back a cigar for Queen Isabella of Spain, and by 1531 the Spaniards had established tobacco plantations on their Santo Domingo (now the Dominican Republic) and Cuban colonies. By 1540, tobacco was being grown in Spain, and in 1560 Jean Nicot, the French ambassador to Portugal, introduced tobacco to France. Tobacco use—both for pleasure and as a medicinal herb—became so popular in Europe that the Swedish botanist Carolus Linnaeus named the genus after Nicot.

Tobacco plants reach heights of three to six feet tall or more, with large hairy leaves and pretty trumpet flowers in various shades of rose that, unlike other nicotianas, bloom during the day. The plants can be quite striking at the back of a border and a number of designers have used them to good effect. “The tobaccos are ornamentally and structurally very valuable,” says Tim Pollak of the Chicago Botanic Garden in Illinois. Pollak grows regular *N. tabacum* for its lime-green leaves, and he also likes a striking yellow-leafed cultivar called ‘Golden Burly’.

—R.B.L.



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bumbler Hydrangeas

Sometimes overshadowed by their mophead siblings, these lesser-known hydrangeas are just as deserving of space in America's gardens.

BY ANDREW BUNTING

IN THE LAST 10 years, the genus *Hydrangea* has experienced a renaissance in American gardens. There are now hundreds of selections of the mophead (hortensias) and the lacecaps derived from the two most popular species, bigleaf hydrangea (*Hydrangea macrophylla*) and the closely related *Hydrangea serrata*. The spotlight on these two heavyweights has also drawn attention to some less trendy members of the genus—including smooth hydrangea (*H. arborescens*), oakleaf hydrangea (*H. quercifolia*), and the panicle hydrangea (*H. paniculata*)—that are worth knowing and growing.

Relying both on my experience evaluating these hydrangeas at the Scott Arboretum of Swarthmore College in Swarthmore, Pennsylvania, where I work, and the recommendations of colleagues around the country, here are some of the most promising selections currently available to American gardeners.

SMOOTH HYDRANGEA

Smooth hydrangea (USDA Hardiness Zones 4–9, AHS Heat Zones 9–4) is an eastern American native that ranges from Upstate New York, west to Ohio, and south to Florida. In the wild, this species is generally found growing in deep shade—often in forests or on rocky hillsides—but in garden settings it does well in part shade and loamy, fertile soil. In the wild, it tends to form a



The conelike inflorescences of 'Amethyst' represent a color breakthrough in oakleaf hydrangeas; they start out white and then transition to cherry red or pale purple.

multistemmed, suckering shrub two to four feet tall and up to twice as broad.

Smooth hydrangea has a number of subspecies (or closely related species, depending on which reference you consult). Of these, *H. arborescens* ssp. *radiata*, *H. arborescens* ssp. *discolor*, and *H. arborescens* ssp. *cinerea* are notable for the strikingly white undersides of their leaves, which shows up as a characteristic of some selections.

Smooth hydrangea flowers come in two different forms. Most common is a slightly flattened dome shape in which inconspicuous, small, white flowers (fertile) are surrounded by four-sepaled showy white flowers (infertile or sterile). The second more closely resembles the traditional mophead, with a rounded cluster three to four inches in diameter or up to 10 inches across. These ball-like flower clusters are



Notable smooth hydrangeas include 'Hayes Starburst', top, which has unique, densely petaled flower clusters, and Invincibelle® Spirit, above, one of the first pink-flowered selections introduced.

predominantly made up of showy sterile flowers, with the more inconspicuous fertile flowers buried within.

Many cultivars have been selected for the large floriferous "head" of flowers. The most notable is 'Annabelle', which was named by the late J. C. McDaniel, a horticulture professor at the University of Illinois. Large lime-green flowerheads emerge in July around the Philadelphia

area. Over the summer, they turn pure white before fading back to green in August. As cooler weather approaches in fall, they make the final transformation to tawny and eventually brown. Another popular old-fashioned selection is 'Grandiflora', which has inflorescences slightly smaller than 'Annabelle'.

Incrediball®, a newer introduction with flowerheads even larger than 'Anna-

belle', was selected for stronger stems that are less likely to flop over in midsummer. This was one of the top-ranked hydrangeas in the Chicago Botanic Garden's Plant Evaluation Program. 'Bounty' is another good performer. It has a slightly broader head than 'Annabelle', but like Incrediball® it has more supportive stems.

'Hayes Starburst' is an unusual selection found by gardener Hayes Jackson in Anniston, Alabama. Each flower has many sepals, giving it the appearance that the flowers are "doubles." At the Scott Arboretum, it has not shown the same vigor as the aforementioned cultivars and tends to be slightly smaller in stature, reaching three to four feet tall.

'Samantha', a selection of *H. arborescens* ssp. *radiata*, has large white flowerheads and is notable for the beautiful silver-white coloration on the undersides of the leaves that shows up dramatically on windy days.

For years, the Holy Grail of the smooth hydrangea world was to hybridize a pink version of 'Annabelle'. Tom Ranney, a plant breeder at North Carolina State University, accomplished this with Invincibelle® Spirit. It has slightly smaller flowerheads than 'Annabelle', but the flowers are a very attractive dark pink. Bella Anna™, developed by former University of Georgia horticulture professor Michael Dirr, has rich pink flowers closer in size to those of 'Annabelle'.

If you prefer the lacecap-type flowers typical of those found on the straight species, several selections offer this feature. Among them is 'Haas' Halo', which bears large flat-topped flowers up to 14 inches across and has great vigor and very strong stems. White Dome™ is an attractive lacecap-type that has a slightly mounded inflorescence and leaves with attractive white undersides. 'Emerald Lace', which is sometimes listed as 'Green Dragon', has small lacecap flowers and neatly incised foliage.

Because smooth hydrangeas bloom on "new wood," they can be cut back hard in early spring; this also curtails their tendency to sucker and ensures a more attractive, mounded habit. At the Scott Arboretum, we cut them back to about six inches tall in mid-March. By July, they have grown to about three to four feet tall.

Other than once-a-year pruning, smooth hydrangea doesn't require a lot of maintenance and is largely untroubled by pests and

diseases. Powdery mildew can be a problem in late summer in humid regions, causing partial defoliation in some cases.

OAKLEAF HYDRANGEA

Oakleaf hydrangea (Zones 5–9, 9–4) is a southeastern native found in the wild from North Carolina and Tennessee, south to Florida and the Gulf Coast. It has demonstrated an even more extended range in cultivation, thriving in the mid-Atlantic states and the Lower Midwest. Alan Branham, director of horticulture at Powell Gardens in Kingsville, Missouri, says oakleaf hydrangea is very tolerant of the climate there. Yet in the Pacific Northwest, oakleaf hydrangea tends to sulk, notes Dan Hinkley, a plant explorer and consultant for Monrovia nursery in Washington. Like smooth hydrangea, it tends to be an understory shrub in the wild, but in gardens it flowers most prolifically in fertile, loamy soil and full sun. It will tolerate part shade, especially in warmer regions.

Oakleaf hydrangea grows four to 10 feet tall and equally broad, developing an upright or mounded shape. It is named for its large, deeply lobed, leathery leaves, which resemble oversized red-oak leaves. The leaves are dark green through the summer and then turn a range of colors from red to burgundy, purple, or bronze in fall. The flowers are predominantly made up of four-sepaled sterile florets that are densely packed in conelike inflorescences. The flowers generally bloom in July in Swarthmore, Pennsylvania. In winter, leaf drop reveals the shrub's shaggy, cinnamon-brown bark.



Snow Queen ('Flemygea') is an oakleaf hydrangea that grows four to six feet tall and wide with flowers that start out white and then transition slowly to pink, purple, and eventually tan.

After polling several hydrangea growers, Snow Queen™ appears to be an all-around favorite selection. Pat Cullina, a garden designer from Brooklyn, New York, feels it is the best single-flowered cultivar and loves it for its upright habit and great fall color. Its white inflorescences turn to a rosy-pink and ultimately

to brown, which provides some fall and winter interest.

Fred Spicer, executive director at the Birmingham Botanical Gardens in Alabama, speaks highly of 'Dayspring', which has great vigor and a large stature reaching 15 feet tall at maturity. Another large plant, 'Semmes Beauty' has long flowerheads and has exhib-

PRUNING HYDRANGEAS

When it comes to pruning hydrangeas, the first thing you need to know is whether they bloom on new wood (current season growth) or old wood (previous seasons' growth).

Panicle hydrangea (*Hydrangea paniculata*) and smooth hydrangea (*H. arborescens*) bloom on new wood. Because of this, there are several ways to consider pruning each of these species. Panicle hydrangea can grow to 30 feet tall, depending on the cultivar, so don't prune it if you want a tree-form specimen. In a more formal setting, it can be pruned into a single-stemmed topiary where the trunk is left intact and the "head" is pruned back hard in late winter, creating a more uniform "ball" of growth. To keep a panicle hydrangea small, prune it back by half or even nearly to the ground each year. This will keep the larger cultivars much smaller, but still allow copious flowering.

Smooth hydrangea can also be left unpruned, or if you prefer to keep the shrub denser and less likely to flop over, it can be cut back to two or three inches above the ground in early spring.

Oakleaf hydrangea (*H. quercifolia*) blooms on old wood and requires little pruning other than a snip here or there to improve the shape. If you have one of the large cultivars, you can do selective pruning in late winter to reduce the height or overall mass.

For all of the species, spent flowers can be removed in the fall (they are an excellent addition to dried arrangements) or left on to add winter interest. If you choose the latter, cut the flower stalks back to the first set of leaf nodes in early spring so the old flowers don't distract from the newly emerging foliage.

—A.B.



Red to purple fall foliage is a feature of many oakleaf hydrangeas, including 'Alice', above.

ited good heat tolerance in the Deep South. 'Alice' is also tolerant of full sun and has great vigor. Similar in stature to Snow Queen is 'Amethyst', which is a Michael Dirr introduction that reaches six to eight feet tall. The white cones of flowers turn a red to pale purple color that is sustained as the flowerheads dry. Jetstream™ is a new cultivar with very upright flowerheads that has shown good resistance to leaf spot and has excellent orange-red fall color.

There are several selections of oakleaf hydrangea with interesting double flowers. The hands-down favorite among the experts is 'Snowflake'. The inflorescences are so heavy from the incredible floral abundance that they have become pendulous. I have seen plantings of 'Snowflake' where the flowerheads are allowed to cascade over a wall. Mark Weathington, assistant director and curator of collections at the JC Raulston Arboretum in Raleigh, North Carolina, is excited by 'Turkey Heaven', which is another double form, but has flowerheads that are wider than 'Snowflake'.

Oakleaf hydrangeas can grow too large for smaller gardens, but many diminutive selections have been introduced to take care of this issue. 'Sike's Dwarf' reaches three to four feet tall with similar spread, but its flowers and foliage are, of course, commensurately scaled down from those of the larger cultivars. 'Pee Wee' is similar in appearance to 'Sike's Dwarf' but has small-

Sources

Fairweather Gardens, Greenwich, NJ. (856) 451-6261.

www.fairweathergardens.com.

Forestfarm at Pacifica, Williams, OR. (541) 846-7269.

www.forestfarm.com.

Greer Gardens, Eugene, OR. (800) 548-0111. www.greergardens.com.

Wilkerson Mill Gardens, Palmetto, GA. (770) 463-2400.

www.hydrangea.com.

Woodlanders, Inc., Aiken, SC. (803) 648-7522. www.woodlanders.net.

Resources

Hydrangeas for American Gardens by Michael A. Dirr. Timber Press, Portland, OR, 2004.

Manual of Woody Landscape Plants (7th ed.) by Michael A. Dirr. Stipes Publishing, Champaign, IL, 2008.

Native Trees, Shrubs, & Vines by William Cullina. Houghton Mifflin, Boston, MA, 2002.

er flowerheads. A yellow-leaf sport of 'Pee Wee' called 'Little Honey' features leaves that are butter-yellow to a soft chartreuse. Finding the perfect planting spot for this selection is essential. Too much sun will

cause the yellow color to bleach out and go off color, while too much shade will turn the leaves green. I have found that planting it on the edge of a shaded garden or in dappled shade makes for the best results.

In the last couple of years, some very exciting dwarf selections released from the U.S. National Arboretum's breeding program in McMinnville, Tennessee. 'Munchkin', developed from a seedling of 'Sike's Dwarf', is more compact than its parent, with flowers that turn from white to pink. 'Ruby Slippers', a hybrid between Snow Queen and 'Pee Wee', reaches three to four feet tall with a slightly broader spread. Its nine-inch-long cones of flowers open white and quickly transition through pink to rose. 'Queen of Hearts' has the same parentage as 'Ruby Slippers', but is a larger, rounded shrub reaching nearly seven feet tall with white flowers that fade to pink.

PANICLE HYDRANGEA

Perhaps the most iconic of the summer flowering hydrangeas is the panicle hydrangea (Zones 3–8, 8–3), a large shrub or small tree native to Japan and China. The form typically seen growing at many old homesteads and cemeteries is the pee gee hydrangea, which is actually a selection called 'Grandiflora'. Some observers have complained that it has been overused in American landscapes,



Compact oakleaf hydrangea cultivar 'Sike's Dwarf' serves as a foundation planting in this bed, fronted by sweet flag (*Acorus gramineus* 'Ogon').

but it can be a striking specimen if planted in the right site and pruned appropriately.

Panicle hydrangea will grow 10 to 25 feet tall with a roughly equal spread, developing either as a tree or a broadly mounded shrub depending on how it is pruned. It thrives in a site with full sun and fertile, well-drained soil, but will tolerate part shade and less-than-ideal soils.

In most cases, its medium green leaves don't offer much in the way of fall color. It is the last of the hydrangeas to flower, starting in late July in the warmest regions and continuing into September. The flowers are borne on top of the foliage and resembles a pyramidal cone. Because panicle hydrangea blooms on "new wood," it can be pruned hard in late winter to early spring. In the South, many cultivars of panicle hydrangea are intolerant of the extreme heat and the pink-flowering cultivars tend to fade.

For gardeners looking for earlier bloom times, several cultivars are recommended. Quick Fire® blooms about a month earlier than the other cultivars. The flowers open white and then fade to pink as the summer progresses. One of my personal favorites is 'Dharuma', which is early-flowering and grows four feet tall and three feet wide in five years. The white flowers fade to pink by late summer. White-flowered Baby Lace® is also a great selection for limited spaces, growing to three or four feet tall and wide.

For mid-season bloom, 'Limelight' is one of the most floriferous selections. The large flowerheads emerge white, change gradually to a striking lime-green, and then finish with a soft pink color in late summer. I prune the 'Limelight' plants in my home garden to about four feet tall in March, which keeps them to about seven to eight feet tall by the time they flower. Little Lime® is a diminutive selection of 'Limelight' that reaches three to five feet tall.

Several white-flowered selections are worth considering. 'Unique', which has large white florets two inches across, is a favorite of Alan Branhagen. If you're looking for large flowerheads, 'Phantom' has perhaps the largest panicles in the genus, but be aware it grows to 10 feet tall and wide at maturity. Pat Cullina describes 'Kyushu', another white-flowered selection, as being very vigorous and a "good bloomer."

In recent years, breeders have been developing panicle hydrangea with



'Limelight', shown above at Fordhook Farm in Pennsylvania, stoked a renaissance in panicle hydrangeas with its smaller overall size and dense flowerheads that open white, then turn pale green and pink as they mature. Left: Pinky Winky™ is an upright form with less densely clustered pink-and-white flowerheads.

flowerheads that start white and quickly transform to soft pink, deep pink, and reddish-pink all on the same panicle.

For the hydrangea collector, the foliage of 'Yukigeshou' has an interesting marbled variegation of white and green, which makes up for a modest floral display.

BROADENING THE OPTIONS

If variety is the spice of life, then having lots of different hydrangeas to choose from is a boon for the home gardener. All three of these hydrangea species are represented by a variety of selections that are suited to gardens big and small. I have planted two or three cultivars of each species in my small suburban garden in Swarthmore. Along with a few mopheads and lacecaps, their stunning flower display offers an extended period of bloom in my summer garden.

Andrew Bunting is curator at the Scott Arboretum of Swarthmore College in Pennsylvania.

11 up-and-coming Herbs

BY JIM LONG

These flavorful yet little-known plants are among this year's culinary favorites with gardeners and chefs alike.

BACK IN THE late 1980s, before the local food movement had a name, a few notable restaurant owners began growing fresh herbs and produce exclusively for their patrons' meals. The Herbfarm restaurant in Woodinville, Washington, comes to mind, as does Alice Waters's Chez Panisse in Berkeley, California, and later the French Laundry in Yountville, California. Those early establishments led the way in creating their own organic gardens specifically for their chefs' kitchens. Today, not only do many upscale restaurants now have their own gardens; smaller, less pricey establishments have entered the market to meet consumer demand.

FROM TABLE TO GARDEN

What we eat in restaurants has a direct correlation to what we grow in our gardens. In 1994, I conducted a survey of wholesale and retail herb growers in the United States and Canada to determine what were the top 10 herbs, by sales. At that time, cilantro wasn't on the list. A decade later, when I conducted the survey again, cilantro had burst into the top 10—at the expense of French tarragon. The influx of Hispanic, Indian, Korean, and Thai restaurants nationwide introduced the dining public to this herb. Now fresh cilantro can be found in nearly every farmers market and grocery store, and every retail seed company offers at least one variety of the herb, valued both for its pungent foliage and its seeds (coriander).

The growing popularity of non-European cuisine is encouraging chefs and

creative home cooks to experiment with new flavors as never before.

CHEFS' HOTLIST OF FAVORITES

Working with the premise that the new

using the powder of ground sumac berries (*Rhus* spp.), an herb common in the Middle East, to provide a tart flavor to its sumac-chile crusted Pacific halibut.

Joe Seals, a restaurant consultant in Arroyo Grande, California, says Latin and Asian herbs are hot for 2014. Included in his "trending" list are culantro (*Eryngium foetidum*), papalo (*Porophyllum ruderale*), shiso (*Perilla frutescens* var. *crispa*), and Vietnamese coriander (*Persicaria odorata*).

Also on Seals's list are citrus-flavored herbs such as lemon verbena (*Aloysia citriodora*), lemongrass (*Cymbopogon citratus*), lemon basil (*Ocimum citriodorum*), lemon balm (*Melissa officinalis*), and lemon thyme (*Thymus citriodorus*).

Chef Jerry Traunfeld, owner of Poppy, a restaurant in Seattle, Washington, uses locally sourced mussels, fried with lovage (*Levisticum officinale*), poached oysters with French sorrel (*Rumex scutatus*) sauce and bacon, and half-shell kushi oysters with lemon verbena ice; the herbs and vegetables all come directly from his restaurant garden.

Tucker Taylor, head gardener at the French Laundry in Yountville, California, told me about an herb I was not familiar with called oysterleaf (*Mertensia maritima*). The herb's salty, oysterlike flavor makes it a hot item for vegan and vegetarian recipes as well as an excellent complement to seafood dishes. Seeds of oysterleaf, unfortunately, are very difficult to locate in the United States, so I



Cumin-scented perilla, sometimes listed as 'Vietnamese' or 'Tia To', is now finding its way into home gardens and kitchens.

herbs chefs are using today are likely to show up in home gardens before long, I recently consulted various growers and chefs to see what might be the cilantro of the coming decade.

Affairs to Remember, a catering company based in Atlanta, Georgia, reports

have confined my discussion of it to the sidebar on page 28.

Another trend among chefs is foraging for native plants such as woodland mushrooms, native sorrels (*Oxalis* spp.), sumac berries, and nuts. A related trend is the foraging and cooking of invasive species, with chefs using such herbs as garlic mustard (*Alliaria petiolata*), Japanese knotweed (*Polygonum ×bohemicum*), and Vietnamese lemon mint (*Elsholtzia ciliata*), in combination with animals such as invasive fish.

For those of us who are avid gardeners and voracious experimenters in the kitchen, this is a truly exciting time.

HERBS TO TRY

Papalo (*Porophyllum ruderale* ssp. *macrocephalum*), also known as yerba porosa, is a marigold relative native to the southwestern United States and Central America. An upright, purple-stemmed annual three to five feet tall, it produces ovoid, blue-green leaves that have a piquant flavor similar to that of cilantro or arugula, although some people detect a hint of cucumber. The leaves are usually used fresh as a garnish or additive to salsa.

Start seeds indoors a few weeks before planting it in the garden, or sow them directly in the garden after danger of frost has passed. Papalo needs full sun and well drained—but not particularly fertile—soil and can be grown in containers. Snip some leaves weekly in order to stimulate more leaf production; the flavor changes dramatically as the plant ages. The insignificant terminal flowers and fluffy, dandelionlike seedheads are unlikely to develop except in areas with long growing seasons.

Shiso (*Perilla frutescens* var. *crispa*) is a specific red-leaf variety of perilla or beefsteak plant. It is linked most strongly with Japanese culinary traditions, but used in a variety of other Asian cuisines. The selection ‘Vietnamese’, sometimes called ‘Tia To’ or cumin-scented perilla, has a delightful flavor described as a currylike blend of cumin, cilantro, and parsley, with occasional hints of cinnamon. It is used in salads and as a sushi wrap; and the seeds are used as a flavoring. The leaves are a pleasant addition to micro-greens salad mixes and are especially good sprinkled over cucumbers and seafood, or shredded in fish tacos.

Native to the Himalayan region of eastern Asia, shiso is easy to grow. Sow seeds directly in average garden soil, in full sun, after all danger of frost has passed. Space plants 15 to 18 inches apart in the garden, or plant in containers. The plants grow to about 18 inches tall and almost as wide. The leaves can be harvested anytime the plant is beyond the seedling stage. Regularly clip young leaves for best flavor. Some varieties of perilla, especially the more common red and green varieties, can self-sow and become weedy, so remove any flowers immediately

root vegetables in the sunflower family, but for culinary purposes they are used more like herbs to lend their unique flavor—often described as somewhere between seafood and artichoke hearts—to a variety of dishes.

White salsify, sometimes called vegetable oyster, is a biennial hardy to USDA Zone 3. Plants grow 14 to 16 inches tall with grasslike leaves and rosy flowers that close in the middle of the day. Look for the heirloom cultivar ‘Mammoth Sandwich Island’.

Scorzonera, also known as black salsify, is a perennial distinguished by broader



Often used fresh as a garnish, papalo has a flavor described as being a combination of cilantro, cucumber, and green pepper. It is easy to grow in moist, moderately fertile soil or containers.

to prevent seeds from forming. Before you start adding perilla to all your dishes, note that it has not been granted GRAS status (see sidebar on page 27); most forms contain a chemical linked with lung disorders. In addition, it has been known to cause contact dermatitis, so if you have sensitive skin, be careful when handling perilla plants.

White salsify (*Tragopogon porrifolius*) and **scorzonera** (*Scorzonera hispanica*) are both

leaves than white salsify and the more typical yellow flowers of the sunflower family. Its black roots also distinguish it from white salsify. Selections include ‘Geante Noire de Russie’ and ‘Belstar Super’.

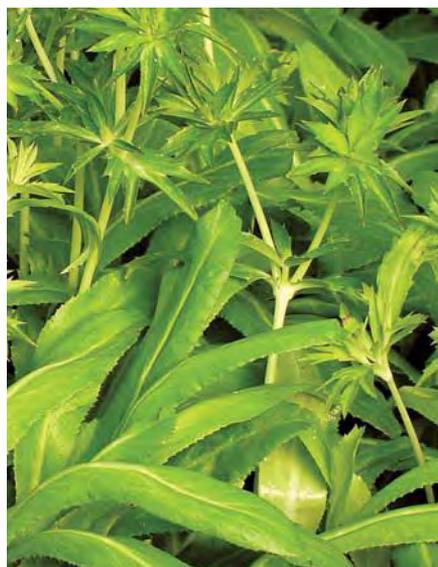
Both plants grow best in full sun and deeply dug, free-draining, neutral to acidic soil lightened up with generous amendments of compost or rice hulls and bone meal. Sow seeds directly in the ground as early as it can be worked in spring, thin-



Scorzonera, also called black salsify, is a member of the sunflower family grown primarily for its dark-skinned roots, which can be harvested after the first fall frost.

ning seedlings to at least four inches apart (leave 18 inches between rows). The roots take between 100 and 120 days to maturity, so depending on your growing season, they can be harvested in the fall and/or left in the ground until the following spring. Not only are the roots tasty, but the young shoots that emerge the following spring can be harvested and cooked, as well.

Culantro (*Eryngium foetidum*) has gone from unknown to mainstream in a few short years. A member of the carrot fami-



Related to sea hollies, culantro is grown for its leaves, which are used like those of cilantro.

ly, it is also known as Mexican coriander, long-leaf coriander, or spiny coriander. The leaves give off a pungent odor, but the flavor is similar to that of cilantro (*Coriandrum sativum*), and like that herb they are nearly always used fresh as a topping for cooked dishes or salads. Native to tropical America and the West Indies, culantro is widely naturalized in tropical regions, including Hawaii and Florida. It is common not only in Central American and Caribbean cooking, but also in Asian cuisine; however it has not yet received GRAS status.

A biennial usually grown as an annual, culantro develops a basal rosette of elongated leaves edged with soft spines, resembling leaf lettuce. In its second growing season, culantro will bear cone-shaped greenish-white flowerheads framed with a ring of spiny bracts typical of other eryngiums.

Sow seeds in early spring and provide bottom heat at 70 degrees Fahrenheit (F); they take about three weeks to germinate. The seedlings can be transplanted to the garden or containers once danger of frost has passed; space them six inches apart. Culantro thrives in part shade and moist soil, so keep it watered during dry spells. In warm-summer regions, growing culantro under shade cloth is suggested to slow down the onset of flowering, which causes flavor to deteriorate and curtails leaf production.

A WORD ABOUT SAFETY

Because some of the plants described in this article are relatively new to cultivation in Western countries, they have not been studied as extensively as some of the more traditional edible plants. We have noted in the article a few plants that have not received GRAS (Generally Recognized As Safe) status from the Flavor and Extract Manufacturers Association, which monitors plant ingredients used to flavor food on behalf of the U.S. Food and Drug Administration. A lack of GRAS status does not necessarily mean plants are unsafe for consumption, but it does indicate they contain chemical components that should be used with caution or that merit further research. To learn more about the potential health risks of these and other herbs, we highly recommend Arthur O. Tucker and Thomas DeBaggio's *The Encyclopedia of Herbs* (see "Resources," page 29.)

—Editor

Vietnamese cilantro or **rau ram** (*Persicaria odorata*, syn. *Polygonum odoratum*) is a tender perennial herb with an aroma and flavor similar to cilantro and culantro with a hint of lemon. It is commonly eaten raw in spicy salads and spring rolls, and is added at the very end of cooking to soups and stir-fried dishes.

Native to Southeast Asia, Vietnamese cilantro is a straggly plant that grows to about eight inches tall and wide. Spearhead shaped green leaves with reddish markings clasp alternately to the trailing, jointed, reddish-colored stems. Tiny pink flowers may appear in late summer. It grows in part shade to full sun in moist or wet soil; it can even be grown in standing water. Like many of its knotweed family (Polygonaceae) relatives, it tends to spread vigorously, so growing it in a container is recommended, particularly where it is hardy (USDA Zones 7/8–11). It should be trimmed regularly to stimulate production of tender new leaves, and can be clipped all the way to the ground as needed to reinvigorate it. The plant thrives in hot summers and can be overwintered indoors in a container.

Vietnamese cilantro will root at each stem joint and is thus easy to propagate;

UNUSUAL OYSTERLEAF

Oysterleaf (*Mertensia maritima*) is so interesting and unusual that I couldn't resist writing about it, even though it is very difficult to find (see below) and a bit tricky to grow from seed.

Related to the American native Virginia bluebells (*M. virginica*), oysterleaf, also known as sea bluebells, is a perennial native to cool temperate regions such as Canada, Alaska, Greenland, and Scotland. The plant produces rosettes of blue-green leaves,



Oysterleaf, also known as sea bluebells, is prized for the seafood flavor imparted by its crisp blue-green foliage.

about four inches tall, that are prized for their crisp texture and salty, oysterlike flavor. The leaves are added to salads or used as garnish for seafood dishes. Its northerly origin means it will thrive only in USDA Zones 3 to 6. It requires full sun and loamy or sandy, moist soil, and can be grown in a hanging basket or allowed to trail along the ground.

Oysterleaf seeds require alternating periods of cool and warm conditioning to germinate, so mix them with moist sand in a plastic bag and store them in the refrigerator at 45 degrees F for several weeks. As soon as the seeds show signs of sprouting, remove the bag and place it in a warm (about 70 degrees F) location for about three weeks. Then, return the sprouting seeds to the refrigerator in their bag for another five to six weeks. At the end of that period, remove the bag and lay it flat so the seeds spread out inside; keep them at room temperature. As soon as the seedlings start to grow, transplant them into moist garden soil. A light mulch of peat moss is recommended when newly planted.

Seeds for oysterleaf are virtually impossible to find in North America, but can be ordered from Edulis Nurseries in the United Kingdom (www.edulis.co.uk; e-mail first for availability) and Alsa Garden in France (alsagarden.com). —J.L.

simply break off a stem and place it in a container of water or in moist potting soil.

French sorrel (*Rumex scutatus*), sometimes called shield-leaf or buckler sorrel, had fallen out of favor for a while but seems to be making a comeback. The slightly bitter, lemony-flavored leaves are used as a tangy addition to salads, but also shine in soups and sauces.

A biennial hardy in USDA Zones 3 through 9, French sorrel forms a clump of elongated, spear-shaped leaves on long stems the first year. Since it devotes most of its energy to forming flower stalks the second year, it's best to replant it annually. French sorrel will thrive in average garden soil and full sun, although part shade may be advisable in regions with hot summers.

Sow seeds indoors in late winter, or directly in the garden or a patio container after danger of frost has passed. Thin seedlings to about 15 inches apart and you can begin harvesting leaves in about 60 days. For micro salad greens, stagger plantings every two weeks and thin to six inches.

Garden sorrel (*Rumex acetosa*) is sometimes offered, but this is a hardy perennial that has naturalized widely



Harvest French sorrel leaves regularly to stimulate production of fresh foliage.

in temperate regions and is considered weedy (it is listed as a noxious weed in Arkansas). If you do grow it, deadhead it rigorously to prevent self-sowing.

Lemon verbena (*Aloysia citriodora*) is a tender perennial shrub or small tree that can grow three to 10 feet tall where hardy (Zones 9–11), but is more often grown as an annual in colder climates, or brought indoors in winter and stored in a cool, dry room. The sweet, lemony aroma and flavor of its leathery, lance-shaped leaves lends itself to teas,

desserts, meat dishes, and sauces. It is also a popular addition to potpourri.

Lemon verbena is native to Argentina and Chile. You can grow it from seed, but it's easier to purchase a small plant in spring. After your region's frost-free date, plant it in a sunny site in the garden or in a container; it thrives in fertile, free-draining soil. It grows quickly, so start with a 16-inch-diameter container. Begin harvesting leaves when the plant reaches a foot tall, and regularly pinch branch tips to encourage a compact shape. Clusters of white or lavender flowers bloom from early to late summer. Unlike many herbs, lemon verbena benefits from regular fertilizing and should be kept moist during dry spells. Propagate by cuttings taken in summer.

Mint (*Mentha* spp.) may seem like a surprising choice for a list of trendy herbs, but this beloved herb has new-found popularity in an array of culinary efforts, notably cocktails and herb-infused ice cubes.

Mints are clump-forming perennials that grow about 12 to 18 inches tall and are easily started from cuttings or root divisions. They thrive in full sun to part shade in average garden soil, even in perpetually



With its glossy green leaves, lemon verbena is an attractive container plant in its own right.

damp areas, but most gardeners grow them in containers to prevent their unwanted spread via vigorous rhizomes. They are hardy (most thrive in USDA Zones 4–10), drought tolerant, and require little care.

The recently-patented Westerfield Mints from Jim Westerfield, a mint breeder in Illinois, can add a range of delightful flavors to sauces, ice creams, and infused ice cubes. Two of Westerfield's introductions, *Mentha* 'Berries and Cream' and 'Jim's Candy Lime' are especially exciting. Another new variety, Mojito mint (*Mentha × villosa*) is becoming a favorite with the cocktail crowd.

Sumac (*Rhus* spp.) is a genus of sucker-ing shrubs or small trees that grow from three to 20 feet or more in height. Middle Eastern cultures, including Lebanese,

Turkish, Afghani, and others, all use the tart, red berry of the sumac plant and you will find it in the za'atar spice from that region of the world. Since chefs are combining ingredients from various cultures, it's no surprise to find sumac berries showing up in all kinds of dishes from Greek dolmas to sumac-dusted oven French fries, and even in cocktails.

If you choose to grow sumacs yourself, keep in mind they are a colonizing plant, sending out roots that form a slowly expanding colony. Many species are native to the United States and you will often see sumacs growing along the edges of fields and the borders of woods, in full sun to part shade.

For culinary purposes, smooth sumac (*R. glabra*, Zones 3–9, 9–2) and fragrant sumac (*R. aromatica*, Zones 4–9, 9–3) produce the best-flavored berries. Sumacs will

Sources

Cooks Garden, Warminster, PA.
(800) 457-9703.

www.cooksgarden.com.

Johnny's Selected Seeds, Winslow, MA.
(207) 861-3999.

www.johnnyseeds.com.

Kitazawa Seed Co., Oakland, CA.
(510) 595-1188.

www.kitazawaseed.com.

Nichols Garden Nursery, Albany, OR.
(541) 928-9280.

www.nicholsgardennursery.com.

Richters Herbs, Goodwood, Ontario.
(905) 640-6677. www.richters.com.

Resources

The Complete Vegetable & Herb Gardener by Karan Davis Cutler. Macmillan Inc., New York, NY, 1997.

Culinary Herbs & Spices of the World by Ben-Erik Van Wyk. The University of Chicago Press, Chicago, IL, 2013.

The Encyclopedia of Herbs by Arthur O. Tucker and Thomas DeBaggio. Timber Press, Portland, OR, 2009.

grow in any average soil, thriving even in poor or rocky locations. The plants make a nice backdrop at the edges of the landscape, where they seem to suddenly appear when their leaves turn brilliant red in the fall. The berries are harvested when they are completely red all over and sticky with resin, then dried and stored for later.

While sumac is in the family that includes allergy-causing plants such as poison ivy, cashews, pistachios, and mangoes, all red-berried sumacs are edible. The so-called "poison sumac" (*Toxicodendron vernix*) contains a skin irritant similar to poison ivy, but it has white berries that look nothing like the 250 or so species of edible red-berried sumacs.

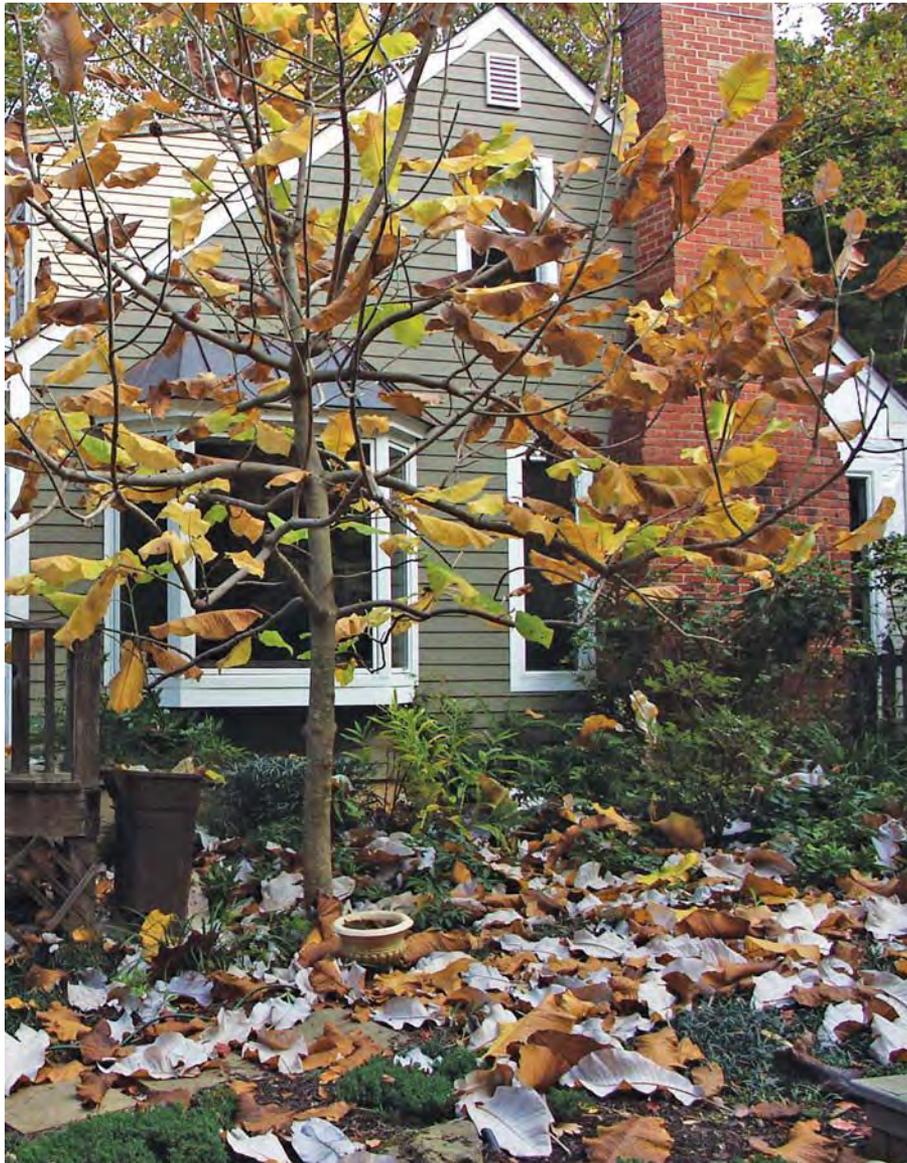
START COOKING

So if you're feeling adventurous, try some of these up-and-coming herbs. They will bring an exotic flair to both your kitchen garden and your cooking.

Jim Long is the owner of Long Creek Herbs in Blue Eye, Missouri, and the author of numerous books on herbs and gardening. He blogs at jimlongsgarden.blogspot.com.

Think Twice, Plant Once

Whether you're a new or seasoned gardener, here are some pointers that can save you from making common errors as you strive for a beautiful, healthy landscape. BY CAROLE OTTESEN



A gorgeous native, the bigleaf magnolia (*Magnolia macrophylla*, USDA Hardiness Zones 5–9, AHS Heat Zones 9–5) needs appropriate placement, because it can reach 40 feet tall by about 25 feet wide. Beginning at 10 to 12 years old, deliciously fragrant white flowers as much as a foot across appear in summer, followed by large red-seeded pods. Its leaves, some nearly a yard in length, are deciduous everywhere except in the Deep South. It is best to site this tree away from garden beds, *not* as shown in this photo, so its enormous leaves don't smother underlying perennials every fall.



a crucial factor. While all plants need sun, some need less than others. The sun can dry out or scald species such as rhododendrons that appreciate more shade. Conversely, too much shade for a tree such as river birch (*Betula nigra*) will cause it to grow gangly as it reaches for more light. These types of environmental stress promote weaker growth that makes affected plants more susceptible to pests, diseases, and breakage.

When a specimen that was purchased in perfect vigor and beauty declines or becomes diseased after planting, the problem is usually where it is has been situated. The location may be too dry or wet, too hot or

Originally planted too close to this house, two palm trees now tower above it, posing a potential hazard during storms. In the center, a Sago palm (*Cycas revoluta*, Zones 8–11, 11–7)—actually a cycad and not a palm—also threatens to eventually grow too large for its site. It already obscures a view of the shrubs behind it and can reach 20 feet tall by 10 feet wide. All parts of Sago palms are highly poisonous, so they should not be planted in gardens with pets and small children.

A GARDEN IS the sum of all of its seasons, usually the product of countless winter nights spent in front of the fire or tucked into bed browsing plant catalogs, magazines, and garden books and dreaming about how to make improvements in spring. In this quest for perfection—despite our best efforts—a garden’s future too often can be marred by past mistakes.

Plants are sometimes placed in the garden like pieces of sculpture, but they are living things that change with time. Each one has a genetic destiny with a special mix of cultural needs. Some are particular about soil. Some need full sun, some all shade, some a gentle mixture of each. Moisture, drainage, and pH are other variables. With the right mix of all, the plant will prosper.

ACCOUNT FOR GROWTH

The most common mistake we make in the garden is not anticipating a plant’s ultimate size and placing it where it will outgrow its space. That lovely, broad-spreading plum yew (*Cephalotaxus* spp.) bought to cover a bare patch is now threatening to smother the adjacent walkway. The row

of white pines along the street did a good job of creating privacy—until their lowest limbs grew up to six feet off the ground.

Plants that get too big require pruning, clipping, and shaping to keep them in bounds, a drudgery that must be undertaken regularly. Even dwarf plants may require a bit of down-sizing. Pruning is best done early. Waiting too long to remove an unruly branch on your crapemyrtle (*Lagerstroemia* spp.) can leave an ugly scar. Trim an overgrown yew (*Taxus* spp.) too late and too vigorously and you risk mutilating and even killing it.

Not all undesirable growth is large. Some of the smallest plants can reproduce with alarming and devastating vigor. The ivy planted as groundcover in a small bed can climb 50 feet into the crown of a tree. The very early crocus (*Crocus tommasinianus*) is a tiny bulb that can insinuate itself into all of a garden’s beds as well as into the lawn, essentially becoming a weed.

CONSIDER GROWING CONDITIONS

Not anticipating or understanding a plant’s cultural needs is the next most common mistake. Exposure to sunlight is

cold, too windy or lacking air circulation, or the soil too acidic or alkaline. Or it may be a deadly combination of insalubrious conditions. A rugosa rose that expands lustily on a windy New England seacoast garden would languish in the heat and humidity of a southeastern city garden. A camellia that grows to luxuriance in the South may perish if left outdoors in regions with cold winters.

LEARN FROM YOUR MISTAKES

As heartbreaking—and sometimes expensive—as garden mistakes can be, they can provide valuable lessons in understanding a garden’s parameters. A garden is dynamic and ever changing, and creating one that is thriving and beautiful is both science and art. Being able to foresee problems before you plant can make the end result much more rewarding. (See the following pages for some commonly encountered mistakes.)

Veteran gardener Carole Ottesen is a contributing writer for The American Gardener and divides her time between her homes in Maryland and Nova Scotia. Her latest novel is Murder House: A Cape Breton Mystery.



A fragrant rose by the garden gate is a lovely, welcoming notion, but the reality can be anything but. Planted too close to the gate, this rose requires constant hard pruning to keep its thorny branches from snagging the clothes, hair, and skin of passersby. A better choice would have been a thornless shrub with fragrant flowers, such as *Daphne odora* (Zones 7–9, 9–7), planted well away from the gate.



A vine from eastern Asia, Boston ivy (*Parthenocissus tricuspidata*, Zones 4–8, 8–1) is frequently planted for its brilliant red fall color and ability to cover walls swiftly, but it can too easily get out of hand like this one has. It adheres to vertical surfaces with little disks that remain on walls after the vines are pulled down, leaving unsightly marks that are difficult to remove. Its dark blue fruits are poisonous, so children and pets should be kept away from it.

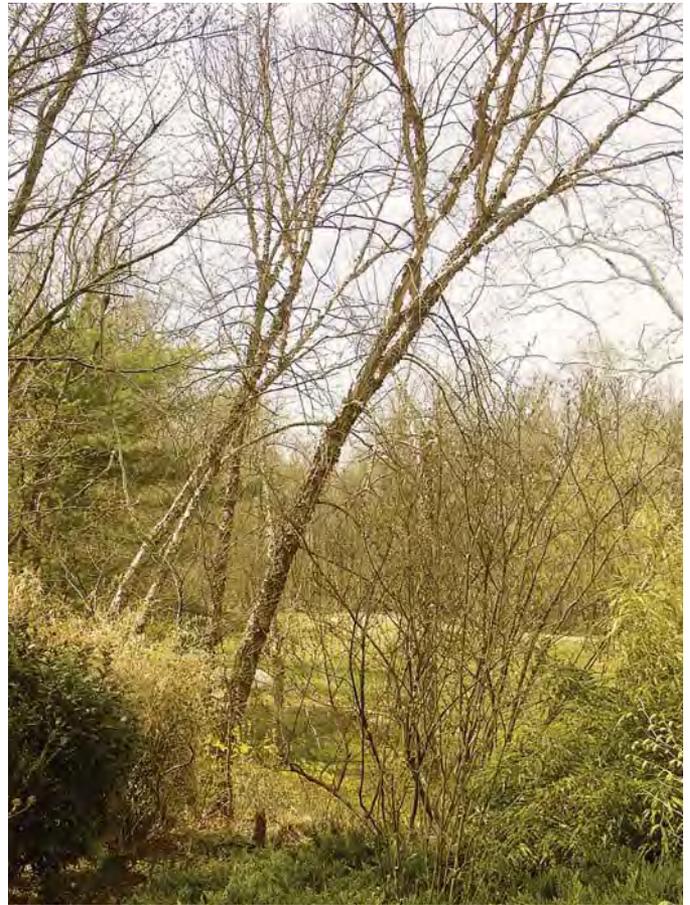


Even attractive and desirable plants can become a nuisance in the wrong place. For example, purple-flowered tommies (*Crocus tommasinianus*, Zones 3–8, 8–1) and yellow-flowered winter aconites (*Eranthis hyemalis*, Zones 4–9, 9–1) bloom for about a week in earliest spring and seem innocent at first. However, the leaves that nourish next year's flowers grow and linger on in inverse proportion to the fleeting period of bloom. The foliage can overpower shorter plants for more than a month. Additionally, both bulbs multiply rapidly by seed and bulblets, popping up in parts of the garden where they are not wanted. A good way to restrain them is to plant them in lawn that can be mowed to control their vigor.

TOP LEFT AND BOTTOM: CAROLE OTTESEN. TOP RIGHT: RICK WETHERBEE



A Eurasian invasive, English ivy (*Hedera helix*, Zones 5–11, 12–1) was introduced to North America in the 18th century. Often planted as a tough groundcover for shade, it has the potential to densely cover trees, as shown here, and vast areas of woodland, creating an “ivy desert” that blocks light to other plants. Once established, the vine can climb to 300 feet, where its weight can make trees more susceptible to wind damage. It also harbors bacterial leaf scorch (*Xylella fastidiosa*), a disease that kills many native trees.



River birches (*Betula nigra*, Zones 4–9, 9–1) are native to the eastern United States where they are seen frequently near streams and rivers. They grow best where their roots are in shaded, moist soil, but their crowns are exposed to sun. The leaning birches in this photo were planted close to a hedgerow that cast the shade needed for their roots. Over time, however, maples in the hedgerow swiftly outgrew the birches, shading them and causing them to reach out for light.



While every plant needs sunlight, some plants such as rhododendron have evolved to prosper in low light conditions. The leaves of this rhododendron have been burned from exposure to too much sun. The only remedy is to alter the condition of the site so that it receives more shade, or relocate the plant to a shadier spot. Other plants that may be damaged by too much sun include southern magnolia (*Magnolia grandiflora*), mountain laurel (*Kalmia latifolia*), *Pieris japonica*, dissected Japanese maples (*Acer palmatum* var. *dissectum*), and azaleas (*Rhododendron* spp.).

Four-Season Trees



Plant 'Gold Rush' dawn redwood in a site where it has plenty of room to achieve its mature size but close enough so you can enjoy its chartreuse foliage and stately conical habit.

If you're designing a new garden or updating an existing one, consider including a specimen tree that offers ornamental appeal throughout the year.

BY HUGH CONLON

A LOT OF US secretly dream of having a five-acre garden with plenty of room for all the wonderful trees on our bucket list. But in reality, most of us tend more modest gardens, so when we do have an opportunity to add a new specimen tree, it's an important decision that merits careful research.

The first step is to identify trees that are well suited to your region and available sites. Then, give some thought to what each tree will offer throughout the year. Trees to consider should have some combination of an elegant shape, beautiful flowers, ornamental bark, and attractive foliage that changes with the season. For example, flowers may be large and showy or small and fragrant. Autumn foliage can be a sedate yellow or vibrant purple, red, and orange. Make sure to rule out those that are susceptible to pests and diseases, or that have messy fruits and seed pods, complicated pruning requirements, and suckering or self-sowing tendencies.

For larger gardens, four-season trees can become the anchors for a series of garden rooms, or serve as focal points along winding paths. Areas of the garden that you frequent, such as a bench or along the walkway to your front door, are also good options. In small gardens, site them where they will provide the greatest impact, such as near a patio or in a location that is easily visible from inside your house. By making an educated choice, you'll end up with a four-season centerpiece for your entire garden.

To get you started, I put together the following list of appealing four-season trees based on recommendations from woody plant experts in different regions of North America and my own favorites.

Maples (*Acer* spp.) Several maples are worth consideration. One of the most ornamental species is paperbark maple (*A. griseum*, USDA Hardiness Zones 5–8, AHS Heat Zones 8–4). This slow-growing Chinese native flaunts eye-catching, exfoliating, cinnamon-colored bark that is particularly striking in winter against a snowy backdrop. In autumn, the leaves turn velvety red, crimson, or russet. Mature size is 20 to 30 feet tall and slightly less spread.

Similar in size and scale to paperbark maple, three-flower maple (*A. triflorum*, Zones 5–7, 7–5) has attractive golden amber bark. Its reddish-brown fall leaf color is perhaps less showy than that of paperbark, but special enough that this native of China and Korea merits a prominent place in my Tennessee garden.

Tucker Reed, horticulturist at the Dallas Arboretum in Texas, raves about ‘Sugarflake’ (Zones 4–8, 8–4), a cross between paperbark maple and sugar maple (*A. saccharum*) that prospers in neutral to slightly alkaline soil and Texas sun and heat. Ten-year-old trees exhibit a stovepipe shape, 12 feet tall and six feet in diameter. Dark green summer leaves turn orange and red in the fall. True to its paperbark parentage, small patches of the gray outer bark begin to shed at an early age.

Introduced by Lake County Nursery in Perry, Ohio, Gingerbread™ (‘Ginzam’) maple (Zones 4–8, 8–4) is believed to be a cross between paperbark and Nikko maple (*A. maximowiczianum*). It grows quickly into an upright oval habit, reaching 25 to 30 feet tall and 15 to 20 feet wide. Highlights include dark green spring and summer foliage, orange-red fall color, and exfoliating cinnamon-colored bark.

Parrotia (*Parrotia persica*, Zones 5–8, 8–4), also known as Persian ironwood because of its Middle East origins,



Paperbark maple’s peeling, cinnamon-colored bark shows up well against a backdrop of green foliage—or snow.

is a lovely tree that matures at 25 to 40 feet tall with an equal or slightly smaller spread. Some specimens develop a wonderful multi-stemmed habit with upright branches; this effect can be enhanced by selective pruning from an early age.

Its tiny but attractive red flowers often go unnoticed when they bloom on bare



Brightly-colored fall foliage is just one of several reasons to grow parrotia.

branches in February to early March. In early spring, three- to five-inch-long witch-hazellike leaves roll out with a deep burgundy tint. Its lustrous dark green summer foliage transitions to blends of yellows, oranges, and reds through autumn.

Over time, parrotia’s best feature may be its bark, says Jeff Jabco, director of grounds and coordinator of horticulture at the Scott Arboretum of Swarthmore College in Pennsylvania. Once parrotia reaches its teen years, the bark on its trunk and larger branches starts flaking off to expose an irregular pattern of beige, greenish-white, and cinnamon-russet colors; the effect improves with age. A popular cultivar, ‘Biltmore’, is low-branched with an upright habit.

Parrotia thrives in a site with full sun—or very light shade—and fertile, free-draining, slightly acidic soil. Given these conditions, it is generally drought tolerant once established and little troubled by pests or diseases.

River birch (*Betula nigra*, Zones 4–9, 9–1) is a popular medium-sized shade tree that’s adapted to a wide variety of sites. It thrives in full sun and moderately fertile, acidic soil with ample soil moisture, but tolerates extremes of summer/winter temperatures and seasonally wet soils. And river birch is resistant to bronze birch borer and birch leaf miner, so it’s a better choice in many regions than the white-barked birches often seen in cooler climes.

River birch tends to develop multiple trunks that show off its shaggy tan-colored bark. Its glossy green foliage turns bright yellow in autumn and there’s interest in early spring from its drooping, tan-colored catkin flowers. Recommended selections include Heritage™ and Duraheat™, both of which grow fairly quickly to 45 to 50 feet tall. The bark on these selections is a creamier color than the species, and they also offer superior pest resistance.

For smaller gardens 15-foot-tall Fox Valley™ (‘Little King’) may be a better fit. Summer Cascade™ is a relatively new weeping form.



Planting 'Heritage' river birches in small, naturalistic groupings accentuates their upright form and attractive peeling bark.

Kousa or Chinese dogwood (*Cornus kousa*, Zones 3–7, 7–4) is a beautiful small single- or multi-branched landscape tree native to eastern Asia. In late spring, shortly after the bloom time for the eastern native flowering dogwood (*C. florida*), it is covered with four- to five-inch diameter, creamy white-bracted flowers (some selections have pink bracts). Kousa's bloom period often lasts two weeks and longer. By late summer, its fleshy, edible globular fruits turn orange-red. Leaves turn reddish purple in fall. And its exfoliating bark is an outstanding winter asset that gets better with age.

Kousa dogwood is highly resistant to anthracnose, a fungal disease that plagues flowering dogwood. However, many of the more than 100 kousa selections are borderline heat tolerant in the mid-South. Paul Cappiello, director of Yew Dell Gardens in Crestwood, Kentucky, and coauthor with Don Shadow of *Dogwoods* (Timber Press, 2005), recommends the following selections, some of which are hybrids:

'**Greensleeves**' has glossy dark green foliage complemented in spring by the large, white floral bracts held well above the leaves.

'**Blue Shadow**' has lovely, deeply veined, blue-green leaves; its floral bracts are slightly smaller than those of 'Greensleeves'.

'**Celestial Shadow**' is a gold-variegated hybrid between the kousa and flowering dogwood that offers excellent spring foliage and vigorous growth.

Venus®, a hybrid between kousa and western dogwood (*C. nuttallii*), blooms young and has spectacular inflorescences up to seven inches in diameter.

Pagoda dogwood (*Cornus alternifolia*, Zones 3–7, 7–2), sometimes listed as alternate leaf dogwood, is a small deciduous tree or large multi-stemmed shrub ideal for a spot in light or dappled shade. Native to eastern North America from maritime Canada, west to Minnesota, and south to Alabama, it typically grows 15 to 25 feet tall with a 20 to 35 foot spread. Part of its year-round appeal stems from its distinctive layered horizontal branching structure. The medium to dark green leaves—alter-

nate, unlike most *Cornus* species—are usually parallel-veined and vary in length from two to four inches. Autumn leaf coloring is variable, sometimes reddish purple. Small, creamy white, non-bracted flowers appear as flattened cymes in late spring to early summer, about two to three weeks after flowering dogwood (*C. florida*). Bluish-black fruits (technically drupes) ripen in late summer and are devoured by birds.

According to Cappiello, the pagoda dogwood is a superior garden plant in the northern part of its range, but is less recommended in the south because high heat and humidity tend to enhance its susceptibility to leaf spot and stem canker diseases. In USDA Zone 7, he suggests planting it in a cool microclimate protected from afternoon sun in summer.

Hawthorns (*Crataegus* spp.) have a generally well-deserved reputation for susceptibility to pest and disease problems, but an exception is 'Winter King', a selection of green hawthorn (*Crataegus xviridis*, Zones 4–7, 7–4). It is a 25- to 30-foot-tall, densely canopied tree with

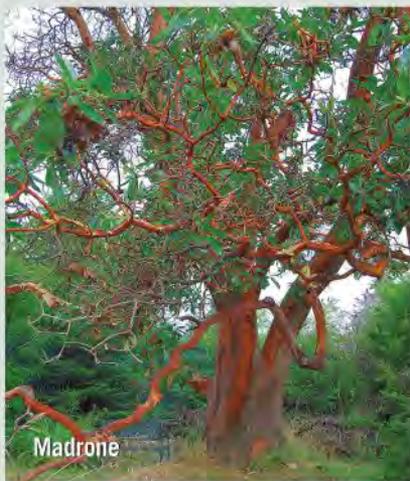


The white flowers and variegated foliage of this kousa dogwood illuminate a partly shaded area beneath tall Ponderosa pines in this woodland garden in the Pacific Northwest.

ADDITIONAL FOUR-SEASON TREES

Common Name (Botanical Name)	Height/Spread (feet)	Attractive Features	Origin	USDA Hardiness, AHS Heat Zones
Madrone (<i>Arbutus menziesii</i>)	20–100/15–75	White to pink spring flowers; red-orange fall berries; peeling reddish brown bark/requires free-draining soil, no summer irrigation	coastal ranges of California, Pacific Northwest	7–9, 9–7
Katsura tree (<i>Cercidiphyllum japonicum</i>)	40–70/30–70	Purple spring foliage/fragrant, yellow to pink, fall foliage; attractive exfoliating bark; look for cultivars 'Amazing Grace', 'Morioka Weeping'	eastern Asia	4–8, 8–4
'Desert Museum' palo verde (<i>Cercidium</i> hybrid, syn. <i>Parkinsonia</i>)	20–30/15–30	Yellow flowers in spring and summer; colorful bark, drought tolerant	hybrid of Southwest U.S. natives	7–11, 11–7
Seven-son flower (<i>Heptacodium miconioides</i>)	15–25/10–15	Attractive spring and summer foliage; fragrant white flowers in late summer; interesting green to reddish fall seedpods; peeling grayish to tan bark	China	5–8, 8–5
Sweetbay magnolia (<i>Magnolia virginiana</i> and <i>M. virginiana</i> var. <i>australis</i>)	15–60/10–40	Leaves are glossy green above, silvery below; fragrant white early summer flowers; fall fruits with red seeds; look for selections 'Henry Hicks', Moonglow®	eastern U.S.	5–9, 9–5
'Okame' cherry (<i>Prunus campanulata</i> hybrid)	20–35/20–30	Pinkish-red early spring flowers; purple to orange fall foliage; reddish-brown peeling bark	hybrid of eastern Asian species	6–8, 8–6
Tall stewartia (<i>Stewartia monadelphica</i>)	20–30/10–25	Mid-green spring/summer foliage turns red to purple in fall; white flowers with yellow centers in midsummer; peeling reddish brown bark; improves with age	Japan	5–8, 8–5

With the exception of tall stewartia, which will tolerate part shade in warm regions, all are suited for a site in full sun.



Madrone



Katsura tree



Seven-son Flower

a vase-shaped habit that blooms over a two-week interval in May. Green hawthorn is native from the mid-Atlantic to the upper Midwest and south to Texas.

“‘Winter King’ kicks off the season with a spectacular display of white blossoms that develop into showy red fruits that persist well into winter,” says Denny Schrock, state Master Gardener coordinator at Iowa State University in Ames. Through late

spring and summer, the foliage is shiny green, turning red to purple in autumn. Silvery green branches bear sparse numbers of inch-long thorns. As the tree ages, the gray bark covering the trunk and major scaffold branches flakes off, exposing the tan to orange-colored inner wood.

‘Winter King’ grows best in full sun and loamy, well-drained soil. Although it can develop cedar-hawthorn rust, “this

disease is seldom serious enough to detract from its overall appearance,” says Schrock.

Dick Bir, a former Extension Specialist with North Carolina State University, likes Washington hawthorn (*C. phaenopyrum*, Zones 4–8, 8–4), native to parts of the lower Midwest, mid-Atlantic, and Southeast. Mature plants reach 20- to 30-feet-tall with an equal spread. “The white flowers bloom later than crabapples—in late May

or early June—but abundantly,” he says. The newly emerged foliage is dark green with distinct tinges of red and violet. Fall foliage is variable, sometimes orangish to red, often with hints of purple.

Thorny branches can be problematic for pruning, but Bir says they keep deer away and may protect the songbirds that flock to hawthorns for the clusters of shiny red fruits, which are decorative in winter until they are consumed. Among the available cultivars are a few thornless forms and smaller, narrowly upright selections like Princeton Sentry™ and ‘Fastigiata’.

American hornbeam (*Carpinus caroliniana*, Zones 3–9, 9–3), which generally flies below the radar for American gardeners, is a 25- to 30-foot-tall, sometimes multi-stemmed tree that develops a dense rounded canopy. In its native range across much of eastern North America, it is known by colloquial names such as ironwood, musclewood, and blue beech. It’s sometimes mistaken for American beech (*Fagus americana*) because of its shiny, dark green foliage and gray, sinewy bark. Ironwood blooms in spring, bearing separate male and female catkins. Clusters of winged nutlets mature in the fall and serve as a food source for wildlife. Autumn foliage color varies from bright yellow, to orange and/or red.

Often an understory tree in the wild, hornbeam adapts to a wide range of light exposures from full sun to part shade. Its tolerance to seasonally wet sites makes it a good choice in rain gardens. Hornbeam also copes with hot, droughty urban conditions surprisingly well and can be trained as a hedge in formal settings.

Over the past quarter century, Michael Yanny, chief propagator at Johnson Nursery in Menomonee Falls, Wisconsin, has selected a number of red fall foliage forms. Firespire™ (‘J.N. Upright’) is a grafted clone with semi-upright branching and vibrant red fall color. ‘J. N. Strain’ also delivers above-average red fall foliage color.

Crapemyrtles (*Lagerstroemia* spp., Zones 6–9, 9–5) “are a southern landscape staple,” says Dallas Arboretum horticulturist Tucker Reed. “They have a picturesque habit year round, beautiful bark, long flower time in summer, good fall color, and are tough as nails,” says Jamie Blackburn, a



Decorative clusters of bright red fruits on ‘Winter King’ hawthorn are a draw for songbirds.

consulting arborist with Arboguard Tree Specialists near Atlanta, Georgia.

Crapemyrtles bloom over six to eight weeks in mid- to late summer with clustered flowers in shades of white, pink, and red. While fall leaf color is not a reliable trait in the lower South, some

cultivars have terrific red autumn foliage further north.

Gardeners must sort through the myriad cultivars (well over 100) to find ones with the appropriate mature size. There are four distinct size classes: dwarf (shorter than five feet), semi-dwarf (five to 12 feet), intermediate shrubs (13 to 20 feet) and tree forms (21 to 30 feet).

Highly aphid- and mildew-resistant cultivars introduced by the U.S. National Arboretum in Washington, D.C., are named after Native American tribes. Some of the best for winter bark (by mature size and flower color) include: ‘Natchez’ (26 feet, white), ‘Muskogee’ (22 feet, light lavender), ‘Sioux’ (15 feet, pink), ‘Acoma’ (10 feet, pure white), and ‘Hopi’ (eight feet, fuchsia).

Gary Knox, research horticulturist at the North Florida Research and Education Center in Quincy, Florida, has been evaluating crapemyrtles for more than two decades. In his opinion, the selection ‘Fantasy’ displays the most striking orange-red bark, beginning at a young age. Knox also favors cultivars that have cream-colored bark, including ‘Acoma’, ‘Near East’, and ‘Byers’ Wonderful White’.



An underused native tree that tolerates moist garden sites, American hornbeam has a tidy multistemmed habit, sinewy gray bark, and red to purple fall foliage in some selections.



Crapemyrtles come in a range of sizes and flower colors, so it's easy to find one suited to most garden sites. Here the selection 'Hopi' shows off its pink, late-summer flowers.

In many selections, the bark coloration improves with age. For instance, 'Woodlander's Chocolate Soldier' turns a rich dark brown while the bark on 'Lipan' turns virtually white. For warm brown-colored bark, Knox rates 'Natchez', 'Kiowa', and 'Townhouse' among the best.

Dawn redwood (*Metasequoia glyptostroboides*, Zones 5–9, 9–5) is a deciduous conifer that grows quickly to 70 to 90 feet tall. The needlelike leaves emerge bright green in spring and gradually darken to medium green. In autumn, the soft feathery foliage turns orange-brown before dropping *en masse*. Thin peeling strips from its mahogany-colored bark and its striking vertical winter silhouette makes dawn redwood a four-season delight.

Dawn redwoods thrive in full sun with a moist, well-drained soil, but can tolerate wet sites over short intervals. No serious disease or insect problems affect this graceful tree, which can be traced in the fossil record to the age of dinosaurs and was believed extinct until the 1940s when it was found in China.

Gold Rush® ('Ogon') is a popular gold-leaved form, slightly slower in growth rate, that matures at 50 to 60 feet.

Bald cypress (*Taxodium distichum*, Zones 5–11, 11–5) is a long-lived, deciduous conifer that grows 75 to 80 feet tall with a spread of 20 to 30 feet. The feathery, compound leaves are light green during the spring and summer months, turning burnt orange to brown before they drop in fall. Shaggy, exfoliating bark and the attractive conical shape outlined by sculptural branches provide winter appeal.

An adaptable and wide-ranging plant native from the warm, humid Florida swamps north and west to the cold plains of central Michigan, bald cypress tolerates a wide range of soil moisture conditions and has few pest and disease problems. It thrives in full sun and neutral to acidic soils.

For small gardens, Duane Ridenour, past president of the American Conifer Society's Southern Chapter, recommends 'Cave Hill', a relatively new dwarf selection that grows three to four feet

Resources

The Homeowner's Complete Tree & Shrub Handbook by Penelope O'Sullivan. Storey Publishing, North Adams, MA, 2007.

Manual of Woody Landscape Plants by Michael A. Dirr. Stipes Publishing, Champaign, IL, 2008.

Sources

Broken Arrow Nursery, Hamden, CT. (203) 288-1026.

www.brokenarrownursery.com.

Fairweather Gardens, Greenwich, NJ. (856) 451-6261.

www.fairweathergardens.com.

Forestfarm at Pacifica, Williams, OR. (541) 846-7269.

www.forestfarm.com.

Rare Find Nursery, Jackson, NJ. (732) 833-1965.

www.rarefindnursery.com.

Whitman Farms, Salem, OR. (503) 585-8728.

www.whitmanfarms.com.

Woodlanders, Inc., Aiken, SC. (803) 648-7522.

www.woodlanders.net.

tall with equal spread. 'Falling Waters' and 'Cascade Falls' are dwarf weeping forms that reach 12 to 20 feet. 'Falling Waters' exhibits a stronger central leader and requires less staking and training when young. 'Cascade Falls', on the other hand, will grow as tall as you stake it and eventually form a mound. A young plant, left unstaked, will grow into an irregular groundcover.

FILLING GAPS

Gardeners in many areas of the country are still taking stock of plants lost over the course of a harsh winter. The glass-half-full view of plant losses is that sometimes they open up a spot for that perennial, shrub, or tree we've been dreaming about but had nowhere to put. If you find a gap in your garden this summer, I hope one of the trees described in this article may turn out to be the perfect replacement. 🌿

Hubert P. Conlon is a horticulturist and garden writer based in Johnson City, Tennessee. His website is whatgrowsthere.com.



Cultivating Ideas *and* Innovation



SEEN THROUGH the prism of imagination and creative play, plants and gardens can serve many roles for children. They can be teachers, healers, providers, and entertainers, to name just a few. Determining out how to capitalize on this versatility to best engage kids in the natural world is what the American Horticultural Society's National Children & Youth Garden Symposium (NCYGS) is all about.

Now in its 22nd year, this event provides an annual forum where people who share a passion for connecting kids to gar-

The Buckeye State welcomes the 22nd annual National Children & Youth Garden Symposium this summer.

BY VIVEKA NEVELN

Schoolchildren explore the whimsically designed Pollinator Garden at Franklin Park Conservatory and Botanical Gardens.

dening and nature can exchange ideas and best practices. This summer's symposium will take place July 17 to 19 in Columbus, Ohio, a fitting venue given the city's widespread reputation for embracing innovative approaches to everything from education and research to the arts and community building.

INSPIRING GARDENS

The Buckeye State's capital city is home to a wealth of public gardens, parks, schools, and organizations replete with inspiring examples of engaging kids with



Originally built in 1895, the Franklin Park Conservatory and Botanical Gardens' iconic Palm House remains a focal point in the landscape.

plants. Highlights from many of these will be packed into the three-day symposium, but the crown jewel is the NCYGS 2014 host, the Franklin Park Conservatory and Botanical Gardens.

The Conservatory is where “children’s informal learning, creating a sense of community, growing healthy food, and knowing the positive effects of nature all come together,” says its Education Manager **Mark Miller**. It achieves all of this through its world-class gardens and plant collections, exemplary programs for all ages, and extensive outreach into the community.

Two of the Conservatory’s biggest attractions are an annual butterfly exhibit and the Dale Chihuly collection of glass art, both housed in a historic, Victorian-style glasshouse. This structure is also home to several major plant biomes such as rainforest and desert, which offer interactive learning experiences for school groups. NCYGS attendees will receive behind-the-scenes tours of these and other highlights, including the four-acre Scotts Miracle-Gro Community Garden Campus, which serves as an outdoor classroom for hosting a variety of programs.

SPEAKING FROM EXPERIENCE

Along with garden tours, the symposium will feature “three outstanding keynote speakers who represent a variety of perspectives,” says AHS Executive Director **Tom Underwood**. The first will be **Hope Taft**, first lady of Ohio from 1999



Former First Lady of Ohio Hope Taft, shown here in the garden of the Governor’s Residence, will be one of the symposium’s keynote speakers.

to 2007. During Taft’s tenure, she focused on youth and community initiatives, and was a driving force behind the creation of the Ohio Heritage Garden at the Governor’s Residence. This garden showcases the beauty and diversity of Ohio’s native plants to its thousands of visitors annually. Using the Heritage Garden as an example, Taft will welcome symposium attendees with a botanical tour of the state and describe how native plants create an important sense of place.

Amanda Maria Edmonds, founder and executive director of Growing Hope in Ypsilanti, Michigan, will speak about how edible plants can be a powerful tool for influencing positive community change. Edmonds’s nonprofit organization grew out of a simple school garden created in 1999. It had such an impact on the surrounding community that before long, many more sites and garden-based learning programs followed, prompting the establishment of Growing Hope in 2003 to lead these efforts. At its core, this organization is about empowering people of all ages to grow and eat local, healthy food together. During her keynote presentation, Edmonds will illuminate the important part that children

OPTIONAL TRIPS BEFORE AND AFTER THE SYMPOSIUM

PRE-SYMPOSIUM EXCURSIONS (JULY 16)

Two optional pre-symposium trips offer participants a chance to extend their Ohio experience. One trip will be to nearby Dayton to visit three different gardens. The other trip will focus on Columbus-area gardens.

■ Option 1: A Day in Dayton

About an hour's drive from Columbus, Dayton is home to a number of exemplary gardens. One stop will be the 189-acre **Cox Arboretum**, which is part of Ohio's Five Rivers MetroPark system. In addition to year-round educational programs that teach children and adults about sustainable horticulture, plant science, and conservation, the arboretum also partners with area schools on programming and hosts the teacher field school, PLANT (Putting Learning and Nature Together!). Participants will meet the staff, explore the grounds, and learn about various programs and tools used to engage children and families.

The group also will go to the **Miami Valley School** to see its Zorniger Environmental Laboratory. The Z-Lab, as it is informally



The Zorniger Environmental Laboratory

calls it, features learning gardens and a “state-of-the-art, 800-square-foot, geothermal structure made from stucco and cedar timbers,” explains Z-Lab Coordinator Patricia DeLotell. Participants will see how the Z-Lab supports curricula for its Middle School students and lower grades through collaborative projects and activities.

Another stop will be **Wegerzyn Gardens MetroPark** to visit its Children's Discovery Garden. Opened in 2006 as a child-friendly place to interact with nature through play and learning, it comprises habitat areas and whimsical themed gardens for young visitors and their adult companions to explore together. Its staff will share the history of the Children's Discovery Garden, explain what they believe “makes it work,” and discuss how the garden has evolved over the years to continue to meet the needs of visitors.



The Children's Discovery Garden at Wegerzyn

its Middle School students and lower grades through collaborative projects and activities.

calls it, features learning gardens and a “state-of-the-art, 800-square-foot, geothermal structure made from stucco and cedar timbers,” explains Z-Lab Coordinator Patricia DeLotell. Participants will see how the Z-Lab supports curricula for

its Middle School students and lower grades through collaborative projects and activities.

its Middle School students and lower grades through collaborative projects and activities.

■ Option 2: Kids and Community of Columbus

First, this tour will head to the Columbus suburb of Westerville for a visit to the **Sisters' Garden**. Created in 2002, this 2.8-acre space within the Inniswood Metro Gardens is designed to encourage curiosity about nature for young visitors and their families. It features seven themed areas such as the Story Maze and the Country Garden, and imaginative children's programs. In addition to exploring these gardens, symposium participants will observe a summer camp program during the visit.

Then, the group will spend the rest of the afternoon at **Highland Youth Garden** in the Hilltop area of Columbus. As one of 12 hub gardens for the Franklin Park Conservatory and Botanical Gardens' “Growing to Green” program that supports community gardening, it serves as a model for anyone who wants to create a community garden. Participants will meet some of the youth involved with this garden and will help out with a service project.

POST-SYMPOSIUM TRIP (JULY 19)

After NCYGS 2014 wraps up, an optional trip to enjoy more of the Columbus area will start in the neighboring city of Gahanna, which is home to the **Ohio Herb Education Center**. Here, participants will use all their senses during a workshop on how to use herbs to introduce kids to the plant world. Not



Topiary Park in downtown Columbus

only are most herbs easy to grow, they also lend themselves to a variety of kid-friendly crafts. The group will learn techniques for working with several herbs and then create hands-on herbal projects such as wreaths, pounding for dye, and making paper. Afterwards, the group will head back into Columbus for a tour of the **Topiary Park** in the downtown area. Its seven acres are a three-dimensional topiary version of *A Sunday Afternoon on the Isle of La Grande Jatte*, the famous French Post-Impressionist painting by Georges Seurat. The only known representation of a painting using topiary, it has become one of Columbus's top attractions. This trip will conclude with dinner at **The Table**. This recently opened Columbus restaurant is known for its funky, relaxed atmosphere and its French-inspired cuisine using ingredients that are either sourced locally or as sustainably as possible. ♡

—V.N.

and youth can play, and how Growing Hope effectively engages them.

For kids, the health benefits of plants extend well beyond their contributions in a nutritious diet. The Natural Learning Initiative (NLI) at North Carolina State University facilitates research that identifies and quantifies these benefits as part of its mission to promote outdoor environments for play and learning. By sharing some of the compelling findings of this research, NLI Director **Robin Moore** will show why nature is vital to a child's development and discuss the kind of elements natural spaces should contain in order to actively engage young minds.

SHARING SUCCESSES

For the teachers, public garden staff, landscape designers, community leaders, and other participants from all over the country who attend the symposium, one of the biggest draws is to learn from each other. Hearing how peers have successfully tackled common challenges can spark valuable ideas and solutions. More than 50 educational sessions will examine topics such as what it takes to run school and community garden programs, how to harness technology to help kids connect with the natural world, and the value of play to encourage discovery and learning.

Several sessions will delve deeper into the programs and resources of the Franklin Park Conservatory and Botanical Gardens.



Students prepare a special meal using ingredients they helped grow at Miami Valley School's Z-Lab Garden.



Above: North Market in downtown Columbus is a popular place for both locals and tourists to shop for produce. Left: Symposium sessions will be held at the LEED-certified Ohio Union on the campus of the Ohio State University.



Representatives from some of the optional field trip locations (see the opposite page for more details), such as Miami Valley School in Dayton and Inniswood Metro Gardens in Westerville, also will offer further insight into their respective institutions and experiences.

All of these sessions will take place at Ohio State University's Ohio Union, which is an impressive LEED Silver Certified green building completed in 2010. To achieve this sustainability recognition, it implements such measures as water efficient landscaping, active stormwater management, and an innovative "pulper" system that captures and composts food waste from the facility's wastewater.

For more details about the 2014 symposium and to register, visit the AHS website at www.ahs.org/ncygs. Plus get updates by following @AHS_ncygs on Twitter.

SAMPLING LOCAL FLAVOR

What trip to a different city would be complete without experiencing some of its cultural and culinary highlights? According to **Lori Kingston**, marketing director for the Conservatory, Columbus boasts "historic neighborhoods, a great food and arts scene, and a vibrant openness that might surprise you."

On one evening of the symposium, participants will have the chance to visit the historic, indoor North Market in downtown Columbus. Here visitors will find vendors offering everything from artisan baked goods and cheeses to a wide variety of fresh produce, flowers, spices, and prepared food.

With so much to spark new ideas and tempt the senses, Columbus promises to provide something for every symposium attendee. This one-of-a-kind event will not only showcase the region's thriving youth gardening programs and green spaces, but also will leave participants excited to get back home and implement what they have learned.

Viveka Neveln is associate editor of The American Gardener.

Late Blight's Toll on Tomatoes

by Scott Aker

WHEN IT comes to plants that reward a gardener's toil, tomatoes are near the top of the list. Those firm, perfectly ripe red orbs plucked fresh from the garden are hard to beat, sliced up in a summer salad or sandwich. So for many American home gardeners, the high susceptibility of tomatoes to the fungal disease late blight over the last few years has been a source of great frustration.

Caused by *Phytophthora infestans*, late blight attacks members of the nightshade family, which include tomatoes, potatoes, and eggplants. It is by no means a new disease; in fact it is one of the most historically prominent of plant pathogens, responsible for the potato blight in Ireland that starved hundreds of thousands and caused mass emigration in the middle of the 19th century.

As its name implies, late blight often appears late in the growing season, when summer temperatures begin to drop, so in the past its damage has largely been confined to the tail end of the harvest.

A few years ago, however, a strain of this fungus that was particularly aggressive on tomatoes started showing up in the eastern United States. The current thinking is that this new strain arose in Florida, where tomatoes are grown in the winter and shipped all over the country. Growers and plant pathologists noted that the disease remained active much longer there than in the past, even extending into hot weather in May. Apparently, a chance mutation allows this strain to flourish in warmer temperatures. As it spread, symptoms started appearing much earlier in the season, long before the fruits had a chance to ripen. Many home gardeners have been losing their entire crop, and truck farmers have suffered losses as well.

CHALLENGES TO PREVENTION

To grasp how best to prevent late blight,



For gardeners whose tomatoes have been infected by late blight, growing blight-resistant selections such as 'Jasper', a 2013 All-America Selections winner, may be the best option.

we must first understand the fungus that causes it. Potatoes have long been the major host for the disease because they are propagated by the tubers (not by seed), and the stored tubers can host the asexual blight spores, which only survive on a living host. Infected potato tubers may appear to be slightly bruised, but in storage the fungus continues to grow, and bacterial soft rot often follows. (This is another reason not to plant potatoes purchased from the local grocery store; it is much better to start with certified disease-free seed potatoes.)

Late blight, in its common asexual form, cannot survive on tomatoes because the plants die in winter. Unfortunately,

if infected potatoes are planted where tomatoes are grown, late blight that overwinters in potato tubers can transfer to tomatoes in the right weather conditions.

The first line of defense for home gardeners is to avoid planting potato tubers that might be infected, and to ruthlessly eliminate any potato plants that may arise from tubers left over from the previous year's harvest. Theoretically, if only clean tubers were planted in a given region, this could eliminate the disease.

Removal and destruction of infected tomato plants is necessary as well to interrupt the disease cycle. This is made challenging, however, by the increased production of tomatoes in high tunnel

greenhouses for local markets. Here, under cover and often treated regularly with fungicides, tomato plants survive outside the normal growing season and may carry minor infections that can nevertheless produce ample quantities of spores to perpetuate the disease. Consider also the mass marketing in spring of tomato seedlings that are produced in southern states. Movement of infected plants is a surefire way to move the disease to new regions.

MONITORING AND TREATMENT OPTIONS

If you live in an area where late blight is a problem, and you want to grow tomatoes, you have three main options: mon-



Symptoms of late blight include wilting and dying foliage and brown lesions on fruits.

itor and destroy, use fungicide sprays regularly, and select resistant varieties.

Given the complexities of preventing late blight, I would argue that the best way to avoid crop loss is to plant resistant varieties. There are hundreds of varieties of tomatoes, and we are fortunate that we have been able to preserve much of the genetic diversity that is the wellspring of disease resistance. Breeders have responded to the need for late blight-resistant varieties, and now we have 'Plum Regal', 'Mountain Magic', 'Jasper', and 'Defiant' to meet that need.

If you haven't tried growing currant tomatoes (*Lycopersicon pimpinellifolium*), you should. A different species than

the more commonly grown *L. esculentum*, it is highly resistant to late blight and other diseases. While the fruits are small and tough-skinned, they offer a rich tomato flavor and produce prolifically over a long season on indeterminate vines with fine-textured foliage.

If you must grow your favorite heirloom variety, you'll need to monitor your plants very carefully every week from the time they are planted and be prepared to remove your plants and destroy them if late blight appears. Grow your own plants from seed to eliminate any chance of bringing infected plants into your garden. Monitor for the disease by checking the foliage carefully. New infections first appear as small water-soaked lesions on the foliage, which rapidly turns brown and wilts. In wet weather, fuzzy spores often appear on the infected leaf surfaces. If you had a late blight infestation the previous growing season, try growing tomatoes in containers using sterilized soil mix or in straw bales.

If you opt for preventive spraying, you can choose to use a conventional fungicide containing chlorothalonil if you want to grow susceptible tomatoes, but I would opt for one of the copper-based fungicides instead, since they are a bit safer. There's also some evidence that fungicides containing botanical oils such as clove, mint, and rosemary offer an effective preventive treatment. When selecting a fungicide, be sure that your crop—tomatoes or potatoes—and the disease—late blight—appear on the label. You'll need to spray plants every week from the time they are planted until the harvest is complete. Spray thoroughly so all surfaces of the plant are covered with the solution.

Keep in mind that weather has much to do with how bad late blight infestations are from region to region. If the summer is relatively dry in your area, it may not be a problem even if infected plants are growing in your neighborhood and you are growing susceptible varieties. I certainly won't advise anyone to give up on growing tomatoes. I, for one, am not willing to forego what many consider the quintessential flavor of summer. ☺

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

Gardening Q&A with Scott Aker

PRUNING A WINTER-DAMAGED GARDENIA

My 'Kleim's Hardy' gardenia is looking mostly dead after the extreme cold last winter. The leaves are dry and brown, and I haven't seen any new growth yet, but the branches are still flexible. Should I cut it back to get it to grow again, or should I leave it alone?

The branches may still have life in them, even if all the buds have been killed. Gardenias can, with time, form buds from old wood. Be patient, and wait until July before doing anything. By that time, if your gardenia is still alive, new growth should be evident, and you can cut off the dead portions.

SOIL MAINTENANCE FOR CONTAINERS

I grow perennials in containers on my balcony. They've done well now for three years, but I noticed this year that in some cases the soil level is several inches below where it started. Should I add new soil to the pots?

If you are going to grow plants for many years in pots, it's important to start with the right kind of soil. Mixes used for annuals are loose and fluffy, and are usually based primarily on peat or coir, which break down over a period of a year or two. If you are going to grow plants for many years in the same pot, it is best to add some pine-bark fines (finely chipped mulch) to the soil so you increase the proportion of components that won't break down as rapidly. This will help the soil stay loose for many years. Carefully dig your perennials out of their pots, then amend the soil with pine-bark fines and some compost or a balanced, slow-release fertilizer. Mix everything in well and make sure the soil is within an inch or two below the pot rim. Replant the perennials immediately. —S.A.

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

Rotary Botanical Gardens

by Hunter Stanford

TO SAY THAT the Rotary Botanical Gardens in Janesville, Wisconsin, celebrating its 25th anniversary this year, came from humble beginnings would be an understatement. What began as one man's vision of what could be created on the site of an abandoned sand and gravel quarry is now a 20-acre gem that attracts more than 100,000 visitors annually. At the Gardens, located about an hour southwest of Milwaukee, visitors can stroll through a variety of themed gardens, view the newest introductions of bedding plants showcased in attractively designed trial gardens, enroll in classes and programs for both adults and children, and enjoy community events throughout the year.

THE ROTARY CLUB CONNECTION

Robert Yahr, a retired orthodontist, came up with the idea of creating a public garden in the Janesville area in the late 1980s. He was walking through town one day when he stumbled across an abandoned quarry the city was using as a storage area and scrap yard—and that doubled as a BMX bicycle racetrack. According to Yahr, the idea to turn the eyesore into a garden was inspired by his recollections of botanical gardens he visited during a bicycling trip of Europe decades earlier. “I thought, they have them there, so why not here in Janesville?” he says.

An active member of the Rotary Club, a service organization with chapters all over the world, Yahr approached the two local Rotary Clubs about helping develop a botanical garden. Soon after, the clubs began putting together a proposal for the creation and design of the garden, and the idea took off. On May 2, 1988, the City of Janesville agreed to lease the site at no cost to the Janesville Rotary Foundation for a period of 99 years.

With the help of countless volunteers and the Rotary Clubs in town, a 10-year plan was put into effect to clear the land



The traditional Japanese Garden, shown at left in spring, was dedicated in 1992. One of its main features is the red Arched Bridge, above, which was fabricated from recycled light poles.



of debris. Because the site was a former quarry and had no topsoil, more than 800 truckloads of soil had to be hauled in before the layout of the garden could begin. As the project moved forward, engineers, carpenters, and contractors were brought in. Among the first projects tackled was the renovation of an old building that eventually became the Gardens' **Rath Environ-**

mental Center, housing a meeting room, library, solarium, and office space.

As a non-profit, 501(c)3 organization, the Gardens relies on admission fees, fundraising, members, and partnerships to maintain and improve the site. It also benefits from over 400 volunteers contributing 16,000 hours of service annually. “While our budget is small, our focused creativity with garden improvements and fund development have allowed us to offer a memorable experience for all of our visitors,” says Mark Dwyer, director of horticulture at the Gardens.

CREATING A VARIETY OF GARDEN SCENES

From the start, the Rotary Clubs had in mind the creation of a series of internationally themed garden areas. The first to be completed was the **Japanese Garden**, formally dedicated in 1992. A highlight of this

garden is the Arched Bridge, which was built using repurposed light poles from the former Janesville Wastewater Plant. A nearby Japanese-style footbridge is a nod towards a centuries-old Japanese legend that a zig-zag in a walkway will keep out evil spirits, which can only travel in straight lines. The garden also features a koi pond, gate, waterfalls, and stone lanterns.

The Gardens now contain a total of 24 themed areas, including an **English Cottage Garden** and a **French Formal Rose Garden**. In addition to the international theme gardens, there is a **Gazebo Garden**, a fern and moss garden, a prairie garden, and an alpine garden.

Each year, the Gardens also features a number of rotating specialty gardens. Among this year's theme areas are a **Thomas Jefferson Garden** in Charlottesville, Virginia, inspired by the historic gardens of Monticello, and a **Pollinators' Garden** that showcases hundreds of different plants that host pollinators.

FOCUS ON EDUCATION

Dwyer, who has been director of horticulture at the Gardens since 1998, is a strong believer that gardens play an important educational role in communities. "We look at the gardens as an outdoor classroom," he says. "Everything we do is geared towards education." With that philosophy in mind, the Gardens has developed a number of

Additional Information

Rotary Botanical Gardens,

1455 Palmer Drive, Janesville, WI 53545. (608) 752-3885.

<http://rotarybotanicalgardens.org>.

- Open daily year-round (hours vary by season; consult website for details).
- Admission is free from November 1 to March 31; the remainder of the year: Adults \$5, Youths (ages 6 to 15) \$3, Children (under age 6) free. Rotary Botanical Gardens participates in the AHS's Reciprocal Admissions Program, so AHS members receive free admission as well as a discount at the gift shop.

Other nearby sites to explore:

Olbrich Botanical Gardens, Madison, Wisconsin. www.olbrich.org.

Anderson Japanese Garden, Rockford, Illinois. <http://andersongardens.org>.

programs for various youth groups, including Boy Scouts and Girl Scouts, children, and adults. From April through November each year, the Gardens offers a weekly Story Stroll for families to enjoy seasonal stories and songs while touring the gardens.

Each May, the Gardens hosts local first and second graders for a two-hour program called "Taking a Closer Look

at Plants." "The program illustrates the different life cycles plants go through," says Kris Koch, education coordinator for the Gardens. "We want to show kids that what they eat doesn't just come from the grocery store." A similar event called the Pumpkin Program is offered in October for local third and fourth graders; this emphasizes math and measurement skills.

Events for adults and families coincide with various holidays, including garden brunches for Easter and Mother's Day, an Earth Day Celebration, a year-end Holiday Lights Show, and various seasonal plant sales.

SHOWCASING NEW PLANTS

In 2001, the Gardens initiated annual trial gardens to showcase the newest bedding plant introductions from many of the top plant and seed companies, sometimes before they are even released at retail garden centers. Unlike the trial gardens in many public gardens, the Rotary Botanical Gardens integrates the new annuals and subtropicals in designed beds and containers, providing colorful, creative compositions that offer visitors design ideas they can apply in their own gardens. "We have a lot of fun with it and our seasonal displays are totally different each year with various color themes and collections," says Dwyer.

The trial gardens include between 200 and 500 varieties that are installed in late May, evaluated three times during the growing season, then removed in mid-October. Other specialty collections include roses, ferns, hostas, and daylilies, as well as a demonstration garden for All-America Selections award winners.

CONTINUING TO GROW

Six themed gardens and a handful of educational programs have been added since Dwyer joined the Gardens, and he's confident more will be added in the coming years.

Yahr maintains an emeritus position on the Gardens' Board of Directors, but he now splits his year between homes in Janesville and Scottsdale, Arizona, so he's not as actively involved in the Gardens as he was in the past. When he is in Janesville, however, he can often be found walking the grounds. 

Hunter Stanford is an editorial intern with The American Gardener.



The Sunken Garden is one of the 24 permanent themed gardens at the Rotary Botanical Gardens.

Foolproof and Flavorful Crabapples

by Nan K. Chase

DESPITE THEIR diminutive size, my two young ‘Callaway’ crabapple trees are superstars in the edible, drinkable landscape. Edible crabapple varieties are marvelous in the garden because they start bearing fruit early and continue bearing reliably, they offer spectacular spring blossoms in shades from white to deep magenta, they tolerate intense cold as well as damp conditions, and they produce delicious fruit that can be consumed in a variety of ways. Crabapples attract pollinators into the garden, resulting in better fruit set for all my other fruiting trees and shrubs. And select crabapples are almost pest- and disease-free, thriving under conditions in which other fruiting plants struggle.

As renowned American horticulturist and fruit expert U.P. Hedrick simply states in his 1944 classic *Fruits for the Home Garden*, “Every home garden should have at least one crab apple.” In fact, I recently added five more crabapple trees of different cultivars, enough to ensure plenty of fruit for years to come.

GROWING GUIDELINES

Crabapples (*Malus* spp., USDA Hardiness Zones 2–8, AHS Heat Zones 8–1) are generally defined as apples that are less than two inches in diameter. The preferred soil for both apples and crabapples is a clay-loam mix with a neutral to slightly acidic pH, but crabapples tend to tolerate moist or heavy soils better than apples. You can plant crabapples in lawn, too.

An ideal site in colder climate regions is a gently sloping south-facing exposure. In the Deep South and the sun-drenched West, crabapple trees benefit from light shade as long as they get eight hours of full sun a day; a north-facing slope may provide some protection from the sun. Crabapples grow well with moderate, even moisture, but can tolerate a lot of rain if they have decent drainage. Once



The author's harvested ‘Callaway’ crabapples await their transformation into juice or cider.

established, they can handle extended dry periods without supplemental watering.

Don't mulch crabapples too heavily. Two or three inches of a loose mulch— not grass clippings—should be sufficient. To help prevent pest and disease problems, be careful not to place any mulch against the trunk.

Crabapples are not heavy feeders; compost incorporated into the soil at planting is all they need to get started,

and a dressing of a balanced, slow-release fertilizer such as fish emulsion or pelletized chicken manure every few years will help maintain their growth.

Unlike some orchard fruits, crabapples don't need elaborate pruning. You shouldn't need to prune at all for the first year or two trees are in the ground. Once they start bearing fruit, just do enough winter pruning to keep the branch structure open for light and air to penetrate free-

PLANTING BASICS

Getting Started Plant crabapple trees in the fall, in soil that has been amended with well-rotted compost. In windy places, line the hole with crushed gravel to provide a more rigid, less slippery placement; do not stake small trees.

Spacing Depending on variety, crabapples can be planted as close together as 10 feet, especially if you plan to prune to keep them small. Otherwise, let the landscape plan dictate best spacing.

Days to Harvest Crabapple trees may bloom the first spring following planting and even set a few fruits. Full harvest usually begins within two years.

ly. When fruiting starts you may want to remove all upright suckers to keep the trees compact and more ornamental, or you can let them grow to their full height. Crabapple trees are naturally compact, many cultivars staying under 20 feet in height.

PESTS AND DISEASES

While largely pest and disease resistant, crabapples can be subject to apple scab during wet springtime weather. Apple scab can cause unsightly black spots on fruit and leaves, but that shouldn't affect fruit quality and can be treated with sulfur. The best treatment is preventative: clear away fallen leaves and fruit in late fall to remove pathogens. Several members of the rose family, including crabapples, are susceptible to the bacterial disease fire blight, but when the disease attacked my standard apple trees, the crabapples weren't affected at all. To be safe, plant a resistant variety such as 'Callaway' or 'Dolgo' and don't over-fertilize.

Crabapples may be affected by codling moths, whose larvae bore into fruits, but in my experience the high tannin content of crabapples keeps these pests at bay. In case of infestation, try moth traps or make a wasp-friendly environment so predatory wasps will dine on the moths.

There may be no sure way to keep deer from nibbling on young crabapple shoots, but some gardeners have had luck hanging bars of soap or small cloth bags filled with hair clippings from the branches. To deter mice, wrap the lower trunk with fine-mesh wire.

RECOMMENDED CULTIVARS

Although crabapples are generally self-pollinating, planting two or more cultivars will produce higher yields. Some bear annually, others in alternate years.

'Callaway' is a small tree—topping out at between six to 10 feet in height—ideal for a small urban landscape. Its blossoms, like so many of the edible crabapples, are white or tinged with pink. The fruit is small and juicy, reminding me of a liquid sweetTARTS candy.

'Dolgo' dates back to the late 1800s. It is highly disease resistant and grows 20 to 30 feet tall. Large yields of flavorful one-and-a-half-inch red fruit follows white spring blossoms.



'Dolgo' is a disease-resistant heirloom crabapple that dates to the late 19th century.

'Kerr' is the result of a cross between 'Dolgo' and a 'Haralson' apple, so the fruit is more applelike than many crabs and ripens in early fall. It is extremely cold hardy.

'Whitney' is an heirloom variety that grows 12 to 20 feet tall. Clusters of pale pink to white spring flowers are followed by yellow and red, golf-ball-size fruit in late summer.

ENJOYING THE HARVEST

I keep my four-year-old crabapple trees pruned to barely five feet high, and in the past few seasons their combined yield has increased from two gallons of fruit to an amazing 10 gallons a year. Harvest



Sweet, tangy crabapple juice can be enjoyed as a beverage or used to make jelly.

Sources

J.W. Jung Seed Co., Randolph, WI.
(800) 247-5864. www.jungseed.com.
Morse Nursery, Battle Creek, MI. (269) 979-4252. www.morsenursery.com.
One Green World, Portland, OR. (877) 353-4028. www.onegreenworld.com.

Resources

Eat Your Yard! Edible Trees, Shrubs, Vines, Herbs and Flowers for Your Landscape by Nan K. Chase, Gibbs Smith, Salt Lake City, Utah, 2010.
Flowering Crabapples: The Genus Malus by John L. Fiala. Timber Press, Portland, OR, 1994.

crabapples in August, September, or October, depending on the cultivar. To test for ripeness, cut open a crabapple and check the seeds: Green means not ripe, brown means ripe. Then pick them all at once so you get enough fruit to process.

I like to make crabapple juice on the stovetop. Simply cut the fruit in half and cover them—seeds and all—with water in a saucepan, bring to a boil, then simmer for about 15 minutes. Strain the juice through cheesecloth or muslin. I have also used this stovetop juice to make jelly—glowing pink-orange—that my family enjoys with breakfast toast and for glazing the Thanksgiving turkey.

Recently I acquired a hand-operated fruit press so I can extract flavorful full-strength cider; with high tannin levels it is crystal clear and makes exquisite fermented cider. For any cider, it's a good idea to include crabapples for flavor balance. Crabapples are also good mixed with other apples for applesauce.

You may want to leave some of your crabapples for wildlife. Unpicked fruit will stay on the tree through most of the winter, feeding birds and small mammals during the lean months. 

Nan K. Chase lives in Asheville, North Carolina, where she recently won a Mountain State Fair blue ribbon for her crabapple jelly. Her most recent book, coauthored with DeNeice C. Guest, is Drink the Harvest: Making and Preserving Juices, Wines, Meads, Teas, and Ciders (Storey Publishing, 2014).

Recommendations for Your Gardening Library

An Infinity of Graces

Ethne Clarke. W.W. Norton & Company, New York, New York, 2013. 191 pages. Publisher's price; hardcover: \$45.

SOME BIOGRAPHIES read as if the author has swept up every name, date, and event associated with the subject, rattling off chronological facts in a dry-as-dust manner. Not so with this one. *An Infinity of Graces* is about Cecil Ross Pinsent, a British architect (for both houses and landscapes) born in 1884, who worked primarily in Italy in the first half of the 20th century. Ethne Clarke, who is as well the editor-in-chief of *Organic Gardening*, has written an engaging and revealing story about Pinsent and his gardens, generously augmented by many of his photographs and drawings.

Details of Pinsent's life take up about half of the book, from his birth in Uruguay to his time in Tuscany designing for well-heeled Anglo-American expatriates to his post-war disillusionment and final years. Famous literary and artistic figures of the era—including writer Vita Sackville-West, sculptor Auguste Rodin, and author Edith Wharton—make cameo appearances.

Clarke devotes the remainder of the book to four of Pinsent's early works that helped establish his reputation. She evaluates a house and garden in Bournemouth, England, and the Villa I Tatti, Villa Le Balze, and La Foce in Italy. In these studies, Clarke recounts the details every gardener understands—the plants used, where they came from, and how installation was carried out. The descriptions of each of these locations also reveal the influence of world events on historic landscapes and buildings, through the lens of Pinsent and his clients.

An appendix lists Pinsent's own advice on creating an Italian garden, and it's a particular delight to read his advice on general design as well as "For Flower Beds Surrounded by Box."

Pinsent died in 1963 with little fanfare, but his architectural legacy lives on in his works. *An Infinity of Graces* will appeal to a wide range of readers—garden historians, architecture buffs, landscape designers, and lovers of Italy and the Edwardian period. Thanks to Clarke's meticulously researched work, new audiences will come to appreciate Pinsent's lasting influence on landscape design.

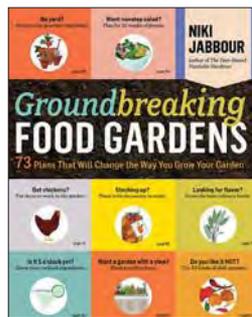
—Marty Wingate

Marty Wingate is the author of The Garden Plot (Alibi), the first Potting Shed mystery. Visit her at www.martywingate.com.

Groundbreaking Food Gardens

Niki Jabbour. Storey Publishing, North Adams, Massachusetts, 2014. 272 pages. Publisher's price, softcover: \$19.95.

WHEN THE Obama family planted a kitchen garden at the White House in 2009, it reignited a national tradition that had been largely dormant for the past century. The simple act of tilling up the lawn and replacing it with an edible garden inspired thousands of families across America and the world to do the same.



There are many ways to grow food, and you'll find plenty of fresh ideas in *Groundbreaking Food Gardens*. The book contains 73 themed edible garden designs, each submitted by recognized garden experts from around the United States and the United Kingdom (full disclosure: I contributed one of these designs).

"Because edible gardening is such a large part of my life," writes author Niki Jabbour in the book's introduction, "I am always looking for new techniques, designs, and ideas to grow more food." The plans range from simple herb gardens aimed at beginners to more elaborate urban homestead plans. Jabbour explains what makes each one unique and weaves in advice from their creators. Novice and experienced gardeners alike will draw inspiration from the charming watercolor illustrations and detailed garden plans that offer specific plant selections. The result is a comprehensive resource for just about every imaginable edible garden scenario.

"If you get no more out of this book than the message that food can be grown anywhere, then I will feel that I've done my job," writes Jabbour. And no matter where you grow your edibles, you'll find it a welcome alternative to supermarket fare, and that the process of growing it will engage all of your senses through a rich tapestry of colors, fragrance, and flavors.

Indeed, this book is a gem, and reinforces the idea that growing and designing food gardens with an eye for beauty might just be a trend that's here to stay. It's a celebration of how far we have come from the long straight rows of a traditional "Victory Garden" in favor of creating gardens that are beautiful, practical, and just plain satisfying.

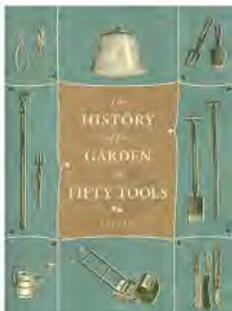
—Ellen Ecker Ogden

Ellen Ecker Ogden is the author of The Complete Kitchen Garden (Stewart, Tabori and Chang, 2011) and lectures on kitchen garden design. Visit her at www.ellenogden.com.

A History of the Garden in Fifty Tools

Bill Laws. The University of Chicago Press, Chicago and London, 2014. 224 pages. Publisher's price, hardcover: \$25.

AN ENTIRE BOOK on garden tools? Surely a snooze, was my first thought. Instead, I found myself enchanted by the conversational prose, historical tidbits, and bizarre digressions that fill its pages.



The 50 tools author Bill Laws chose to include range from expected standbys like the fork, spade, rake, and wheelbarrow to less obvious items such as labels, barrels, ladders, sheds, and cloches. This latter group includes such sundries as the sundial, which was first developed by ancient Babylonian and Egyptian mathematicians, and the hot-

bed, "a device using the heat of fermenting manure to raise early crops." Even a few things not necessarily associated with gardening, such as radio, a tape measure, and Latin, are included for the "host of horticultural revelations" they bring to light. Historical photographs, drawings, and other artwork illustrate various tools' past iterations, balanced with contemporary photos showing their continued relevance to gardening.

One of the most fascinating tidbits for me is a priceless discussion of "the effects of bones as a manure on the land." It provides a snapshot of the advent of artificial fertilizer in the

1800s, using animal bones treated with sulfuric acid to make superphosphate. Of course, it wasn't long before its industrial manufacture and widespread use caused new woes for the environment that we still struggle with today.

While perusing my copy of this book, my brother-in-law, a retired surgeon who now wields knives for grafting peculiar-fruiting plants, particularly enjoyed the sections on sharp-edged implements. Laws has plenty of illuminating things to say about the humble grafting knife and other "garden penknives," which at one time in the not-too-distant past were seen as essential tools for a range of daily tasks. Everyone from Picasso to George Washington carried one.

Other specialized blades such as the scythe, pruning saw, and pruning shears receive attention, and Laws even explores the origins of the word "pruning." It's derived from an Old French word for "cutting back vines" and a Middle English falconry term for "trimming the feathers with the beak."

Don't worry if you haven't experienced all the tools Laws covers; you will surely find new appreciation for any implement that can be fashioned into some garden purpose. This is a truly entertaining read that will appeal as much to non-gardeners as to those who have wielded many a tool to coax plants from the soil.

—Linda Yang

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

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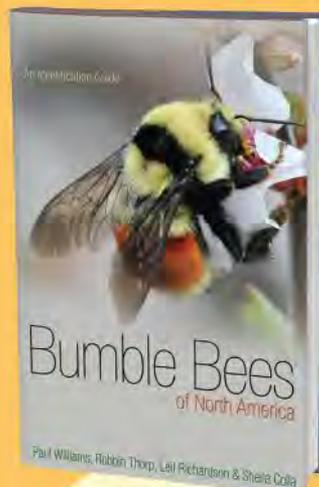
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Horticultural News and Research Important to American Gardeners

KEEP AN EYE ON ETHANOL

Next time you fuel up your lawn mower, weed trimmer, or other outdoor power equipment, you could be breaking the law. You also may be risking personal injury or damaging the equipment next time you use it. This is because engines in these tools are manufactured to handle only gasoline containing 10 percent ethanol (E10). However, gas stations nationwide have begun offering E15, which is illegal to use for anything other than passenger vehicles manufactured in 2001 and later. E35 and E85 for “flex fuel” vehicles also may be available.



“Ethanol burns hotter and faster than petroleum,” explains Kris Kiser, president of the Outdoor Power Equipment Institute (OPEI). “This can be especially dangerous in machines not meant to handle mid-level ethanol blends, where the machine will burn so hot the engine will accidentally engage without warning, known as unintentional clutch engagement.”

A survey OPEI conducted last year revealed a significant lack of awareness among American consumers about the safety and legality issues when using the different fuels. To educate the public about this problem, OPEI initiated a “Look Before You Pump” campaign aimed at the affected equipment’s users and dealers. The goal is to get consumers to pay closer attention to the ethanol level in the fuel they choose at the pump to ensure proper selection for their power tools.

Visit www.lookbeforeyoupump.com for more details.

TICKSEED TRIALS AT MT. CUBA CENTER

The Mt. Cuba Center, a public garden in Hockessin, Delaware, has released the results from its second year of trialing 27 selections of annual coreopsis, also known as tickseed, for garden performance and



ecological potential. Most of the tickseeds evaluated were hybrids developed from two American natives, plains coreopsis (*Coreopsis tinctoria*) and small rose tickseed (*C. rosea*). The latter is a perennial, but plant breeders include it in hybridization to take advantage of the pink hues of its flowers.

The five selections noted for superior garden performance are ‘Salsa’, ‘Jive’, ‘RP #1’ (Little Penny), ‘Pineapple Pie’, and *Coreopsis verticillata* ‘Golden Dream’. These top-performing cultivars received high marks for floral display, disease and pest resistance, and a sturdy habit that reduc-

es the tendency to flop after heavy rains, a common problem with annual coreopsis cultivars, according to George Coombs, assistant research horticulturist at the Mt. Cuba Center (USDA Hardiness Zone 6/7, AHS Plant Heat Zone 6). Also selected for special mention was the Lemonade™ series, a group of four cultivars that offered “electrifying chartreuse foliage” in the weeks prior to flowering.

Ten plants of each cultivar were evaluated weekly by Mt. Cuba’s horticultural staff. No pesticides were used during the test and the plants were only given fertilizer and supplemental water at the time they were planted. The trial area was in full sun with a clay-loam soil.

“It is our hope that the results of this trial will help to further promote the use of these plants, as there are very few annuals on the market that can claim to have a parentage native to the eastern United States,” says Coombs. “Their ability to attract a wide array of pollinators is also an important attribute, because many people are interested in providing habitat for these insects.”

To learn more about the coreopsis trials or the Mt. Cuba Center, visit the center’s website at www.mtcubacenter.org.



Researchers at the Fairchild Tropical Botanic Garden grow orchids from seeds in a micro-propagation laboratory. After 18 to 24 months, the seedlings are planted in trees outdoors.

FLORIDA'S ENDANGERED NATIVE ORCHIDS BEGIN COMEBACK

Due to decades of illegal harvesting and habitat loss, wild populations of Florida's native orchids have become increasingly rare. The Million Orchid Project launched by Fairchild Tropical Botanic Garden in Coral Gables, Florida, aims to reverse this trend. The plan is to mass produce a number of epiphytic, or tree-dwelling, native species, which are notoriously challenging to germinate from seed. Then, the orchids will be glued into the canopy of South Florida's street trees, where they hopefully will establish



Encyclia tampensis is among the threatened native Florida species the Million Orchid Project is hoping to reestablish.

and thrive to such a degree that they will begin reproducing on their own.

To this end, Fairchild staff and volunteers have for more than a year been growing thousands of seedlings from three different species in the carefully controlled environment of its micro-propagation lab. The first of these plants were placed on trees around the Coral Gables City Hall this past April on Earth Day. Over the next five years, thousands more will be planted in urban areas around Miami-Dade County.

According to Fairchild Director Carl Lewis, the idea for this project came from the Singapore Botanic Gardens, which has been successfully planting orchids in street trees around Singapore for the last three decades. Nothing like this has been attempted in the United States, however. "This is all a big experiment to see whether we can restore rare plant species within the tree canopy layer above our cities," says Lewis.

Learn more about the Million Orchid Project on Fairchild's website at www.fairchildgarden.org.

CAUTION ADVISED WHEN GARDENING IN URBAN SOIL

When it comes to soil, most gardeners know to pay attention to its fertility and structure. But gardeners in urban areas also should be aware of potential soil contaminants. In a paper published in the online

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PEOPLE and PLACES in the NEWS

Heronswood Homecoming for Dan Hinkley

Déjà vu alert! Dan Hinkley is back at Heronswood. The founder and former co-owner of the legendary Kingston, Washington, garden and nursery stepped away from the



Dan Hinkley, Heronswood's new part-time director

business in 2006, a few years after it was purchased by the Burpee Company. In 2012, the Port Gamble S'Klallam Indian Tribe acquired the property on Seattle's Kitsap Peninsula, and now the neglected and overgrown gardens are being cleaned up with a view to restoring Heronswood Garden to its former glory.

Recently appointed as part-time director of Heronswood, Hinkley says he's delighted to be a part of the team moving the garden forward. "I am leading twice monthly Talk, Walk

and Weed tours that have been bringing a small army of volunteers out," says Hinkley. "This has offered us an opportunity to make great strides forward, though it will take several years of hard work to bring the full shine back."

Hinkley and his partner, Robert Jones, created a thriving mail-order nursery business at Heronswood starting in

the late 1980s. By 2001, the nursery's catalog included more than 2,400 plants, many propagated from specimens growing in the display gardens Hinkley and Jones created at



Volunteers help restore the display areas at Heronswood Garden.

the nursery. Now, in full-circle fashion, many former Heronswood customers are sending back divisions of plants they purchased years ago to help repopulate the garden. "The response to our initial requests has been both staggering and extraordinarily generous," says Hinkley.

Visit www.heronswood.com for more information.

journal *PLOS ONE* in February 2014, researchers from the Johns Hopkins Center for a Livable Future (CLF) in Baltimore, Maryland, note that urban soils can contain high levels of contaminants such as heavy metals because of their proximity to pollution sources. Exposure to these chemicals through gardening poses significant health risks, especially to children. However, the researchers' survey of community gardeners in Baltimore revealed a general lack of knowledge about these risks and how to minimize them.

Of the 70 survey respondents, only half said that they are concerned about soil contaminants when gardening in an urban environment. When asked to list likely hazardous contaminants, lead appeared to be the one that most of the gardeners were aware of; 66 percent named it while only 13 percent named pesticides, 19 percent mentioned petro-



Soil in urban areas such as this are often highly contaminated with heavy metals.

chemicals, and 11 percent listed asbestos and other building materials.

In response to what they would do if they found out their soil is contaminated, about half said they would stop growing produce in it, 29 percent would seek out more information, and a quarter didn't

know what they would do. Only three percent said they would continue doing what they had been doing.

Because relatively little research has been done on urban gardeners' perceptions of soil safety, the CLF researchers "believe the results of this study can be used as a starting point to inform educational interventions for reducing soil contamination risks among gardeners in a variety of urban contexts." For example, the survey responses indicated much confusion about soil testing, so developing ways to simplify the process and results could help increase the likelihood gardeners will try testing to detect contaminants.

To find out more about this issue, visit www.jhsph.edu/clf/urbansoilsafety.

News written by Editorial Intern Hunter Stanford with Associate Editor Viveka Neveln.

GREEN GARAGE® by Rita Pelczar

Contributing editor Rita Pelczar reports on products she has found useful or innovative in her garden, with an emphasis on earth-friendly products, tools, and supplies. Here she focuses on useful products for gardening indoors and out.

Sowing Another Season

Starting plants from seed indoors can give you a jump-start on the gardening season; it also allows you to grow vegetable and flower varieties that may be difficult to find as transplants at your local garden center. Although it's late for sowing seeds for your spring gardens, many summer and fall flowers can still be sown, either indoors or out, and in another month or two it will be time for many gardeners to start plants for their fall vegetable garden.

HANDLING SMALL SEEDS WITH EASE

Proper spacing is essential for healthy seedling growth. The **Seed Dial Sower** is a simple tool that dispenses small seeds such as radish, carrot, and broccoli individually. It's a plastic cup with a spout and a cap that can dial up five different sizes of openings. Load your seeds into the cup, select the opening to suit the size of your seed, then tap gently to release them. I have found it works best for round or pelletized seeds. Available from Territorial Seed Company, www.territorialseed.com.



For the tiniest seeds, the **Seed Spoon®** is the answer. It is a set of two small plastic spoons with a different size scoop at each end, for a total of four scoop sizes. Insert a spoon into a package of seeds and remove it. If the scoop holds more than a single seed, use a smaller sized scoop. For the dustlike seeds of foxglove it works great, as it does for herbs such as basil, marjoram, and parsley, and any other seeds up to 1/16 inch in diameter. Available from Lee Valley, www.leevalley.com.

GENTLE WATERING

A stream of water can easily dislodge young seedlings from the soil. The **Seedling Sprayer** circumvents this problem. It's a hand-sized rubber bulb with a stem attached to a small brass rose. Just fill the bulb with water and squeeze, releasing a gentle flow that doesn't disturb tiny roots and fragile stems. Available from Lee Valley, www.leevalley.com.



SPACE-SAVING REPURPOSED TRAY

I start lots of plants indoors under lights. To keep things neat and prevent seedling packs from standing in water, I contain them in a **Large Boot Tray Set** from Gardener's Supply Com-



pany (www.gardeners.com). Although the tray was designed for wet boots, it's ideal for seedlings. The tray is constructed from recycled plastic, 46½ inches long, 15½ inches wide, and two inches deep. A set of two plastic grids fit into the tray, elevating the seedlings and allowing excess water to drain.

A COLD FRAME FOR ALL SEASONS

The **Cedar Cold Frame** provides a perfect transition space for acclimating seedlings to the conditions in your garden prior to transplanting them. The easy-to-assemble kit comes complete with cedar frame, corrugated plastic covering, and the necessary hardware. Assembled, it is four feet long, 30 inches wide, 24 inches tall at the back, and 17 inches tall in the front. It can be placed on a raised bed or set directly on the ground. Braces on either side of the hinged lid allow the lid to be raised and secured to a variety of heights to keep temperatures inside from getting too toasty. Come fall, I like to extend the growing season by sowing lettuce and kale in the frame for winter harvest. www.cedarcoldframes.com. ☞



Rita Pelczar is a contributing editor with The American Gardener.



REGIONAL HAPPENINGS

Horticultural Events from Around the Country

NORTHEAST

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

RAP MAY 24. **Memorial Day Plant Sale.** Polly Hill Arboretum. West Tisbury, Massachusetts. (508) 693-9426. www.pollyhillarboretum.org.

RAP MAY 27. **Seasonal Highlights Guided Tour.** Brooklyn Botanic Garden. Brooklyn, New York. (718) 623-7200. www.bbg.org.

RAP MAY 31. **29th Annual Spring Plant Sale.** Tower Hill Botanic Garden. Boylston, Massachusetts. (508) 869-6111. www.towerhillbg.org.

RAP JUNE 6–JULY 7. **Garden Railway Exhibit.** Buffalo and Erie County Botanical Gardens. Buffalo, New York. (716) 827-1584. www.buffalogardens.com.

RAP JUNE 15. **Community Day.** Free admission. Hildene, The Lincoln Family Home. Manchester, Vermont. (802) 362-1788. www.hildene.org.

RAP JUNE 15. **Open House.** Tour the house and gardens, free of charge. The Morrill Homestead Victorian Gardens. Stafford, Vermont. (802) 765-4288. www.morrillhomestead.org/visiting/gardens.

RAP JUNE 27. **Deer Resistant Plants for the Home.** Lecture. Coastal Maine Botanical Gardens. Boothbay, Maine. (207) 633-4333. www.maine-gardens.org.

Looking ahead

RAP JULY 5. **Wave Hill History Walk.** Guided walk. Wave Hill. Bronx, New York. (718) 549-3200. www.wavehill.org.

JULY 13. **Gardens in the Watershed Tour.** Garden tours. Georges River Land Trust. Rockland, Maine. (207) 594-5166. www.georgesriver.org.

MID-ATLANTIC

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

RAP MAY 25. **Garden Photography Workshop.** Greenwood Gardens. Short Hills, New Jersey. (973) 258-4026. www.greenwoodgardens.org.

RAP MAY 31. **Under the Arbor: Garden Classics—Lavender and Roses.** Class. U.S. National Arboretum. Washington, D.C.

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

(202) 245-4523. www.usna.usda.gov.

JUNE 1. **Thriving Curbside Gardens.** Lecture. U.S. Botanic Garden. Washington, D.C. (202) 225-8333. www.usbg.gov.

JUNE 4. **Clematis for the Present and Future.** Lecture. The Scott Arboretum. Swarthmore, Pennsylvania. (610) 328-8025. www.scottarboretum.org.

JUNE 5–7. **Native Plants in the Landscape Conference.** Millersville University. Millersville, Pennsylvania. (717) 872-3011. www.millersvillenativeplants.org.

JUNE 12. **Backyard Herbalist: Medicinal Herb Definitions and Terminology.** Class. The Rosemary House. Mechanicsburg, Pennsylvania. (717) 697-5111. www.therosemaryhouse.com.

RAP JUNE 13. **Shade Gardening.** Class. Green Spring Gardens. Alexandria, Virginia. (703) 642-5173. www.greenspring.org.

Looking ahead

AUG. 8–11. **Garden Writers Association Annual Symposium.** The Westin Convention Center. Pittsburgh, Pennsylvania. (806) 832-1870. www.gardenwriters.org.

SOUTHEAST

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

RAP MAY 24. **Guided Tour of Prairie Grove Glades.** Birmingham Botanical Gardens. Birmingham, Alabama. (205) 414-3950. www.bbgardens.org.

RAP MAY 31–JUNE 1. **Plant Show and Sale.** The Tropical Fern & Exotic Plant Society. Fairchild Tropical Botanic Garden. Coral Gables, Florida. (305) 667-1651. www.fairchildgarden.org.

RAP JUNE 3. **Permanent Collections High-**

lights Tour. Guided tour of the gardens, free with admission. The Cummer Museum of Art & Gardens. Jacksonville, Florida. (904) 356-6857. www.cummer.org.

JUNE 14. **Creating Fresh Arrangements with Roses.** Workshop. Witherspoon Rose Culture. Charlotte, North Carolina. (800) 643-0315. www.witherspoonrose.com.

RAP JUNE 14. **What's that Plant?** Identification workshop. Birmingham Botanical Gardens. Birmingham, Alabama. (205) 414-3950. www.bbgardens.org.

RAP JUNE 20–28. **Dazzling Daylilies.** Garden festival and hot-air balloon show. Western Kentucky Botanical Gardens. Owensboro, Kentucky. (270) 852-8925. www.wkbg.org.

Looking ahead

JULY 15–20. **Cullowhee Native Plant Conference.** Western Carolina University. Cullowhee, North Carolina. (828) 227-7397. www.wcu.edu.

JULY 28–31. **American Society for Horticultural Science Conference.** Rosen Plaza Hotel. Orlando, Florida. (703) 836-4606. www.ashs.org.

AUG. 9. **Summer Meeting of the Southeastern Palm Society.** Juniper Level Botanical Gardens. Raleigh, North Carolina. Register by July 1. www.sepalms.org.

NORTH CENTRAL

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

RAP JUNE 7. **Nebraska Wildflower Week Plant Sale.** Nebraska Statewide Arboretum. Lincoln, Nebraska. (402) 472-2971. www.arboretum.unl.edu.

RAP JUNE 7. **World Environmental Day.** Educational seminars and farmers market. Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. www.chicagobotanic.org.

RAP JUNE 15. **Father's Day at the Gardens.** Free admission for dads. Green Bay Botanical Garden. Green Bay, Wisconsin. (920) 490-9457. www.gbbg.org.

RAP JUNE 15. **Rose Show.** Olbrich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. www.olbrich.org.

RAP JUNE 17 & 18. **Plant Sale.** The Holden Arboretum. Kirtland, Ohio. (440) 946-4400. www.holdenarb.org.

JUNE 20 & 21. **Master Gardener College.** Class. Michigan State University. East Lansing, Michigan. (517) 355-1855. www.mg.msue.msu.edu.

RAP JUNE 25. **25th Anniversary—Free Day.** Free admission. Rotary Botanical Gardens. Janesville, Wisconsin. (608) 752-3885. www.rotarybotanicalgardens.org.

Looking ahead

AHS JULY 17–19. **National Children & Youth Garden Symposium.** American Horticultural Society. The Ohio State University. Columbus, Ohio. (703) 768-5700 ext. 121. www.ahs.org.

JULY 28–AUG. 1. **Perennial Plant Association Symposium.** Hilton Cincinnati Netherland Plaza. Cincinnati, Ohio. (513) 421-9100. www.perennialplant.org.

SOUTH CENTRAL

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

RAP MAY 31–JUNE 1. **St. Louis Horticultural Society Plant Sale.** Missouri Botanical Garden. St. Louis, Missouri. (314) 577-5100. www.mobot.org.

RAP JUNE 8. **Art in the Garden.** Gourd craft workshop. Garvan Woodland Gardens. University of Arkansas. Hot Springs, Arkansas. (501) 262-9300. www.garvangardens.org.

RAP JUNE 12. **Nature Nights—Fossils.** Guided walk. Lady Bird Johnson Wildflower Center. Austin, Texas. (512) 232-0200. www.wildflower.org.

JUNE 19–22. **American Hibiscus Society National Convention.** Lafayette Hilton & Towers. Lafayette, Louisiana. (337) 235-6111. www.americanhibiscus.org.

JUNE 21. **Garden Fest at Burden.** Plant sale and educational event. LSU AgCenter Botanical Gardens. Baton Rouge, Louisiana. (225) 578-4161. www.lsuagcenter.com.

RAP JUNE 28–JULY 27. **Desert Show.** Missouri Botanical Garden. St. Louis, Missouri. (314) 577-5100. www.mobot.org.

Looking ahead

AUG. 14. **Seeds for Change.** Workshop. Garvan Woodland Gardens. University of Arkansas. Hot Springs, Arkansas. (501) 262-9300. www.garvangardens.org.

SOUTHWEST

AZ, CO, NM, UT

RAP JUNE 3. **Free Day.** Free admission for Colorado residents. Denver Botanic Gar-

NYBG Exhibition Focuses on Influential Women

FROM MAY 17 to September 7, the New York Botanical Garden (NYBG) will host “Groundbreakers: Great American Gardens & The Women Who Designed Them,” an exhibition that focuses on the accomplishments of prominent women whose work influenced landscape architecture and garden design, garden photography, and garden writing in the first three decades of the 20th century.



Beatrix Farrand was a renowned landscape architect.

Included in the exhibit is “Mrs. Rockefeller’s Garden,” a reconstruction of the Abby Aldrich Rockefeller Garden in Seal Harbor, Maine. The garden, designed by Beatrix Farrand in 1926, was at the summer home of philanthropist John D. Rockefeller and his wife, Abby. Also featured is “Gardens for a Beautiful America: The Women Who Photographed Them,” a display in the Garden’s LuEsther T. Mertz Library of vintage photographs and illustrated books highlighting the work of female photographers. An outdoor poetry walk will feature the work of Edna St. Vincent Millay.

During the exhibition, visitors can also enjoy live musical performances featuring pieces by American composers of the time period, hands-on programs for children, public lectures, and a downloadable app that offers additional information about the exhibition. Visit www.nybg.org or call (718) 817-8700 for further details. AHS members receive free admission to NYBG through the Reciprocal Admissions Program.

Raising Awareness of Pollinators

FROM JUNE 16 to 22, the Pollinator Partnership, a non-profit based in San Francisco, California, is coordinating its annual, nationwide Pollinator Week. Now in its eighth year, Pollinator Week is an opportunity to celebrate pollinators and promote awareness of the important role birds, bees, butterflies, bats, and many other pollinators play in our food supply and maintaining healthy and diverse ecosystems worldwide.

According to the Pollinator Partnership, in the United States pollinators are responsible for one-third of every bite of food we eat. Some species of pollinators in the United States have experienced a 90 percent decline in population over the last 10 years, so one of the goals of Pollinator Week is to reverse that trend by teaching people about the causes of pollinator decline and how they can help.

Numerous organizations and businesses participate in Pollinator Week, and the Pollinator Partnership hosts a listing on its website of their special events. It also provides a range of free downloadable educational brochures; kits for school garden programs and some other educational materials can be ordered for a fee.

To find locations in your area that are hosting Pollinator Week events, or learn more about pollinators, visit the Pollinator Week website at www.pollinator.org.

—Hunter Stanford, Editorial Intern

dens. Denver, Colorado. (720) 865-3500. www.botanicgardens.org.

RAP JUNE 7. **Connecting Plants and People.** Edible plants workshop. Tohono Chul Park. Tucson, Arizona. (520) 742-6455. www.tohonochulpark.org.

RAP JUNE 7. **Guided Tours throughout the day.** Betty Ford Alpine Gardens. Vail,

Colorado. (970) 476-0103. www.bettyfordalpinegardens.org.

RAP JUNE 10. **Garden Tours.** Guided walks. Red Butte Garden and Arboretum at the University of Utah. Salt Lake City, Utah. (801) 585-0556. www.redbuttégarden.org.

JUNE 23–27. **Everyday Magic: American Public Gardens Association Conference.** Denver,

Family Garden Opens at Wildflower Center

THE LUCI AND IAN FAMILY GARDEN, the newest addition to the Lady Bird Johnson Wildflower Center in Austin, Texas, officially opened on May 4. Named after lead donors Luci Baines Johnson—daughter of President Lyndon B. Johnson and Lady Bird Johnson—and her husband, Ian Turpin, the four-and-a-half acre garden is designed to encourage hands-on learning and nature play. Its features include a



These giant bird's nests at the new Luci and Ian Family Garden are created from wild grape vines and sticks.

maze of native shrubs that offers lessons on metamorphosis, giant bird's nests made of wild grape vines, a lawn of native grasses, and a creek with interactive water activities and dinosaur footprints.

Designed by landscape architect W. Gary Smith and an Austin, Texas-based architectural firm TBG Partners, the Family Garden is a pilot project of the national Sustainable Sites Initiative (SITES) program, which provides

guidelines for the creation of sustainable landscapes. "The Wildflower Center is on the cutting edge of sustainability," says Luci Baines Johnson. "Our hope is that the Family Garden will be a place where families go to play and discover the wonder and importance of nature."

For additional information, visit www.wildflower.org or call (512) 232-0100. AHS members are eligible for free admission, free parking, and a gift shop discount at the Wildflower Center through the Reciprocal Admissions Program.

—Hunter Stanford, Editorial Intern

NORTHWEST

AK, ID, MT, OR, WA, WY

RAP JUNE 6–8. **Habitat Plant Sale.** Kruckeberg Botanic Garden. Shoreline, Washington. (206) 546-1281. www.kruckeberg.org.

JUNE 10. **Walk in the Gardens.** Guided tour. Tizer Botanical Gardens. Jefferson City, Montana. (866) 933-8789. www.tizergardens.com.

RAP JUNE 14. **Annual Rhodie Deadhead Work Party.** Volunteer landscaping event. Lakewold Gardens. Lakewood, Washington. (253) 584-4106. www.lakewoldgardens.org.

RAP JUNE 14. **Plant Donations Sale.** Washington Park Arboretum. Seattle, Washington. (206) 325-4510. www.arboretumfoundation.org.

RAP JUNE 21. **Kalmiopsis Discovery Day.** Free guided walk. Leach Botanical Garden. Portland, Oregon. (503) 823-9503. www.leachgarden.org.

JUNE 28 & 29. **Boreal Gardens and Art Fest.** Alaska Botanical Gardens. Anchorage, Alaska. (907) 770-3692. www.alaskabg.org.

Looking ahead

JULY 12. **Plant Sale and Garden Open.** Heronswood. Kingston, Washington. (360) 297-9623. www.heronswood.com.

RAP JULY 15. **Backyard Birds of the Garden.** Lecture. Bellevue Botanical Garden. Bellevue, Washington. (425) 451-3755. www.bellevuebotanical.org.

CANADA

MAY 19–JUNE 20. **Stress-free Gardening.** Daily consultation and information session. Espace Pour La Vie Botanical Gardens. Montreal, Quebec. (514) 872-1400. <http://espacepurlavie.ca/en>.

JUNE 7. **Taguchi Bonsai Club Show and Sale.** Van Dusen Botanical Garden. Vancouver, British Columbia. (604) 257-8335. www.vandusengarden.org.

RAP JUNE 8. **Ontario Iris Society Annual Flower Show.** Toronto Botanical Garden. Toronto, Ontario. (416) 397-1341. www.torontobotanicalgarden.ca.

Looking ahead

RAP JULY 4 & 5. **Japanese Iris Convention.** The Gardens at Horticulture Centre of the Pacific. Victoria, British Columbia. (250) 479-6162. www.hcp.ca.

JULY 19 & 20. **International Herb Association Annual Conference.** Eaton Chelsea Hotel, Toronto, Ontario. (800) 588-9141. www.iherb.org.

Colorado. (720) 865-3500. <http://2014.publicgardens.org>.

RAP JUNE 28. **Raptors of the Rockies.** Bird presentation. The Hudson Gardens and Event Center. Littleton, Colorado. (303) 797-8565. www.hudsongardens.org.

Looking ahead

RAP JULY 11 & 12. **Plant Sale and Penstemon Festival.** The Arboretum at Flagstaff. Flagstaff, Arizona. (928) 774-1442. www.thearb.org.

WEST COAST

CA, HI, NV

JUNE 7. **Hike Grant Park.** Family hike. Ventura Botanical Gardens. Ventura, California. (805) 652-1456. www.ventura-botanicalgardens.com.

RAP JUNE 14. **Gardens Workshop: Gardening in Small Spaces.** Las Vegas Botanical Gardens at the Springs Preserve. Las Vegas, Nevada. (702) 822-7700. www.springspreserve.com.

RAP JUNE 14. **Organic Fruit and Vegetable Gardening.** Workshop. Los Angeles County Arboretum and Botanic Garden. Arcadia, California. (626) 821-3222. www.arboretum.org.

RAP JUNE 17. **Hummingbirds in the Garden.** Lecture. Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. www.descansogardens.org.

RAP JUNE 21. **Free Nature Tour.** Guided tour of the garden. Fullerton Arboretum. Fullerton, California. (657) 278-3407. www.fullertonarboretum.org.

JUNE 21. **Medicinal Plants Tour.** Garden walk/workshop. Foster Botanical Garden, Honolulu Botanical Gardens. Honolulu, Hawaii. (808) 522-7066. www.honolulu.gov/parks.

RAP JUNE 28. **Wildlife at Descanso: Spiders.** Talk. Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. www.descansogardens.org.



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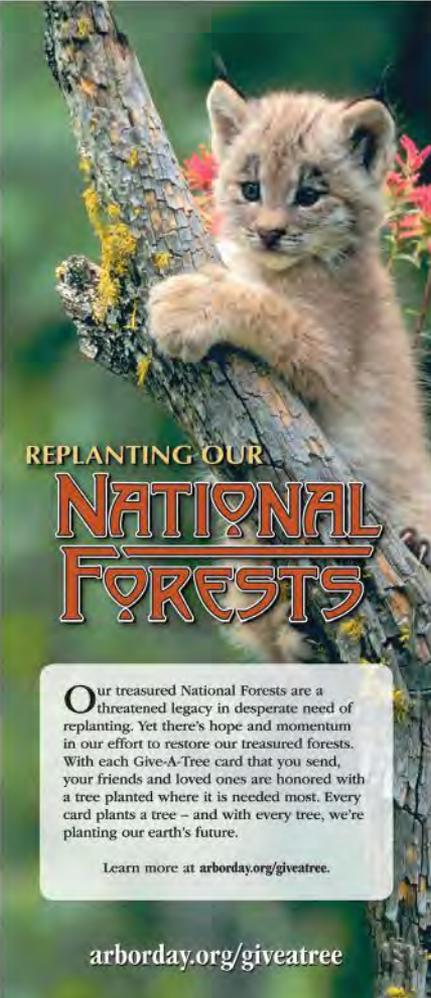
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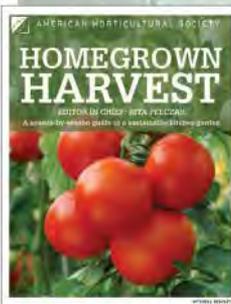
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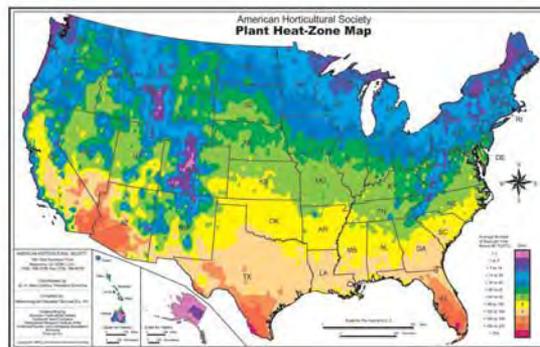
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PRONUNCIATIONS AND PLANTING ZONES

Most of the cultivated plants described in this issue are listed here with their pronunciations, USDA Plant Hardiness Zones, and AHS Plant Heat Zones. These zones suggest a range of locations where temperatures are appropriate—both in winter and summer—for growing each plant. USDA Zones listed are still aligned with the 1990 version of the USDA's map.

While the zones are a good place to start in determining plant adaptability in your region, factors such as exposure, moisture, snow cover, and humidity also play an important role in plant survival. The zones tend to be conservative; plants may grow outside the ranges indicated. A USDA zone rating of 0-0 means that the plant is a true annual and completes its life cycle in a year or less.



A-E

- Acer buergerianum** AY-sur bur-jeh-ree-AN-um (USDA Hardiness Zones 5-8, AHS Heat Zones 8-4)
A. griseum A. GRIS-ee-um (5-8, 8-4)
A. maximowiczianum A. mak-sih-mo-vich-ee-AN-um (5-7, 7-5)
A. saccharum A. sak-AH-rum (4-8, 8-1)
A. triflorum A. try-FLOR-um (5-7, 7-5)
Aloysia citriodora uh-LOY-zee-uh sih-tree-o-DOR-uh (8-10, 11-7)
Anthriscus cerefolium an-THRIS-kus sair-eh-FO-lee-um (3-8, 7-3)
Arbutus menziesii AR-byew-tus men-ZEES-ee-eye (7-9, 9-7)
Betula nigra BET-yew-luh NY-gruh (4-9, 9-1)
Brunnera macrophylla bruh-NEH-ruh mak-ro-FIL-luh (3-7, 7-1)
Carpinus betulus kar-PY-nus BET-yew-lus (4-8, 8-1)
C. caroliniana C. kair-o-lin-ee-AN-uh (3-9, 9-3)
Cercidiphyllum japonicum sur-sid-ih-FIL-lum jah-PON-ih-kum (4-8, 8-3)
Cercidium floridum sur-sid-ih-UM FLOR-ih-dum (9-11, 10-8)
Citrus hystrix SIH-truss HIS-triks (9-11, 10-8)
Coriandrum sativum kor-ee-AN-drum sah-TY-vum (0-0, 10-1)
Cornus alternifolia KOR-nus al-tur-nih-FO-lee-uh (4-8, 8-1)
C. florida C. FLOR-ih-duh (5-8, 8-3)
C. kousa C. KOO-suh (5-8, 8-5)
C. nuttallii C. nuh-TAL-lee-eye (6-8, 9-6)
Crataegus phaenopyrum krah-TEE-gus fee-no-PY-rum (4-8, 8-1)
C. ×viridus C. VEER-ih-dus (4-7, 8-4)
Crocus tommasinianus KRO-kus tom-muh-sin-ee-AY-nus (3-8, 8-1)
Cycas revoluta SY-kus reh-vo-LOO-tuh (8-11, 11-7)
Cymbopogon citratus sim-bo-PO-gon sih-TRAY-tuss (10-11, 12-1)
Daphne odora DAF-nee o-DOR-uh (7-9, 9-7)
Eranthis hyemalis ee-RAN-thiss hy-ih-MAL-iss (4-9, 9-1)
Eryngium foetidum ee-RIN-jee-um FEE-tih-dum (4-9, 8-4)

F-O

- Fagus americana** FAY-gus uh-mair-ih-KAN-uh (4-9, 8-4)
Foeniculum vulgare fee-NICK-yew-lum vul-GAY-ree (4-9, 9-1)
Hedera helix HED-er-uh HE-lik-s (5-11, 12-1)
Heptacodium miconioides hep-tuh-KO-dee-um my-kon-ee-OY-deez (5-9, 9-4)
Hydrangea arborescens hy-DRAN-juh ar-bo-RES-enz (4-9, 9-4)
H. macrophylla H. mak-ro-FIL-uh (6-9, 9-6)
H. paniculata H. pan-ik-yew-LAY-tuh (3-8, 8-3)
H. quercifolia H. kwer-sih-FO-lee-uh (5-9, 9-4)
Kalmia latifolia KAL-mee-uh lat-ih-FO-lee-uh (4-9, 9-4)
Levisticum officinale leh-VIS-tih-kum oh-fiss-ih-NAL-ee (5-8, 8-4)
Liquidambar styraciflua lik-wid-AM-bur sty-rass-ih-FLEW-uh (5-9, 9-1)
Lycopersicon esculentum ly-ko-PER-sih-kon es-kew-LEN-tum (0-0, 12-1)
L. pimpinellifolium L. pim-pih-nel-ih-FO-lee-um (0-0, 11-3)
Magnolia grandiflora mag-NOLE-yuh gran-dih-FLOR-uh (6-9, 9-6)
M. macrophylla M. mak-ro-FIL-uh (5-9, 9-5)
M. virginiana M. vir-jin-ee-AN-uh (6-9, 9-6)
Melissa officinalis meh-LISS-uh o-fiss-ih-NAL-iss (4-9, 11-1)
Mertensia maritima mur-TEN-see-uh muh-RIT-ih-muh (4-7, 7-5)
M. virginica M. vir-JIN-ih-kuh (3-8, 7-1)
Metasequoia glyptostroboides met-uh-suh-KWOY-uh glip-toh-stro-BOY-deez (5-9, 9-5)
Nicotiana glauca nih-ko-shee-AN-uh ah-LAY-tuh (10-11, 12-1)
N. ×hybrida N. HY-brih-duh (10-11, 10-8)
N. langsdorffii N. langs-dor-FEE-eye (9-11, 10-3)
N. mutabilis N. mew-TAH-bih-liss (9-10, 11-4)
N. rustica N. rus-tih-KAH (8-12, 11-6)
N. ×sanderiae N. san-DUR-ee (10-11, 11-1)
N. suaveolens N. swa-vee-O-lenz (0-0, 10-1)
N. sylvestris N. sil-VES-triss (10-11, 10-1)
N. tabacum N. tuh-BAK-um (9-11, 11-5)
Ocimum citriodorum OSS-ih-mum sih-tree-o-DOR-um (9-11, 10-7)

P-Z

- Parrotia persica** pahr-o-TEE-uh pur-SIH-kuh (5-8, 8-4)
Parthenocissus tricuspidata par-then-o-SISS-uh try-kuss-pih-DAY-tuh (4-8, 8-1)
Perilla frutescens peh-RILL-uh froo-TESS-enz (3-11, 12-1)
Persicaria odorata pur-sih-KAIR-ee-uh o-doh-RAY-tuh (8-11, 11-8)
Physocarpus opulifolius fie-so-KAR-pus op-yew-lih-FO-lee-us (3-7, 7-1)
Pieris japonica py-AIR-iss juh-PON-ih-kuh (4-7, 7-4)
Plectranthus ciliatus plek-TRAN-thus sih-lee-AY-tus (9-11, 11-9)
Porophyllum ruderale por-o-FIL-lum rud-ur-AH-lee (3-11, 12-1)
Rhus aromatica RUS ah-ro-MAT-ih-kuh (4-9, 9-3)
R. glabra R. GLAB-ruh (3-9, 9-1)
Ruellia brittoniana roo-EL-ee-uh brit-tone-nee-AN-uh (9-11, 12-7)
Rumex acetosa ROO-mex ah-seh-TOH-suh (3-9, 9-4)
Scabiosa caucasica skay-bee-O-suh kaw-KAZ-ih-kuh (4-10, 9-4)
Scorzonera hispanica skor-zuh-NAIR-uh hiss-PAN-ih-kuh (3-7, 8-4)
Stewartia monadelphica stew-AR-tee-uh mon-uh-DEL-fuh (6-8, 9-6)
S. pseudocamellia S. soo-doh-kuh-MEEL-yuh (5-8, 8-4)
Taxodium distichum taks-O-dee-um DIS-tih-kum (5-11, 11-5)
Thymus citriodorus TY-muss sih-tree-o-DOR-us (5-9, 10-5)
Tragopogon porrifolius trah-guh-PO-gon por-ih-FO-lee-us (6-10, 10-6)

Shade-Loving Mona Lavender *Plectranthus*

by Patricia A. Taylor

FOUR YEARS AGO, my friend Joan Sandstedt asked me to identify a shade-loving plant she had bought at a Home Depot. “It gets about two feet tall, is covered with tubular lavender flowers that open all summer outdoors and in my sun room in winter, and has glossy green leaves that are purple underneath. I’ve had it for four years, have easily rooted it and given it to friends, and it is just wonderful,” she told me. “The only problem is that I have no idea what it is.”

I love the challenge of identifying unknown plants. However, Joan lives about 20 miles from my Princeton, New Jersey, home and we only see each other occasionally at bridge club gatherings. So I had to rely on her verbal description to conduct my research.

AFRICAN ROOTS

After many false starts, I located a shade plant native to southern Africa named *Plectranthus ciliatus* that seemed to match her description. I e-mailed a photo of it to Joan and she replied, “That’s it.”

San Marco wholesale growers in California describes it as a tender perennial popular in Europe, Australia, and California, serving



A hybrid of a plectranthus native to southern Africa, Mona Lavender produces an abundance of purple blooms all summer.

as a “nice shade plant that can be used as a groundcover or in a hanging basket.”

In gratitude for my research, Joan brought me some rooted cuttings last spring, which I planted underneath a Japanese stewartia (*Stewartia pseudocamellia*) in a site with no direct sunlight. There they thrived—pest and disease free—requiring water only during dry periods. I paired them with ‘Silver Heart’, a new cultivar of *Brunnera macrophylla* that has silver leaves edged in light green. This created a smashing foliage combination.

MISTAKEN IDENTITY

By August, however, I noticed the plants were not spreading to form a groundcover; rather they stayed very proper and contained. So, back I went to the Internet. Because I had an actual specimen for comparison this time, I was able to hunt with more precision. It turned out what I had *is* a member of the genus *Plectranthus*, but a hybrid cultivar trademarked as Mona Lavender (‘Plepalila’).

Bred by the Kirstenbosch National Botanical Garden in Cape Town, South Africa, it is described as a late-summer bloomer. This, I gather, is a response to shortened daylight at that time of year. In the bright shade of my garden, however, Mona Lavender started blooming when placed outside in late spring. Starting in August, it went bonkers and was covered in lavender flowers from then until the first killing frost in autumn.

Fortunately, before the frost killed it, I had already cut several stems and rooted them in water. I planted them in containers so I could winter them over indoors for use in the garden again this summer.

I’m not sure if you can still find this plant at any of the big box stores, but it is available through some mail-order suppliers. It is a tender perennial that will survive year-round outdoors in mild climates (USDA Hardiness Zones 10–11, AHS Heat Zones 12–1), but in temperate climates it should be viewed as a summer bedding or container plant, or grown indoors as a houseplant. 🌿

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

Sources

Avant Gardens, Dartmouth, MA.
(508) 998-8819.

www.avantgardensne.com.

White Flower Farm, Litchfield, CT.
(800) 503-9624.

www.whiteflowerfarm.com.

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