

The background of the cover is a lush garden scene. In the foreground, several tall, yellow spike flowers with small, delicate blossoms stand prominently. Behind them, there are clusters of vibrant purple flowers, likely petunias, with green foliage interspersed throughout. The overall lighting is bright, highlighting the colors of the plants.

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May / June 2012

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contents

Volume 91, Number 3 · May / June 2012

FEATURES



- 12 20 YEARS OF YOUTH GARDENING** BY AHS STAFF
Preview of the American Horticultural Society's National Children & Youth Gardening Symposium this summer in Washington, D.C.

- 14 NATIVE VINES** BY CAROLE OTTESEN
Make use of vertical space in the garden with one or more of these North American vines.

- 20 SUSTAINABLE HARDSCAPING** BY BETH O'DONNELL YOUNG
Environmentally responsible gardening includes considering eco-friendly choices for the non-plant features of a landscape.

- 24 ALL-AMERICAN HERBS** BY DONALD HUMPHREY
For a non-traditional herb garden, try some of these American native plants with a long history of medicinal or culinary use.

- 30 BUTTERFLY GARDENING** BY KRIS WETHERBEE
No matter the size of your garden, there are many things you can do to attract butterflies and moths to visit.

- 35 SUMMER BULBS** BY DAVID J. ELLIS
Add an exotic touch to your garden or patio with these summer-blooming bulbous plants.

ON THE COVER: Exotic-looking pineapple lily (*Eucomis comosa*) is a summer-flowering bulb native to tropical southern Africa. Photograph by Lynne Harrison

DEPARTMENTS

- 5 NOTES FROM RIVER FARM**
- 6 MEMBERS' FORUM**
- 8 NEWS FROM THE AHS**
Controlled burn of the André Bluemel Meadow at River Farm, AHS represented in workshop on climate and gardening in North Carolina, paperback edition of the AHS's *Homegrown Harvest* book available in May, the AHS President's Council members visit gardens in Arkansas.
- 11 AHS MEMBERS MAKING A DIFFERENCE**
Kurt Van Dexter.
- 40 TRAVELER'S GUIDE TO GARDENS**
Gardens of Cantigny.
- 42 GARDEN SOLUTIONS**
Invasion of the stinkbugs.
- 44 HOMEGROWN HARVEST**
Refreshing mint.
- 46 BOOK REVIEWS**
Natural Companions, *Waterwise Plants for Sustainable Gardens*, and *Heirloom Gardening in the South*.
Special focus: Regional gardening books.
- 50 GARDENER'S NOTEBOOK**
USDA turns 150, circadian rhythms trigger plant self-defense, kudzu bugs threaten crops, new ornamental cherry tree honors First Lady Helen Taft, breakthroughs in understanding how plants tolerate drought, understanding plant invasiveness, unusual winter affects bird count, Logee's Greenhouses celebrates 120 years, Gibbs Gardens opens in Georgia.
- 54 GREEN GARAGE®**
Expanded aggregates solve soil problems.
- 57 REGIONAL HAPPENINGS**
- 60 HARDINESS AND HEAT ZONES AND PRONUNCIATIONS**
- 62 PLANT IN THE SPOTLIGHT**
Teucrium chamaedrys.

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NOTES FROM RIVER FARM



WE ALL HAVE a few “plants out of place” in the garden (some of you may call them weeds) and usually we can count on enough cold weather during winter to slow them down a little. No such luck in Virginia this year! Our staff and volunteers have had to scramble to keep up with all the uninvited plants that sprang up as the days grew longer. But as we weeded, we could admire the thousands of blooming bulbs as well as the flowering cherries, redbuds, and dogwoods.

In addition to all the garden maintenance, we’ve had a busy spring getting ready for and hosting our annual Spring Garden Market in April. This much-anticipated event in the local community gives us a chance to meet our members and potential members who come to shop. It’s also an important fundraiser that supports our educational programs and the maintenance of our River Farm headquarters.

In the nearly 40 years that the American Horticultural Society has called River Farm home, we have created numerous features like our meadow and children’s gardens that add to the property’s charm and appeal as well as its educational value. However, sometimes it is the behind-the-scenes components that require our attention. As most of our members are aware, we are in the midst of upgrading our infrastructure. While not as appealing as planning new gardens, this water and sewer line project is a crucial step to creating a solid foundation for the future of River Farm and the AHS. We hope you will consider making an additional donation to help us complete this vital improvement.

We also hope we will have the opportunity to welcome you to River Farm soon to see what we’ve been up to here. But no matter where your summer travel plans take you, remember to take advantage of the AHS Reciprocal Admissions Program. Your AHS membership card can be your “garden passport” as you visit public gardens, entitling you to free admission and other discounts at the more than 250 participating locations across the country. For more details, visit www.ahs.org/rap.

Another way to explore the world of American horticulture is by turning the page and enjoying another issue of *The American Gardener*. In this issue you’ll find an information-packed feature on native vines, ideas for creating sustainable hard-scaping, butterfly gardening tips, and a fascinating look at native herbs.

Happy gardening and best wishes from all of us at the AHS,

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



CONTACTS FOR AHS PROGRAMS, MEMBERSHIP BENEFITS & DEPARTMENTS

For general information about your membership, call (800) 777-7931. Send change of address notifications to our membership department at 7931 East Boulevard Drive, Alexandria, VA 22308. If your magazine is lost or damaged in the mail, call the number above for a replacement. Requests for membership information and change of address notification can also be e-mailed to membership@ahs.org.

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

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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 River Farm section of www.ahs.org.

TRAVEL STUDY PROGRAM Visit spectacular private and public gardens around the world through the Society’s acclaimed Travel Study Program. For information about upcoming trips, call (866) 627-6621, send an e-mail to ahs@macnairtravel.com, or visit the Travel Study section of www.ahs.org.

WEBSITE: www.ahs.org The AHS website is a valuable source of information about the Society’s programs and activities. To access the members-only section of the website, the user name is **garden** and the password is **2012ahs**.

MEMBERS' FORUM

PURPLE PLANT BULLIES

After reading “Purple-Leaved Perennials Pack a Punch” (March/April 2012), I felt the caveat about *Lysimachia ciliata* ‘Firecracker’ being aggressive was not worded strongly enough. I would urge readers not to plant this invasive thug or they will battle it for years. It was planted in the English Garden perennial border at Allen Centennial Gardens in Madison, Wisconsin, where I work, many years ago and spread so aggressively it outcompeted neighbors and ran rampant. I have been trying to eliminate it by physical removal and herbicides for three years.

I also have issues with another plant recommended in the same article, *Eupatorium rugosum* ‘Chocolate’. It re-seeds rampantly, and what makes it an obnoxious re-seeder is that you will find seedlings fair distances from the mother plant. Most gardeners will not remember to cut the flowers off this plant to control re-seeding, as suggested in the article.

Some better-behaved purple plants that I would suggest are: *Physocarpus opulifolius* ‘Donna May’ (Little Devil®), the new *Actaea simplex* ‘Chocolate’ (which is more robust and earlier flowering than the cultivars in the article), *Phlox paniculata* ‘Lord Clayton’, *Lobelia cardinalis* ‘Fried Green Tomatoes’, *Ligularia dentata* ‘Britt-Marie Crawford’, and *Euphorbia dulcis* ‘Chameleon’.

Edward Lyon
Director, Allen Centennial Gardens
Madison, Wisconsin

Editor’s note: Carol Bornstein, director of North Campus Gardens at the Natural History Museum of Los Angeles County, wrote to warn readers that castor bean plant (*Ricinus communis*), also mentioned in the purple foliage plant article, is self-sowing in the wild in central and southern California.

DIFFERING PERSPECTIVES ON CLIMATE CHANGE AND GARDENING

Anne Raver’s article on Tony Avent (March/April 2012) was a great read until



The recently revised USDA Hardiness Map has provoked new discussions about climate change and global warming.

the author introduced her opinion on the global warming controversy.

Most people don’t have the time or inclination to study this issue on their own, but I decided to check the facts after reading several gardening books from the 1930s and ’40s in which the authors bemoaned the drought and terribly high heat of the Dust Bowl years and abnormally cold winters. My past employment with the Center for Air Environment Studies and the Environmental Protection Agency also informed my own assessment about climate change.

In a *Wall Street Journal* op-ed published March 27, 2012, William Happer, a physics professor at Princeton University, wrote: “There has indeed been some warming, perhaps about 0.8 degrees Celsius, since the end of the so-called Little Ice Age in the early 1800s. Some of that warming has probably come from increased amounts of carbon dioxide, but the timing of the warming—much of it before CO₂ levels had increased appreciably—suggests that warming is from natural causes that have nothing to do with mankind.”

Perhaps the most inconvenient fact of all, Happer pointed out, is the lack of global warming for well over 10 years now. Atmospheric CO₂ has increased, but global temperatures have not.

Raver’s statement that “97 percent of climate scientists agree that... humans are causing global warming” may once have been true, but is not an accurate repre-

sentation of the state of scientific opinion today. Tony Avent, who asserts human activity is not affecting climate, has current scientific opinion on his side.

Polly Brockway
Davidson, North Carolina

In the article about the new USDA Plant Hardiness Zone Map (March/April 2012), I was disappointed to see how much the USDA (and *The American Gardener*) seemed to be trying to avoid offending anyone about climate change, even to the point of avoiding honesty about the science. The scientific consensus about human-caused global warming is much stronger than for most scientific issues.

Please focus on what we should know about changing plant zones, impacts on insects and pollination, and other information to keep us gardening successfully.

Lee Cassin
Aspen, Colorado

David J. Ellis, editor, responds: The scientific viewpoint on climate change has, unfortunately, been obscured by the issue’s politicization. But if you set politics aside, the vast majority of legitimate scientists support the conclusion that climate change *is* occurring and that human activities are a primary causative factor.

I recently attended a workshop on climate and the gardening industry (see article, page 8) that included presentations by scientists from the National Climatic Data Center (NCDC), which is the U.S. government agency responsible for researching and tracking climate trends of all kinds. One important point that was raised is that there has been a statistically significant increase in global minimum average temperatures over the last two decades. For more information about climate change, visit www.ncdc.noaa.gov/faqs/index.html. ☺

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ASSOCIATE EDITOR

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(703) 768-5700

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E-MAIL: editor@ahs.org

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News from the AHS

May / June 2012

PROGRAMS • EVENTS • ANNOUNCEMENTS

RIVER FARM'S MEADOW GOES UP IN FLAMES

THIS SPRING, the four-acre André Bluemel Meadow at the American Horticultural Society's River Farm headquarters in Alexandria, Virginia, underwent a prescribed burn for the second time. The first controlled burn took place in the spring of 2010 to help control invasive species and reinvigorate the growth of desired plants, with the plan to repeat the treatment every two years. The meadow is mowed back in alternate springs, which also helps to control unwanted species.



On a clear, windless day this March, a controlled burn rejuvenated River Farm's meadow.

“While the walls of flames and clouds of smoke looked dramatic,” says River Farm Manager and Horticulturist **Sylvia Schmeichel**, “it was all carefully monitored to ensure safety. To be most effective, the goal is to sustain a slow and steady burn rather than a raging inferno.”

The meadow, installed between 2003 and 2008, was designed to provide valuable wildlife habitat and educational opportunities for River Farm's visitors, while demonstrating a more sustainable alternative to a lawn monoculture.

Within a couple of weeks, the scorched earth was carpeted in green once more, as grasses and wildflowers emerged with renewed vigor.

WORKSHOP ON CLIMATE AND GARDENING

IN MARCH, Director of Communications **David J. Ellis** represented the AHS at *A Growing Interest 2: Climate and Economic Impacts on the Plant Sector*, a workshop at the North Carolina Arboretum in Asheville that explored the effects of climate change on the diverse businesses and organizations involved in the gardening industry.

The workshop, a follow-up to a conference that took place in 2008, was co-sponsored by the arboretum and the Institute for Global Environmental Strategies, a nonprofit organization focused on science education, communication, and out-

AHS 2012 NATIONAL EVENTS CALENDAR



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

JUNE 7. Great American Gardeners Awards Ceremony and Banquet.

River Farm, Alexandria, Virginia.

JUNE 14–16. The Gardeners of America/Men's Garden Clubs of America Convention. Boardman, Ohio.

JULY 19–21. National Children & Youth Garden Symposium.

Washington, D.C.

AUG. 17–19. The Homestead's "In the Garden with the Experts" Symposium. Hot Springs, Virginia.

SEPT. 20–22. America in Bloom Symposium and Awards Program. Fayetteville, Arkansas.

SEPT. 22. AHS Annual Gala. River Farm, Alexandria, Virginia.

DEC. 3–21. Holiday Trees Display. River Farm, Alexandria, Virginia.



reach. Participants included scientists from the National Climatic Data Center (NCDC), a branch of the National Oceanic and Atmospheric Administration (NOAA), public garden administrators, and representatives of the American Nursery & Landscape Association (ANLA).

NCDC experts presented an overview of the latest research and data on climate change, noting not only the continuing rise in global average minimum temperatures, but also the increase in the frequency of "severe weather events" such as flooding, tornadoes, and drought. This led to a dynamic discussion on the outlook for the different components of the gardening industry and how NOAA's climate database and sophisticated forecasting technology might be utilized to manage climate change risks and identify potential business opportunities.

Another focus of discussion was the potential role of the gardening industry in communicating relevant information about climate change to the public. **Casey Sclar**, interim executive director of the American Public Gardens Association (APGA) and plant health care leader at Longwood Gardens, described a new partnership on climate change education between the APGA and NOAA that debuted with a cell phone tour and display pilot project at Longwood Gardens in Kennett Square, Pennsylvania.

"The AHS will continue to work closely with the NCDC and other horticulture and gardening groups to ensure gardeners have access to resources and updated scientific information that will help them understand and adapt to these changing conditions," says Ellis.

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The AHS in Arkansas



The new Crystal Bridges Museum of American Art in Bentonville, above, was one of the sites visited on the AHS President's Council trip to Arkansas this spring. Left: Cody George, the museum's field horticulturist, took participants on an informative walking tour of the museum's grounds, which include more than three miles of pedestrian and bicycle trails.

PAPERBACK EDITION OF HOMEGROWN HARVEST RELEASED

THE HARDCOVER EDITION of the AHS's *Homegrown Harvest*, released in fall 2010, has been so successful that the publisher, Mitchell Beazley/Octopus, is releasing a paperback edition of the book this summer. Available in stores in May, the book retails for \$19.99.



Compiled by Editor-in-Chief **Rita Pelczar**, a contributing editor for *The American Gardener*, the book—filled with informative color photographs—is a season-by-season guide to growing vegetables, herbs, and fruits using sustainable methods. Special page spreads address in-

triguing topics such as trying fruits native to North America, growing and using edible flowers, cultivating root crops, cre-

ating a pesto garden, and tips for storing fruit. Useful appendices include sowing and harvesting charts tailored to different regions of the country, advice on controlling pests and diseases, and a complete glossary.

To purchase the book, visit www.ahs.org or look for it at your local bookstore.

SAVE THE DATE: AHS 2012 GALA

MARK YOUR CALENDAR now to attend this year's AHS Gala, which will be held at River Farm in Alexandria, Virginia, on Saturday, September 22. This elegant evening is an opportunity to celebrate the beauty of River Farm while enjoying a sit-down dinner, silent auction, and good company. Look for more details about the gala in the next issue of *The American Gardener*.

News written by AHS Staff.

AHS MEMBERS MAKING A DIFFERENCE: Kurt Van Dexter

by Helen Thompson

LANDSCAPE ARCHITECT and artist Kurt Van Dexter of North Kingston, Rhode Island, grew up on an eight-acre farm in southern New Jersey. Influenced by his early exposure to the natural world, he has become a passionate advocate for the importance of providing similar opportunities for children of all ages.

A NEW DIRECTION

While studying horticulture and landscape architecture at the University of Rhode Island (URI) in 1993, Van Dexter had the opportunity to attend the American Horticultural Society's (AHS) first symposium on youth gardening, now the National Children & Youth Gardening Symposium (NCYGS). He had three elementary-school age children at the time and had been "wanting to make changes in the way schools looked at their outdoor spaces." After attending the event, Van Dexter says, he immediately knew "this was the direction in which I was going to focus my career."

Returning to URI as a new AHS member, Van Dexter decided to do an independent study project on children's landscapes that involved helping to create a school garden at the elementary school in North Kingston that his children attended at the time. The end result included a spruced-up nature trail, a small orchard, and several garden plots.

"I wanted to make sure the garden was used, so I asked the teachers what was the most important thing to grow for the curriculum," says Van Dexter. "Each grade level maintained a plot. For example, fifth grade had a Colonial dye garden because they were learning about American history."

BUILDING THE FUTURE

After graduation, Van Dexter got a job with a landscape architecture firm, but continued consulting on school garden projects on the side. Van Dexter's strategy was to include students and teachers in the design process. "I don't go in and design the



Left: Kurt Van Dexter was a presenter at the 2010 NCYGS in Pasadena, California. Above: At Potter Burns Elementary School in Pawtucket, Rhode Island, a group of students prepare a bed for a garden that Van Dexter helped design.

LONG-TERM IMPACT

Van Dexter has participated in several of the NCYGS, but for this year's 20th annual event, he will give a presentation on how the first symposium in particular influenced his school garden work over the last two decades, and what trends he has seen.

The annual symposium "has had a huge impact on how the public and school administrators perceive school grounds," says Van Dexter. He recalls trying to work with schools in the early 1990s and not being met with much enthusiasm. "But now it's really caught on. Several states have statewide initiatives, and others are now working to develop their own," says Van Dexter. "The goal, of course, is to have active garden programs in every school, but in reality it's about having gardens in as many schools as possible."

Freelance writer Helen Thompson is a former editorial intern with The American Gardener.

celebrating 20 years of promoting **Garden-Based Teaching and Learning**

BY AHS STAFF

IN 1993, the American Horticultural Society (AHS) hosted a symposium on “Children, Plants, and Gardens: Educational Opportunities,” in Chevy Chase, Maryland. More than 500 people attended—parents, teachers, garden designers, school principals, public garden education specialists—many of

whom were ecstatic to find like-minded peers. The first symposium was so successful that it was transformed into an annual event. The National Children & Youth Garden Symposium (NCYGS) is held in a different city

An advertisement for the first symposium in 1993

each year, highlighting gardens and programs from all areas of the country. Throughout the years, faces have come and gone, but the purpose of the symposium has remained the same: to provide a forum for promoting garden-based teaching and learning.

This year, the 20th annual Symposium will return to where it all started in the greater Washington, D.C., area, with the University of Maryland’s College Park campus serving as the headquarters from July 19 to 21.

“As the only national, annual educational event that explores the influence of gardens in the lives of children and youth,” says AHS Executive Director **Tom Underwood**, “the symposium is



Top: The Butterfly Garden is one of the newest installations in the Children’s Garden at River Farm. **Above:** Holly Shimizu, executive director of the U.S. Botanic Garden, will deliver the symposium’s opening keynote.

where America’s passionate youth gardening advocates can network, gain professional development, and share best practices for engaging today’s youth.”

HIGHLIGHTS

The opening keynote speaker for this year’s symposium will be **Holly Shimizu**, executive director of the United States Botanic Garden (USBG) in Washington, D.C. Shimizu will lead the charge with her presentation, “We Can Make a Difference—Let’s Tell the World That Plants Are Not Optional!” Later, **Wendy Blackwell**, director of education for the National Children’s Museum in Oxon Hill, Maryland, will talk about “The Child in All of Us: The Importance of Play and Loose Parts in Each of Our Lives.” And special guest **Kirk Brown**, a horticulturist and histori-

cal re-enactor from Allentown, Pennsylvania, will personify John Bartram, one of America's greatest botanists and explorers, as he offers advice for cultivating the next generation of gardeners.

There are nearly 70 different educational sessions to choose from this year. A few presenters who attended the initial symposium will share their perspective on the evolution of the youth gardening movement over the last two decades. Others who have attended several symposia through the years share their firsthand observations on the influence gardening can have on generations of children. Other topics range from permaculture and but-

veiled at the school. Jointly administered by the AHS and the Junior Master Gardeners, the award program is designed to recognize children's books that effectively promote an appreciation for gardening, plants, and the environment.

There will also be study tours to Coolidge High School Greenhouse Garden & Outdoor Classroom and several other D.C. school gardens as well as the USBG, the United States Department of Agriculture (USDA) The People's Garden, and the Smithsonian Institution National Museum of Natural History.

Symposium attendees will enjoy an evening at the AHS's River Farm head-



On a visit to Hollin Meadows Science and Math Focus School in Alexandria, Virginia, symposium attendees will learn how teachers have integrated the school's garden into the curriculum.

terfly gardening to design ideas and innovative ways to use plants and gardens to teach math, science, and other subjects.

One day of the symposium will be held at Hollin Meadows Science and Math Focus School in Alexandria, Virginia. This school has so effectively integrated gardening in its curriculum that in 2009 it merited a visit from First Lady **Michelle Obama**, who has become an advocate for improving young people's health through gardening and other outdoor activities. Symposium attendees will tour the school's gardens and the students will be on hand to give demonstrations. The 2012 Growing Good Kids—Excellence in Children's Literature book award winners will also be un-

quarters in Alexandria, Virginia, featuring a performance by singer-songwriter **David Mallett**, whose *Garden Song* ("inch by inch, row by row") is an American folk favorite sung around the world. There will also be time to explore River Farm's Children's Garden, which was installed in conjunction with the first symposium and continues to provide a place for children to experience plants and nature in a play-friendly environment.

AN UNPARALLELED EXPERIENCE

At its core, NCYGS is about planting the seeds of passion for plants and the natural world during children's formative years so that they will make healthy lifestyle and

ADDITIONAL LEARNING OPPORTUNITIES

In concert with the NCYGS, optional educational programs are scheduled before and after the main event.

On July 18, a pre-symposium workshop at the University of Maryland will focus on the "Science and Technology of Green Roofs." The program will be jointly presented by **Steve Cohan**, a professor in the university's Plant Science & Landscape Architecture department, and **Ed Snodgrass**, an international green roof consultant and author based in Street, Maryland.

Following the symposium on July 22, there will be an excursion to Lewis Ginter Botanical Garden in Richmond, Vir-



ginia (www.lewisginter.org). Highlights include its children's garden, "Butterflies Live" exhibit, and artist **Patrick Dougherty's** acclaimed *Diamonds in the Rough* stick sculpture, (shown). The day will end with a special "farm-to-table" dinner at the garden.

—AHS staff

environmental choices in the future. It's about celebrating effective ways to plant those seeds, and it's about sharing ideas, plans, and experiences among like-minded peers. "Many people tell us that they attend various conferences and symposia each year, but ours is the highlight they really look forward to," says **Nancy Busick**, 2012 NCYGS Coordinator. "There is always an incredibly supportive atmosphere at this event, and most everyone leaves feeling rejuvenated and inspired," she adds.

For more details about the 20th annual NCYGS, visit www.ahs.org/ncygs. 🌱

This article was compiled and written by several members of the AHS staff.

BY CAROLE OTTESEN

Make use of vertical space in the garden with one or several of these North American vines.

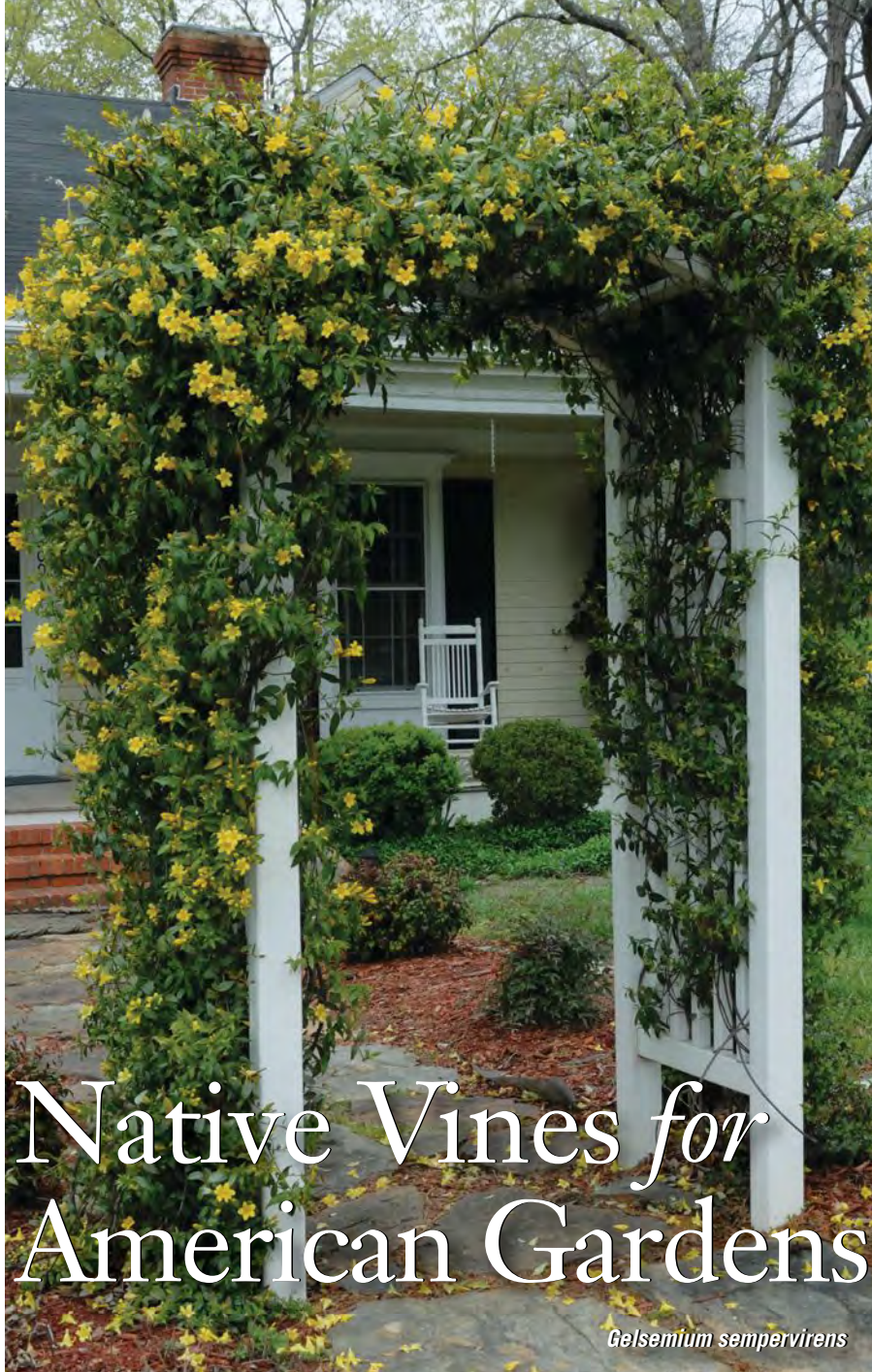
WHEN EVERY inch of the garden is planted and there is no where else to go but up, when there's something unsightly that needs camouflage—like a big, blank garage wall or a telephone pole in front of the house—or when shade is desperately needed, consider planting a vine! Vines do it all. And native vines do it while nourishing wildlife.

Here is a sampling of native vines, selected from my own experience and those of some gardening peers around the United States. Among them are gentle blooming twiners as well as double-duty vines that bear edible fruits after flowering. It includes innocents whose reputations are tainted by association with exotic invasives, as well as a few that have earned their reputations honestly, but have merit in the right spot.

CAROLINA JESSAMINE *(Gelsemium sempervirens)*

When Carolina jessamine, also known as Confederate jasmine, (USDA Hardiness Zones 7–9, AHS Heat Zones 10–4), the official flower of South Carolina, starts to bloom, it's a sure sign that winter is over. The fragrant yellow tubular flowers continue into early summer and repeat sporadically thereafter. Its shiny, light green leaves are evergreen in its native range from eastern Virginia and Tennessee south to Florida, the Gulf Coast, and Texas, turning purple in harsh winters.

A twining vine that reaches 10 to 15 feet tall and up to 10 feet wide, Carolina jessamine's smallish size makes it easy to control. Pruning guru Lee Reich, author of *The Pruning Book*, advises pruning "after flowering to get rid of dead and broken stems" then shearing back the remaining growth. Bushy and sprawling, this is the vine to cascade over a wall, festoon a porch railing, or camouflage a chain link fence. Moderately drought tolerant, it thrives in full sun and is adaptable to a wide range of soil types.



Native Vines for American Gardens

Gelsemium sempervirens

Cultivars include 'Pride of Augusta', a double-flowered form, and 'Margari-ta', a hardy selection that has been grown successfully in USDA Zone 6. All parts of Confederate jasmine are poisonous if ingested.

LEATHER FLOWER, AMERICAN BELLS *(Clematis viorna)*

Native to stream banks and under tree canopy in the American Southeast to the Midwest and places in the Rockies, (Zones 4–9, 9–1), this gentle climber climbs by tendrils up to 13 feet. It is the poster child of a group of native clematis, lumped together as the "viorna

group." Members of this group are distinguished from other clematis types by the shapes of their flowers—typically urn or bell-shaped—and the restraint of their vines. Their flowers are composed of leathery sepals, fused at the base, that turn up at their tips, varying in color from pale lavender to vivid red-purple. Vines are easy to prune, says Reich—before growth begins, "top all stems back to strong buds within one foot of the ground." Leather flowers produce seeds with long, hairy tails that form showy seed heads.

Similar in appearance to leather flower, *Clematis morefieldii* (Zones 6–8, 8–1) hails

from limey, rocky places in southern Tennessee and northern Alabama where it will climb to 16 feet and bear pretty pink-and-white bells.

Native to scattered locations in moist woodlands in the Southeast and west to Oklahoma, *C. glaucophylla* (Zones 6–8, 8–5) has hot pink flowers that are pumped out nonstop from June to frost, attracting hummingbirds. The flowers and showy seed heads, which appear simultaneously, contrast well with the vine's glaucous, or



Clematis viorna

blue-hued foliage. It grows to 10 or 15 feet in a single season but can be kept shorter by pruning. Provide part shade and regular water during dry spells.

Clematis pitcheri (Zones 5–9, 10–5) grows to 13 feet, bearing pink bells that open to deep cherry from summer into fall. Its native range is from the Midwest to Texas and Arizona where it can be found on limestone outcrops. (For more on American native clematis, view the web special linked to this article on the AHS website).

PASSION FLOWER, MAYPOP *(Passiflora incarnata)*

The fabulously intricate blooms of our native passion flower, or maypop (Zones 5–10, 12–1) are more than reason enough to grow this vine, but the edible egg-size fruits put it over the top. American naturalist and preservationist John Muir called passion fruits “the most delicious fruit I have ever eaten.”

One of the northernmost species in a huge tropical genus, maypop is native from Virginia to Florida and west to southern Illinois, Kansas, and Texas. It thrives in a warm, sunny location in the garden and appreciates winter protection at the northern end of its hardiness range. Passion flower dies to the ground each year, but quickly twines up again in spring, achieving 25 feet in a single season on a trellis or other support. Its rambunctious nature and wide spreading habit—it can spread

like very upright wisteria flowers. As pretty as the flowers are, this nitrogen-fixing legume produces edible beans and has long been grown for its tuberous roots. Native Americans ate them and taught the Pilgrims how to dig and cook “Indian potatoes.” More nutritious than potatoes, groundnut tubers contain up to 17 percent protein. Wisconsin forager Sam Thayer, author of *The Forager's Harvest* (2006), wrote: “The flowers are fairly good raw or cooked, and the seeds are edible... I have



Passiflora incarnata

20 feet per year laterally by underground rhizomes—has earned it the reputation of a nuisance in many parts of the South. To avoid its exuberant spread, grow it in a large container. There is a pretty white selection, *P. incarnata* ‘Alba.’

GROUNDNUT, POTATO BEAN *(Apios americana)*

Groundnut (Zones 4–10, 10–3) is an uncommonly cultivated vine with gorgeous and fragrant pink to rusty red blooms—

eaten the young, whitish shoots in the spring both raw and boiled, and have found them passably good but nothing worth raving about.”

Groundnut vine grows vigorously to about 15 feet, climbing over shrubs and small trees or sprawling into a dense tangle on the ground. Although the vine dies back in fall, the long chains of tuberous roots can be harvested at any time. Native to the eastern United States, groundnut grows in moist sun to part shade.

‘ROGER’S RED’ CALIFORNIA GRAPE
(*Vitis* spp.)

The aggressive spread and rapid growth of wild grape may cause gardeners to shy away from native grape vines, but California grape (*Vitis californica*, Zones 8–10, 10–8) is considered suitable for domestication by western gardeners.

Californians Betsy Clebsch, author of *A Book of Salvias*, and Bart O’Brien of Rancho Santa Ana Botanic Garden in Claremont, California, recommend ‘Roger’s Red’, a hybrid between California grape and a European wine grape. “It has brilliant red fall color virtually everywhere it’s been grown—from the coast to the deserts, and from north to south,” says O’Brien. “It produces an abundance of small grapes favored by many birds.”

Great on walls, arbors, and chain link fences, it reaches 30 feet in part sun and light shade and has need little water.

CORAL OR TRUMPET HONEYSUCKLE
(*Lonicera sempervirens*)

Say “honeysuckle” and for many gardeners the first plant that comes to mind is the dreaded invasive *Lonicera japonica*. Nothing like its aggressive relative, polite coral honeysuckle (Zones 4–9, 9–1) is the classic mailbox adornment. The gray-green leaves are perfoliate—the bases of each pair of opposite leaves are fused around the stem—and they appear on a 10-foot vine that twines counterclockwise around a support. Best in full sun, whorled clusters of tubular coral flowers attract hummingbirds and butterflies. Later, red berries are cherished by finches and robins.

Native from the East Coast west to Texas, it is semi-evergreen in most regions. In the warmer zones, fully evergreen vines flower as early as February and keep on blooming into June. Coral honeysuckle has a host of cultivars, including ‘Alba,’

with white flowers; ‘Cedar Lane,’ sporting deep red flowers and narrow, blue-green leaves; yellow-flowered ‘John Clayton’ and the highly regarded ‘Major Wheeler,’ with extremely floriferous coral flowers and reputedly mildew-free foliage.

AMERICAN WISTERIA (*Wisteria frutescens*) and **KENTUCKY WISTERIA** (*W. macrostachys*)

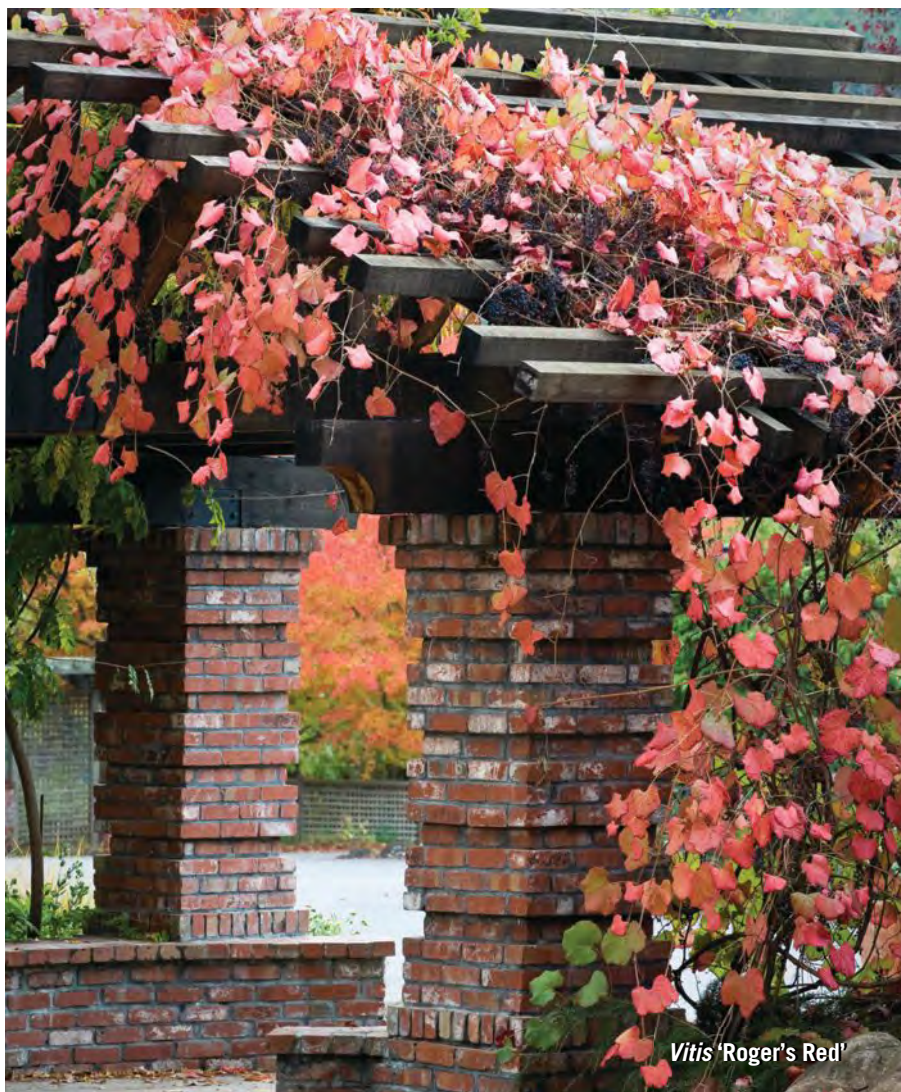
You will never discover a 25-foot-long stem of American wisteria (Zones 5–9, 9–6) snaking around from the side of the house into the front yard as you might with invasive Japanese and Chinese wisterias.

True, the flower clusters of American wisteria grow neither as long and loose nor as fragrant as the Asian species. However, instead of producing its first flowers at 10 years of age or more, American wisteria blooms earlier—typically at four or five, but as early as at one year. It will also flower reliably because it blooms later in the season, in May and June, thereby escaping late frosts. And flowers last longer—up to a month or more—and blooms recur sporadically through summer.

American wisteria also supports wildlife as a host plant for butterflies, including the long-tailed skipper. Perhaps, best of all, it blooms on new growth of the season, making pruning (a mysterious and frustrating practice with exotic wisterias) quite straightforward: Trim your vine to four buds of last year’s new growth in early spring before this year’s growth begins. After flowering, trim lightly and new shoots will produce a second flush of blooms in summer. Kentucky and American wisterias grow to about 25 feet in full sun or light shade.

Cultivars include ‘Amethyst Falls’, which is considered to be a dwarf with fragrant lavender flowers, ‘Longwood Purple,’ with deeper purple flowers, and ‘Nivea’ with long white racemes. All three are repeat bloomers.

Kentucky wisteria (Zones 6–9, 9–6) from the south central United States has also produced some showy cultivars. Among them is ‘Clara Mack,’ considered the most restrained of the native wisterias, with fragrant white flower clusters that reach one foot long. ‘Blue Moon’ is sweetly scented and tends to bloom very early, at two to three years old.



Vitis ‘Roger’s Red’

HOW VINES CLIMB

Vines have different ways of supporting themselves, so it's important to know what kind of surface or supporting structure is appropriate when choosing or planting them.

Twining vines coil around their supports in a clockwise or counter-clockwise direction; these vines need a sturdy trellis or network of wires or cables for support. Examples of twiners include groundnut (*Apios americana*), Dutchman's pipe (*Aristolochia* spp.), Carolina jessamine (*Gelsemium sempervirens*), honeysuckles (*Lonicera* spp.), and wisterias.

Tendrils climbers develop specialized leaf stalks that coil where and when necessary. Train tendril climbers such as cross vine (*Bignonia* spp.), clematis, passion flowers (*Passiflora* spp.), and grapes (*Vitis* spp.) to climb on a trellis or arbor.

Self-clinging vines such as Virginia creeper (*Parthenocissus quinquefolia*) and wood vamp (*Decumaria barbara*) have adhesive pads at the end of tendrils, allowing them to climb on the surface of most structures without support. While they won't damage brick or stone, the pads may leave marks on painted wood surfaces.

Clinging stem vines have short, but vigorous adventitious rootlets that can burrow into supports and loop through older stems—they may need initial training to ensure they grow where you intend them to. Provide sturdy support such as a tree trunk or utility pole for these vines, which include trumpet vine (*Campsis* spp.) and climbing euonymus (*Euonymus* spp.).

—C.O.



Dutchman's pipe has twining stems.



VIRGIN'S BOWER, WOODBINE (*Clematis virginiana*)

Often mistaken for the highly invasive sweet autumn clematis (*C. terniflora*), the native virgin's bower (Zones 3–8, 8–3) “adapts beautifully to garden conditions in almost any situation, provided it has sufficient moisture and light,” says Neil Diboll, chief executive officer

of Prairie Nursery in Westfield, Wisconsin. According to Diboll, the vine is “notable for its seeds rather than its flowers. Profuse clusters of white blooms are upstaged by the silky silver seed heads in early fall.” The deep green foliage looks great all season.

Native to most of eastern North America west of the Rocky Mountains, virgin's

bower reaches 20 feet tall. Cut it back to the ground each year and grow it up arbors, lamp posts, and pergolas.

AMERICAN BITTERSWEET (*Celastrus scandens*)

American bittersweet (Zones 3–8, 8–1) is another vine with an invasive relative, Asian bittersweet (*C. orbiculatus*). Native to a broad range encompassing most of eastern North America, American bittersweet is attractive to songbirds because of its decorative fall fruits. “The leaves fall off with the first hard frosts, leaving the tawny stems adorned with the brilliant red-orange, pea-sized seeds,” says Diboll. He advises cutting the vines in long sections when the seeds are ripe and using them to make decorations for Thanksgiving and Christmas.

Because American bittersweet is dioecious, meaning male and female flowers are borne on separate plants, it's important to plant several vines if you want to ensure a supply of the fruits. Plant it in part shade to full sun with support of a trellis, or allow it to clamber over early-blooming shrubs. Diboll says that although the vine can sometimes produce a dense cover on shrubs, it does not smother them.

PIPEVINES (*Aristolochia* spp.)

Butterfly gardeners count on pipevine or Dutchman's pipe (*Aristolochia macrophyll-*



Celastrus scandens

la, Zones 5–8, 8–4) and its fuzzy-leaved cousin woolly pipevine (*A. tomentosa*, Zones 5–9, 9–3) as larval food sources for the pipevine swallowtail butterfly. Dutchman’s pipe is a hardy, vigorous, East Coast native which when given a site in sun or part shade and moist soil, will quickly grow to 30 feet. Its small, purplish brown flowers—which bear a resemblance to the curved, Calabash-style pipes that fictional sleuth Sherlock Holmes is often portrayed with—appear in early to midsummer. They are carried on old growth, so do not cut the vine back in fall.

While the flowers are enchanting (although some people consider their odor

foul), it is the huge, overlapping heart-shaped leaves—eight inches or more across—that endear this vine to gardeners. Because pipevines grow from fleshy roots or rhizomes, they are best transplanted while dormant.

Woolly pipevine is native from the Midwest, south to Texas and Florida. It has slightly larger flowers than Dutchman’s pipe but also grows up to 30 feet. Western gardeners can try California or Sierra pipevine (*A. californica*, Zones 7–9, 8–4), a northern California native that grows 10 to 12 feet tall. Its creamy, two-inch diameter flowers are highlighted by bright red markings.

CROSS VINE

(*Bignonia capreolata* syn. *Anisostichus capreolata*)

Cross vine (Zones 6–9, 9–5) is a favorite of garden writer Jan Midgley of Birmingham, Alabama. Midgley, author of *Southern Wildflowers*, especially appreciates its accommodating nature. “It will grow in part shade or full sun, in average moisture or on a rock outcrop. It is great for covering ugly cement walls. If shade grown, it should have a half day of sun in order to get bloom at a level where one can enjoy the show.”

The showy, fragrant flowers—stunning two-tone red and yellow trumpets that attract hummingbirds—appear in May and June. Cross vine’s native range is southern Ontario and the entire eastern United States. Its compound leaves are fully evergreen in the southern part of its range, but the vine may die to the ground over winter in the north.

Midgley has seen cross vine used “effectively around light poles in an upscale shopping center in Birmingham.” Let “light poles” serve as the caveat here. Cross vine can climb by tendrils to 50 feet if given half a chance, and it is known to spread underground where conditions are to its liking. Give it something to hold onto to get it started and then stand back; it can be cut back hard if it outgrows its support structure. The cultivar ‘Tangerine Beauty’ is orange-red with a golden throat.

Sources

- Forestfarm**, Williams, OR. (541) 846-7269. www.forestfarm.com.
- Nearly Native Nursery**, Fayetteville, GA. (770) 460-6284. www.nearlynativenursery.com.
- Oikos Tree Crops**, Kalamazoo, MI. (269) 624-6233. www.oikostreecrops.com.
- Sunlight Gardens**, Andersonville, TN. (800) 272-7396. www.sunlightgardens.com.
- Wilkerson Mill Gardens**, Chattahoochee Hills, GA. (770) 463-2400. www.hydrangea.com.
- Woodlanders, Inc.**, Aiken, SC. (803) 648-7522. www.woodlanders.net.

Resources

- Armitage’s Vines and Climbers** by Allan M. Armitage. Timber Press, Portland, Oregon, 2010.
- Flowering Vines: Beautiful Climbers** edited by Karan Davis Cutler. Part of the 21st-Century Gardening Series from Brooklyn Botanic Garden, New York, New York, 1999.

MORE NATIVE VINES TO CONSIDER

Botanical name (Common name)	Type	Height/Spread (feet)	Ornamental features/ Site requirements	Native range	USDA Hardiness, AHS Heat Zones
<i>Adlumia fungosa</i> (Allegheny fleece vine)	biennial twiner	8–12/2–3	Clusters of pink flowers in late summer/shady site with support	Canada south to North Carolina	3–7, 7–3
<i>Asarina antirrhiniflora</i> (climbing snapdragon)	annual twiner	6–8/2–3	Tubular pink to purple flowers in summer/full sun, trellis or fencing	Texas, Southwest	9–12, 12–1
<i>Cocculus carolinus</i> (moralbeads)	perennial twiner	12/2–3	Pale green flowers in summer, red fruits in fall/part shade to shade	eastern U.S.	5–9, 9–5
<i>Decumaria barbara</i> (wood vamp)	perennial self-clinger	15–25/2–4	Glossy green foliage, creamy white flowers in late spring/site in part shade, provide support	southeastern U.S.	6–9, 9–6
<i>Lonicera ciliosa</i> (orange honeysuckle)	perennial twiner	5–15/2–4	blue-green foliage and orange flowers late spring into summer/part shade, water in dry periods	British Columbia south to northern California	5–8, 8–5
<i>Menispermum canadense</i> (moonseed)	perennial twiner	10–15/2–5	pale green flowers in mid- to late summer, followed by black fruits*/ part shade to shade	eastern U.S.	5–8, 8–5

*The clustered fruits, which resemble grapes, are poisonous, so this is not a good choice for a garden frequented by children.



Bignonia capreolata
'Tangerine Beauty'

VIRGINIA CREEPER (*Parthenocissus quinquefolia*)

Virginia creeper (Zones 3–10, 9–1) is a deciduous vine that grows in the wild throughout the eastern United States and south to Mexico. It usually grows to about 25 feet, but has been known to reach as much as 75 feet.

It climbs and holds on by little disks at the end of short tendrils. These holdfasts, unlike those of trumpet vine and ivy (*Hedera* spp.), are not harmful to masonry but will disfigure the finish of painted wood. Its green palmate leaves turn red in the fall.

Insignificant greenish-white summer flowers give way to clusters of dark berries that are eagerly eaten by many birds.

While some gardeners will shudder at the idea of planting Virginia creeper, it has merit in the shady part of a naturalistic garden where few other vines will flourish. Leaves of the cultivar 'Monham' (Star Showers®) sport irregular splashes of white, and in cool weather, a lovely pink blush.

TRUMPET VINE (*Campsis radicans*)

Some admire the red-orange flowers of trumpet vine (Zones 3–9, 9–3) and the

hummingbirds that visit them; others consider this vine an invasive thug. No matter which view you hold, keeping this southeastern United States native from becoming a 40-foot monster takes tough love. Rather than pruning the vigorous stems, cloaked in dark green compound leaves, Reich suggests just "whacking it back."

Because it tends to send up root suckers in all directions, plant it where it cannot reach what you don't want engulfed. Some possible locations for trumpet vine are at the base of a very large, dead tree surrounded by mowed lawn or on a chain link fence in an area where its spread will be limited by hardscaping.

Its spectacular show of midsummer tubular flowers attract swarms of hummingbirds. Cultivars provide a range of flower colors: 'Jersey Peach' is a lovely pale peach, 'Atropurpurea' is a wonderful deep rose, and 'Flava' is a soft yellow.

Every garden has at least one unsightly problem spot. If you camouflage it with a native vine, enjoying more wildlife will be part of the bargain. Just be sure to match the vigor of the vine you choose to the location and the size of the problem. ☞

A contributing writer for The American Gardener, Carole Ottesen gardens in Maryland and Nova Scotia. Her latest book, Dying for the Christmas Rose, a garden mystery, was published this spring.

Sustainable Hardscaping *for an* Earth-Wise Garden

When it comes to environmental responsibility, many gardeners are aware of the need to make wise plant selections and practice gardening techniques that conserve water and don't harm the ecosystem. But to be truly earth-friendly, it makes sense to think the same way about the other parts of a garden, such as pathways, fences, and outdoor furniture.

BY BETH O'DONNELL YOUNG

THE CHOICES you make about materials for your hardscape (the structural, usually nonliving, elements of the landscape) have an impact on this world, for better or for worse. It takes an awareness of the consequences of your decisions as well as a willingness to go beyond the norm (that is, traditional landscaping materials) to make earth-wise choices.

To be conscientious about landscape materials, you must question everything about traditional landscape materials, the things that you can purchase at your garden center, your local big-box store's gardening department, your lumberyard, even your stoneyard. Because, as with a lot of current landscape practices, the status quo is damaging our earth.

What follows are the things to think about before you buy something new. These are guidelines, not hard-and-fast rules. Your best bet is to consider the full range of options, throw out what doesn't work for you, and weigh the rest. Making conscious choices—rather than buying what the commercials tell us to buy—is the best we can do.

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TO PURCHASE OR NOT TO PURCHASE

Do you really need to buy it? Or can you beg, borrow, or share it? Perhaps you could rethink purchasing that fancy play structure—after all, all the kids in the neighborhood need only one. Does every home need a patio set big enough for parties? What if all the neighbors chipped in for an extra patio set that anyone could borrow? Rethinking our natural tendency as Americans to be independent might lead to some good neighborly relations (or at least you might meet the neighbors).

INDIGENOUS, INGENIOUS

If you decide you need it, you can still stretch your thinking process to go beyond the standard materials. Think back to the time when folks could not go out

and buy prefabricated landscape materials and install them in a weekend. What did they do?

They used what was at hand. Boards, yes, but also branches, grasses, bamboo canes, straw, dried manure, crushed rock, chalk dust, hide, hair, and hay. Twigs were soaked to make them pliable and then bent and tied or glued into trellises, arbors, and furniture. Thin branches were woven between stakes to make fences or daubed with gypsum to make durable walls. Bamboo canes were used for fences as well as paving and ornamentation. Mud and straw were combined to make bricks and roof tiles. Stains were created from berries and vegetable extracts. Structures were weatherproofed with gypsum, mud, and/or straw. Stone was broken and carried to make paving, walls, and water features that stand centuries after being built.

To find out what techniques were used in your region, you may have to do some sleuthing. Your local historical museum would be a good place to start; it may have information on how local people lived before industrialization, what materials were abundant, and how they were used. Another source of ideas is to look toward ancient (or just preindustrial) cultures with similar climates to yours: if you live in the coastal Northeast, you could borrow ideas from England and Japan; in the arid West, you could look toward the Middle East and North Africa, and so on. Researching the old ways of making paths, fences, walls, and overhead structures around the world might inspire you to start an entirely “new” way of hardscaping in your area—one that is gentle on the land as well as your wallet.

BY-PRODUCTS, NOT PRODUCTS TO BUY

Thinking in terms of using materials at hand, particularly free materials that are the by-product of some form of local production, can save you a lot of money. Find out what the local farms grow and what their by-products are. Here in Oregon we

This fence was built using scrap lumber and branches cut from juniper trees on the property. It serves the purpose of creating a boundary between a densely planted area of the garden and a more open, casual area, and it adds texture and local character to the scene. Design by Betsy Arriola.

GIVE OLD STUFF NEW LIFE

Here are some ideas for jump-starting your own creative musings about how to repurpose rather than purchase.

- Urbanite is an increasingly popular material for making steps, retaining walls, raised beds, and patios. It's simply broken-up concrete, repurposed. It's free and can usually be had for the asking if you see a pile of it at a construction site. You haul and it's yours.
- Wire can be used to string together cans, bottles, or found objects such as beads or keys from a secondhand store to create rain chains or partitions to divide outdoor rooms.
- Old toolboxes make intriguing planters.
- Old toilet tank lids can be painted and used as stepping-stones. Just be sure to put strips of nonskid tape across lengthwise to prevent slipping and sliding on a rainy day.
- Wire cages picked up at a home salvage or used-building-material store can be filled with objects like cut branches or glass bottles to create gabions, which can be used as tables or walls.
- Old sheets can be transformed into flags or canopies.

have hazelnut groves, and the cracked shells make a lovely path material that is long-lasting and that ties in visually with nearby trunks and branches; walking on this material generates a sharp crunch that is somehow restful. Farms are usually eager to give you by-products that are useless to them, but you will have to haul these gifts away yourself. You'd be surprised what you might glean—anything from aged manure to mint hay to used tools.

Don't forget local manufacturers. Asking friends what their company's (or department's) waste products are might get you thinking: maybe I can make a fence of that, or stack it into a wall, or lash it together to make a trellis. Shipping pallets, for instance, can easily be recycled into compost bins. Stone scrap from the manufacture of kitchen counters can be turned rough side up to serve as stepping-stones.

Another source of materials is our public lands. If you ask the appropriate local



KAREN BUSSOLINI



Reused bricks are a good choice for a naturescape path because they hint of the area's history and save resources. Design by Betsy Arriola.

authority for permission, you might be surprised to find that you can help yourself to (a small amount of) an abundant natural resource, such as beach sand, river gravel or cobble, or fall leaves. Before asking for permission, be sure to have in mind what you want, how much you want, when you would like to remove it, and how you propose to haul it.

REIMAGINE AND REPURPOSE

Every culture since the dawn of time has used what is abundant to make shelter and landscape structures. Our 21st-century world also has things in abundance. Sadly, our abundance can be found in our landfills, where we have discarded household goods that have outlived their usefulness or stylishness, or simply don't work anymore. Enter repurposing, which takes a usually discarded item, say an old door, and fixes it up so it can have a new life as something else, say a picnic table.

I've seen great repurposed items in gardens: an old desk fitted with a secondhand sink to make a handy potting bench with a built-in soil funnel; cut-off sneaker soles placed in a concrete path to look like footsteps; and even a string-and-yogurt-cup rain chain. House salvage shops and secondhand stores are great places to start. Walk around these places with new eyes; don't see what it was but what it could be.

One caveat, though: to avoid tackiness, the repurposed part should not be easily identifiable as its former self. Better to make beautiful, useful garden pieces and elements that look vaguely familiar but can't quite be placed. It will add a touch of intrigue to your yard, and humor as your visitors solve the riddle.

IF YOU MUST BUY NEW...

In some cases, buying new is your only alternative. Purchasing new can be guilt-

free if you choose products that are non-toxic, have high recycled content, are locally produced, are durable, and are modular. It would be difficult to find one product with all of these attributes, but thinking in these terms will help you make informed decisions.

Toxic substances to avoid include paints and coatings with volatile organic compounds or VOCs, which contribute to smog and groundwater pollution. Also avoid arsenic and creosote, often used as wood preservatives in the past and found in old railroad ties, which have been sold as landscape timbers for many years. Stay away from any treated wood; perhaps even rethink wood if it decays quickly where you live.

More and more new products have high recycled content. Recycled content is high in some plastic landscape items such as rain barrels, composters, hoses, composite decking, and furniture. There is



Old stuff can have a new life in your garden—and bring your garden to life. This rose-themed path makes creative use of old tiles and manhole covers gleaned from an urban renewal project in Portland, Oregon (the Rose City).

even recycled wood mulch, made from old pallets rather than virgin wood.

Taking a cue from locavores, who make a good effort to eat only locally grown food, you can make a good effort to purchase only locally manufactured landscape materials. You might find that this is harder than it sounds. But it can be done with a bit of sleuthing. Start at your garden center—ask where the item was made. If they don't know, ask for the name of the distributor, who can tell you where it was manufactured. You may find that the product is not made nearby at all, but by asking around you are raising retailers' awareness that this is im-

portant to consumers. When given a choice, choose durable. For example, if you have decided on plastic lawn edging (to keep the grass roots from spreading to the adjacent flower beds), choose the more durable plastic. But also consider the bigger picture: What else can keep the roots at bay? Perhaps the answer is deep-set concrete blocks or natural stone.

And last, when buying new, choose modular over built-in. For example, if you want a patio, consider setting concrete blocks or natural stone in tamped sand rather than poured concrete (but do it accurately so it lasts for years without becoming uneven). That way, as the tides

PLANT YOUR HARDSCAPE

Although hardscape is conventionally understood to be nonliving, there's no reason why plants can't serve as structures that are incorporated into the landscape. Here are a few ideas:

- For a security wall, try planting a hedge of cactus, barberry, pyracantha, or holly.
- For a fence, why not use a thin hedge of upright shrubs or trees like hornbeam or arborvitae, or a cordon (a freestanding tree or shrub that has been trained to grow flat)?
- For latticework, an espaliered tree or shrub (one trained to grow flat against a structure) will work just fine.
- For a patio, let an organic lawn or a walk-on groundcover be the pavement.
- Instead of building an arbor, plant a tree to provide shade and something for your clematis to twine on.

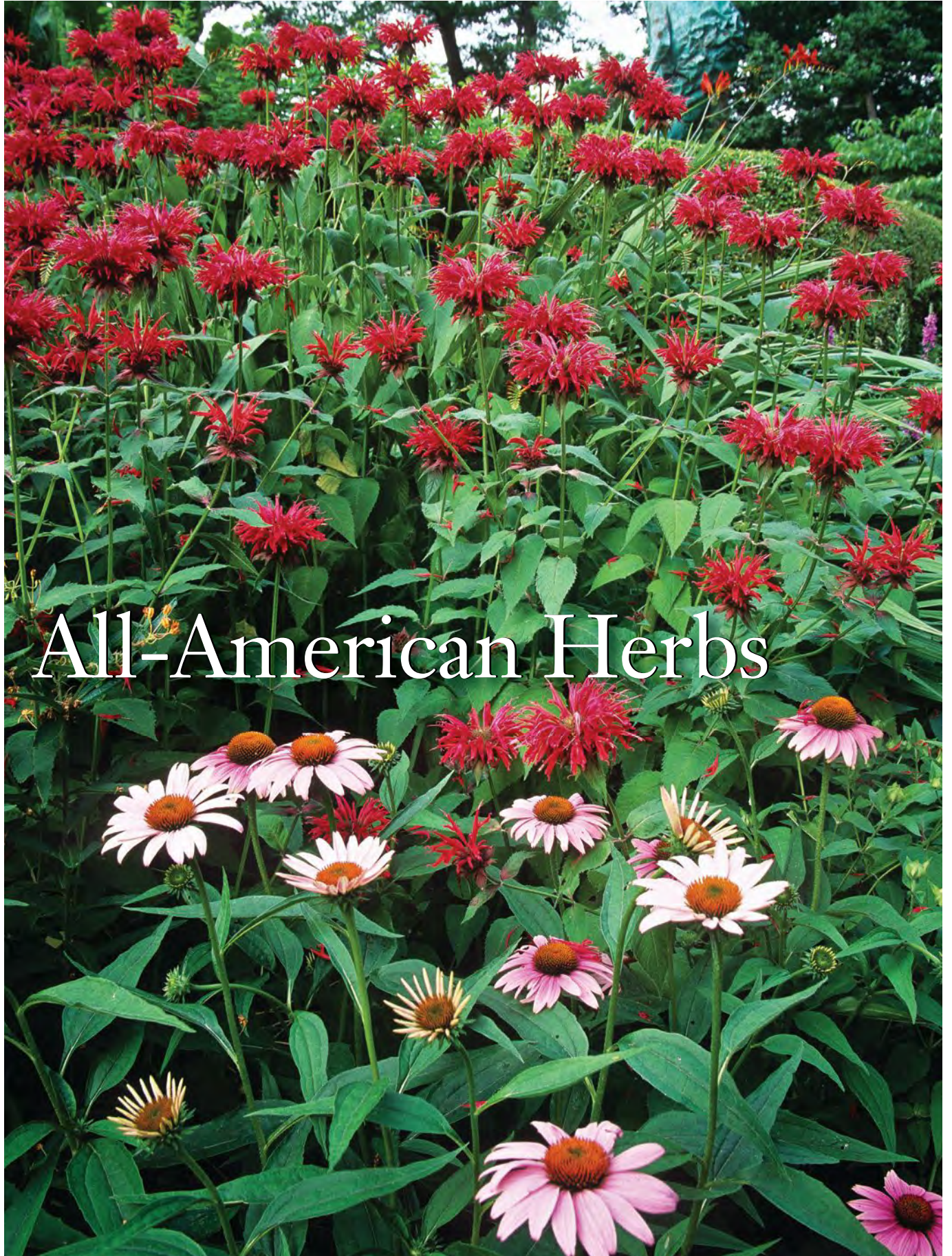
of landscape fashion change (they do, but slowly) you can give away, resell, or reset the pieces as you please—with no waste generated in the process.

THE AFTERLIFE

Regardless of whether your landscape materials are shared, natural, by-products, repurposed, or new, there's one last (and lasting) thing to think about: what happens when they are no longer needed? Will they take a lot of energy to break up and remove? Will they fall apart, leaving an unsightly, even toxic, mess?

The best choice, in respect to the afterlife, are the biodegradable items. Nature knows what it is doing. Natural materials do not need to be removed; when they are done, they revert to their elements and regroup into something cool like food for a termite or mealybug. And rather than requiring energy to break down, they generate energy for the garden as they all but magically disappear. Espaliered trees, walkable ground cover, even cacti can make excellent hardscape stand-ins; we just need to expand our definition of hardscape.

Beth O'Donnell Young owns a residential landscape design firm in Corvallis, Oregon.



All-American Herbs

MARK TURNER

HISTORICALLY, people have relied on herbs indigenous to their part of the world to improve their quality of life. Their many applications include medicines, dyes, fragrances, teas, and flavorings. However, the majority of herbs—such as lavender, thyme, and rosemary—grown in American gardens today originated in the region around the Mediterranean Sea, the Near East, and Asia.

While these herbs certainly earn their keep in our gardens, there are many herbs native to North America with plenty to offer. In fact, several have become popular

For a non-traditional herb garden, try some of these attractive and intriguing American native plants that have a long history of medicinal or culinary use.

BY DONALD HUMPHREY

ornamental plants that many gardeners grow without any awareness of their historic herbal properties. Others are more obscure native plants that deserve to be more widely known and grown.

Please keep in mind that although the plants in this article are generally regarded as safe to grow, the descriptions of traditional herbal or medicinal uses of these plants are included purely for informational purposes and should not be construed as a guide or recommendation for treating any medical conditions.

ORNAMENTALS WITH A MEDICINAL PAST

If you have perused the herbal medicine aisle at a supermarket or pharmacy recently, it will come as no surprise that America's native coneflowers (*Echinacea* spp.) have a long history of medicinal use. Most gardeners are familiar with purple coneflower (*Echinacea purpurea*, USDA Plant Hardiness Zones 4–9, AHS Heat Zones 9–1), but two other species worth planting are black Samson coneflower (*E. angustifolia*, Zones 4–9, 9–1)



Opposite page: Beebalm and purple coneflowers, growing here in the West Virginia garden of John and Clara Thomas, have long histories of medicinal and herbal use. Statuesque Culver's root, above, is a good back-of-the-border perennial.

from the Great Plains and pale purple coneflower (*E. pallida*, Zones 4–8, 8–1), which is native primarily in the central and upper Midwest.

Documented pharmaceutical uses of coneflowers date back to the 1880s, and Native Americans used roots, stems, leaves, and flowers to treat conditions ranging from burns, colds, and toothaches to snakebites. Studies have shown that the plant contains compounds that reduce inflammation and boost the immune sys-

tem. More to the point for gardeners, the attractive, long-lasting, lavender-pink summer flowers lend themselves well to sunny borders and draw an array of pollinators and other beneficial wildlife.

Native Americans utilized the roots of black cohosh (*Actaea racemosa*, Zones 3–8, 12–1) as a diuretic and to treat women's reproductive disorders. Native to most of eastern North America, it grows best in cool, moist locations. Its tall white spires of fuzzy spring and summer flowers

and rich green foliage make it an attractive back-of-the-border addition.

Though the root of rattlesnake-master (*Eryngium yuccifolium*, Zones 4–9, 12–1) was used by Native Americans and European settlers to treat a wide range of ailments, it was perhaps best known as a treatment for snakebites. Growing to four feet tall and half as wide, it features blue-gray, sword-shaped leaves up to three feet long and greenish-white, honey-scented, globe-shaped flowers in summer. Native from the Great Plains east to Connecticut and south to Florida, it grows best in full sun in well-drained, sandy soil.

The black root of Culver's root (*Veronicastrum virginicum*, Zones 4–8, 8–3), was used by Native Americans to treat coughs and fevers, to assist with childbirth, and for its powerful cathartic and emetic properties. Growing up to six feet tall and two to three feet wide with erect racemes of white or pale pink late summer flowers, it creates a distinct vertical accent in perennial or mixed shrub borders. Native to



Rattlesnake-master and *Agastache* 'Black Adder' make an attractive and drought-tolerant pairing, above right. A Joe-Pye relative with white flowers, boneset, below right, tolerates moist sites.

central and eastern North America, it is easily grown in well-drained soil in full sun or part shade.

Joe-Pye weed (*Eutrochium purpureum*, syn. *Eupatorium purpureum*, Zones 3–9, 9–1) has been used to treat burns, gout, and urinary tract infections. Growing five to seven feet tall and half as wide, it develops large panicles of pink flowers in summer that attract pollinators. Native to eastern North America, it grows best in full sun and moist to wet soils.

Similar in size and range, boneset (*Eupatorium perfoliatum*, Zones 3–8, 8–1) produces white flowers in late summer. Its common name is thought to refer to its use for healing broken bones or more likely because it was a household remedy in the 18th century for dengue or break-bone fever, which can cause pains in limbs.

One of my favorite wildflowers is pink-root (*Spigelia marilandica*, Zones 5–9, 9–2), which also goes by the less appealing name of wormgrass because of its historic use as a treatment for intestinal worms.





Once used to treat intestinal worms, pinkroot, above, has a more appealing role in a partly shaded garden site. Lemon beebalm, left, can be used to make tea that has a citrusy flavor.

Native to the southeastern United States, it prefers part shade and acidic soil. It grows to one-and-a-half feet tall and wide, so it works well at the front of a perennial border or at the edge of a path where its two-inch-long, red, trumpet-shaped flowers—and the hummingbirds it may attract—can be easily viewed.

AROMATIC HERBS

Several of the 17 species in the genus *Monarda* are known both for their herbal and ornamental qualities. Perhaps the most familiar to gardeners is *M. didyma* (Zones 4–10, 10–1)—commonly referred to as Oswego tea, beebalm, or bergamot—which is native to wooded areas in eastern North America, so it prefers moist, rich soil and tolerates some shade. The name “Oswego tea” refers to the use of the leaves for tea by early settlers in Upstate

New York. I enjoy a few leaves of it in my regular tea—the fragrance resembles that of the citrus bergamot orange, the oil of which is used to flavor Earl Grey tea. The species has bright red summer flowers, which are magnets for bees, butterflies, and hummingbirds, but cultivars are available in an array of colors. Because it suckers freely, it may need containment in a small garden. Mildew also can be a problem, especially in the South, but resistant cultivars are available.

Native to most of the United States and Canada, *M. fistulosa* (Zones 3–9, 9–1) has pale lavender flowers, mint-scented foliage, and is known variously as horse mint or wild bergamot. The Spanish name *oregana de la sierra* suggests its use in the kitchen garden. Unlike *M. didyma*, it is drought resistant. Less ornamental than the preceding species are mint-leaf bergamot (*M.*

Resources

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

A Field Guide to Western Medicinal Plants and Herbs by Steven Foster and Christopher Hobbs. Houghton Mifflin Company, Boston, Massachusetts, 2002.

Herb Society of America, www.herbsociety.org.

The History and Folklore of North American Wildflowers by Timothy Coffey. Houghton Mifflin Co, Boston, Massachusetts, 1993.

National Geographic Guide to Medicinal Herbs by Rebecca L. Johnson, Steven Foster, Tieraona Low Dog & David Kiefer. National Geographic Society, Washington, D.C., 2010.

North American Native Plant Society, www.nanps.org.

Sources

Mountain Valley Growers, Inc., Squaw Valley, CA. (559) 338-2775. www.mountainvalleygrowers.com.

Plants of the Southwest, Santa Fe, NM. (800) 788-7333. www.plantsofthesouthwest.com.

Prairie Nursery, Westfield, WI. (800) 476-9453. www.prairienursery.com.

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

The Sandy Mush Herb Nursery, Leicester, NC. (828) 683-2014. www.sandymushherbs.com.

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

Though traditionally used in medicinal and culinary teas, I have used the leaves in cooking in the same manner as oregano and find the scent very pleasant. It may be short-lived, so saving seeds is suggested.

Native to the Southwest, threadleaf giant hyssop (*Agastache rupestris*, Zones 5–9, 9–5) is a real jewel. It is a subshrub that grows up to three feet tall and nearly as wide. The soft gray-green leaves have a root beer aroma. The one-inch, tubular, pink-and-orange flowers, which attract hummingbirds, appear by midsummer and continue until a hard frost. It prefers full sun and sharply drained soil. Since it flowers the first year if started early, it may be grown as an annual in colder climates.

Yerba buena or Oregon tea (*Clinopodium douglasii*, syn. *Satureja douglasii*, Zones 6–9, 8–6) is a low-growing, creeping perennial native primarily along the Pacific Coast from British Columbia south to southern California. Its rounded green leaves have a mintlike scent and can be dried and used to make a tea. Tiny white or pinkish flowers bloom off and on from late spring into summer. It's suitable as a groundcover in shade or part shade, slowly spreading to three or four feet in diameter. It thrives in moist soils but is drought tolerant, sometimes going dormant during dry periods.

LESSER-KNOWN SPECIES

Related to yerba buena is Georgia calamint

fistulosa ssp. *fistulosa* var. *menthifolia*, Zones 3–9, 9–1) and the annual lemon balm (*M. citriodora*, Zones 6–10, 10–2). Both are native to the central United States, have aromatic leaves, and have traditionally been used in teas.

Stone mint or dittany (*Cunila origanoides*, Zones 6–8, 8–6) is found from

New York to South Carolina and west to Oklahoma in dry woodlands. It has a penchant for sloping, well-drained sites. It has small, delicate leaves, and its branches divide again and again, giving it a light, airy appearance. Growing to a foot or so in both height and width, it is covered with small lavender flowers in late summer.



Both threadleaf giant hyssop, above, and Lemmon's marigold, shown right growing at Cistus Nursery in Oregon, have fragrant foliage and are native to the American Southwest.





A compact selection of California blue sage, 'Winnifred Gilman' bears fragrant deep violet flowers at the end of thin, reddish stems.

(*Clinopodium georgianum*, Zones 7–8, 8–7), which occurs from North Carolina to Mississippi. This upright shrub grows about 20 inches high, and is clothed in narrow, green, mint-scented leaves that are used in teas. The numerous half-inch lavender flowers appear on the upper part of the stems in autumn.

Lemmon's marigold (*Tagetes lemmonii*, Zones 8–9, 12–1) is a slightly woody perennial, endemic to the mountains of southeastern Arizona where it grows in rich, moist canyon soils. It is a bushy plant with finely divided, aromatic, deep green leaves sometimes used to flavor Tex-Mex cuisine. It grows to two feet or more in height and width. The abundant, inch-wide, soft yellow flowers are also fragrant, but with a warmer, subtler scent. Because the blooms appear in late fall, an early cold snap may kill the flowers in northern gardens.

A somewhat better-known marigold native from Sonora southward is Mexican tarragon or sweet-scented marigold (*T. lucida*, Zones 8–11, 12–1), which releases a

unique scent that I find both warm and sweet. It flourishes in high summer heat, making it a practical substitute for French tarragon, which does not. The plant bears little resemblance to typical marigolds in that its leaves are entire and untoothed, but its late autumn flowers, though small and insignificant, give it away.

The modest little plants of the American genus *Hedeoma* bear a superficial resemblance to the Old World thymes. Most of the 20 or so species are found from Texas to Arizona, but a couple hail from the eastern United States. The only species I have grown is aromatic false pennyroyal (*H. hyssoipifolia*, Zones 7–9, 12–6), native to Arizona and New Mexico. The flowering stems grow to a foot or more and bear tiny lavender-pink flowers in summer. The evergreen winter growth is composed of numerous, erect stems with tiny, fragrant leaves said to contain oils that repel insects.

The chaparral of San Diego County and adjacent Baja California is the home

of California blue sage (*Salvia clevelandii*, Zones 8–10, 10–1). It resembles garden sage with its gray, puckered foliage, but because it grows three to four feet tall and twice as wide, it appears more shrublike. Its whorls of blue-purple flowers open from late spring through summer and attract bees. The fragrant leaves are used in sachets and potpourri. It grows best in full sun and well-drained soil. In cooler regions, it makes an attractive container plant for a sunny terrace.

Many fine native plants with herbal properties exist in every region of the country. While a good number of them are already well known, others are exciting, little-known plants that will add beauty and intrigue to your garden. ☪

Donald Humphrey is former garden manager of Green Springs Garden Park in Alexandria, Virginia. Now retired, he lives in Worthington, Ohio. This article is a revised and adapted version of one published in the July/August 2002 The American Gardener.

FROM SPRING TO FALL, the front courtyard garden at my Oregon home becomes a butterfly magnet alive with colorful motion. The garden is frequented by many species, including swallowtails, blues, painted ladies, California sisters, and my childhood favorite, the ever sociable skipper. And every year without fail we have new generations of butterflies that come to visit and linger in the garden.

There are more than 800 species of butterflies in North America (not to mention over 10,000 moth species). The best way to lure these winged wonders to your garden is by enticing them with the crea-

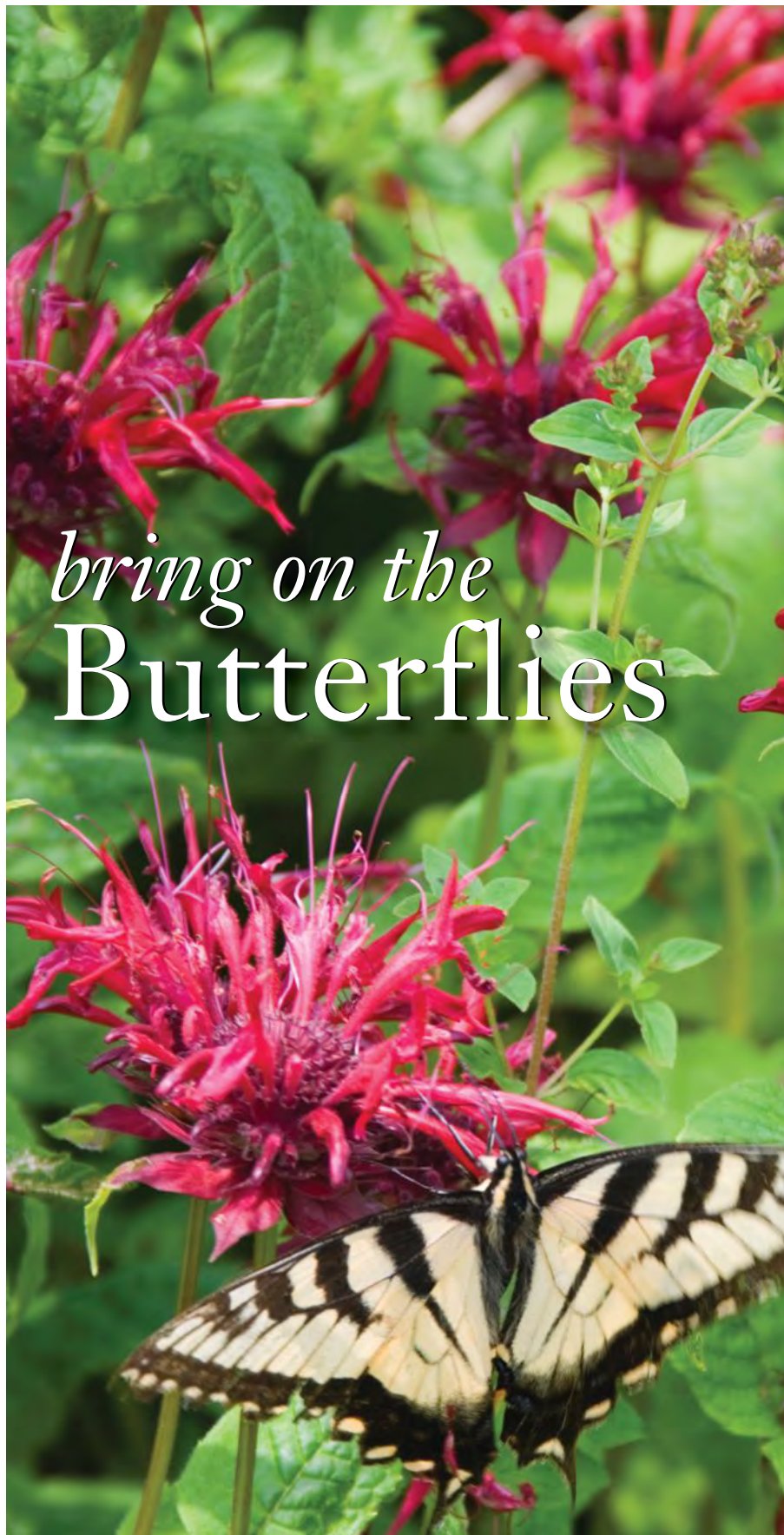
No matter where you live or what size your garden, there are many things you can do to encourage butterflies and moths to visit your garden.

BY KRIS WETHERBEE

ture comforts we all need for survival: food, water, shelter, and places where their young can grow. But even the best of garden designs can lack magnetic potential if you don't know which butterflies reside in your area or visit during migration.

Familiarizing yourself with the butterfly species that are common to your region will help in selecting appropriate plants to grow to attract them, which is especially important if space is limited. Butterflies feed from a wide variety of nectar flowers, but each species does have their favorites and these don't always overlap. More important, butterflies only lay their eggs on the specific host plants for the larval stage of their life cycle because caterpillars often require very specialized diets.

Many resources are available that can help you learn about local butterfly species, including your cooperative extension office, regional guidebooks, conservation groups in your area, and specific organizations that offer information about butterflies and other pollinators (see "Resources," page 33).



A swallowtail butterfly sips nectar from scarlet beebalm (*Monarda didyma*).

NECTAR SOURCES

A garden with drifts of colorful flowers laden with sweet nectar will entice a wide variety of butterflies to visit. Not all flowers are created equal, however, at least from a butterfly's perspective. The flower's color, shape, and fragrance will attract butterflies to varying degrees, but the quantity and accessibility of the nectar is what will cause them to stay and feed.



Butterflies taste with their feet, which are equipped with special receptors for sweetness. When those receptors find a nectar-laden treasure, these insects will uncoil their tubular tongues (called proboscises) and use them like straws. Once a butterfly discovers its favorite flowers, it will return to that location again and again.

Adult butterflies typically have very cosmopolitan tastes, which are best served with a smorgasbord of nectar-rich flowers with a variety of floral shapes. Regionally native plants are ideal because these are the plants the butterflies evolved

with, but many non-native nectar plants are also suitable.

Composites—plants that have daisy-like flowers—are great for the masses, providing an excellent all-around nectar source for many butterflies. Asters, cosmos, chrysanthemums, coneflowers (*Echinacea* spp.), black-eyed Susans (*Rudbeckia* spp.), sunflowers (*Helianthus* spp.), and zinnias are just a few examples

spp.), and penstemons; then wrap up with fall-blooming plants such as asters, salvias, mums, sedums, and goldenrods (*Solidago* spp.).

Another way to enhance your garden's appeal to pollinators is to include layers of plants that flower at different heights—this takes advantage of the vertical space that goes unused in many yards. Flowering vines are a particularly efficient way to do this in small gardens.

Not all butterflies seek out nectar from flowers, so don't neglect supplying other sources of food. Mourning cloaks, red-spotted purples, tawny emperors, and a



Cater to butterflies of all kinds by combining plants with a variety of flower shapes, left, such as black-eyed Susan (*Rudbeckia hirta*), goldenrod (*Solidago canadensis*), and yarrow (*Achillea* sp.). Leaving out a plate of cut-up fruit, above, will attract butterflies that don't feed on nectar, including this owl butterfly.

few other species prefer the sap that exudes from certain trees, bird droppings, animal dung, and rotting fruit. Even nectar-loving species such as painted ladies and monarchs have been known to dip their tongues into things like overripe bananas (mashed), past-their-prime peaches, and watermelon rinds.

You can let nature do its own thing with the bird droppings and sap flows, but offering fruit in a saucer or bird feeder is easy to do. It may take a day or two for fresh fruit to reach the butterfly-attracting stage—the riper the fruit, the more appealing it is to these butterfly species.

FEEDING CATERPILLARS

With a season-long buffet of flowering plants to keep butterflies well fed, the

of nectar-rich composites. Plants that bear inflorescences composed of many small flowers, bell-shaped flowers, and tubular flowers also lure butterflies into the garden.

To keep butterflies coming to your garden all season long, include plants that bloom at different times of the year. For example, you might include spring-blooming plants such as dianthus, lilacs (*Syringa* spp.), lupines, and phlox; span the hot summer months with beebalm (*Monarda* spp.), coneflowers, milkweeds (*Asclepias* spp.), lavenders (*Lavandula*



Milkweed, shown flowering, above, is a host plant for the striped larva of monarch butterflies, above right. An adult monarch, right, sips nectar from a verbena flower.

adult females may linger to lay their eggs as long as the appropriate host plants are available. And catering to caterpillars by growing host plants leads to more butterflies fluttering around the garden throughout the seasons.

Unlike their more generalized parents, caterpillars are very picky eaters. As a result, the female of each species seeks out a specific plant or plants on which to lay its eggs. This is where knowing the butterfly species common to your area really comes in handy.

Monarch caterpillars, for example, feed exclusively on milkweed (*Asclepias* spp.), while pearl crescent caterpillars dine primarily on asters. Tiger swallowtails seek out tulip poplar and cherry trees, while black and anise swallowtail caterpillars dine on dill, fennel, and parsley. Fritillaries adore violets, red admirals feast mainly on nettles, and painted ladies prefer hollyhocks and thistles.

Keep in mind that caterpillars are champion eaters. A monarch butterfly larva, for example, gains about 2,000 times its weight in two weeks or less. As a result, host plants may look somewhat ragged and defoliated. The nibbles might be less noticeable if you mingle them among other plantings, hide them in the back of



the border, or confine them to a back corner of the yard. Any cosmetic deficiencies will seem well worthwhile once you start seeing all the newly emerged butterflies.

WATER WORKS

Nectar alone does not provide for all the nutrients that butterflies need. Butterflies seek water for certain minerals. Even a simple water source, such as soaker hoses in garden beds, can provide a place for butterflies to drink.

You can easily make any bird bath a butterfly-friendly water station by placing

small stones in one side of the saucer. Simply position them to create a series of steps or islands, making sure the tops of the stones are slightly above water level so the butterflies have a safe place to perch.

Puddles are another way to offer valuable nutrients. Mostly adult males gather around these wet spots—a behavior known as “puddling.” The nutrients strengthen the male’s sperm, encourage breeding, and improve the viability of the female’s eggs. Much like the highly concentrated nutrients in dried fruit (as opposed to fresh), they become even more



Another way to enhance your garden's appeal to butterflies is to provide a moist "puddling" site like this one, where they can gather to drink up needed nutrients.

concentrated as the water evaporates from the puddle. As a result, butterflies often continue visiting these puddling sites until they're nearly dry.

You can create an artificial puddle by burying an old pail or plastic container filled with wet sand or soil. Create places for butterflies to perch by positioning a few sticks or rocks on top of the sand, and be sure to refill the bucket before it runs dry.

SUNSHINE AND SHELTER

Situate your butterfly garden in a sheltered area that receives at least six hours of direct sunlight daily. Being cold-blooded creatures, butterflies need sun-

light and warmth in order to fly. At 60 degrees Fahrenheit they begin to flutter and launch their colorful flight. Their flight improves as temperatures rise and the sun dries their wings

Butterflies also bask in the sun to absorb heat so they can fly when temperatures are lower. Help them out by placing flattish rocks, paving stones, or other heat-absorbing material in the sunnier areas of your garden. If the location is right, this may become a butterfly sunbathing station.

A windbreak of trees or shrubs will give butterflies a place to hide from the elements and roost at night. An open shed or any nearby evergreen or broad-leaved de-



Flattish rocks in a sunny part of the garden offer butterflies a site to bask on cool days.

Resources

BOOKS

Attracting Birds, Butterflies & Other Winged Wonders to Your Backyard by Kris Wetherbee. Lark Books, New York, New York, 2004.

Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens (revised edition) by Douglas W. Tallamy. Timber Press, Portland, Oregon, 2009.

The Xerces Society Guide to Attracting Native Pollinators by Eric Mader, Matthew Shepherd, Mace Vaughan, Scott Hoffman Black, and Gretchen LeBuhn. Storey Publishing, North Adams, Massachusetts. 2011.

ORGANIZATIONS

Butterflies and Moths of North America, www.butterfliesandmoths.org.

The North American Butterfly Association, www.naba.org.

The Xerces Society, www.xerces.org.

ciduous trees serve as good shelter sites. Leave a few fallen leaves, pieces of tree bark, and other natural detritus where they fall so butterflies will have places to crawl underneath for shelter. A loosely stacked log or rock pile also creates a safe haven with its many open nooks and crannies.

AVOIDING INSECTICIDES

Most pesticides—including the ones labeled organic—are just as lethal to beneficial wildlife as they are to their target pests. So if you want butterflies and other pollinators, avoid using pesticides or restrict their use to small areas of your garden.

Instead of relying on pesticides, try giving nature a chance. A few weeds and pest insects are a natural and essential part of any healthy habitat. It's when ecosystems get out of balance—a condition that can be triggered by persistent pesticide use—that pest insects are likely to become abundant enough to cause significant damage.

You are off to a good start by growing the nectar plants and host plants butterflies seek, because this will also encourage other beneficials—including predatory insects such as lady beetles and lacewings—to take up residence in your garden, which will help keep pest populations in check.

PROVEN PERFORMERS FOR BUTTERFLIES

The following plant genera are easy to grow and broadly adaptable in North America. Most include a range of species that are native to different regions; consult regional guides or the resources listed on page 33 to identify species that do best in your area. Note, the butterflies listed with each plant group are just the ones most commonly associated with the genus; other types of butterflies may also visit these plants.

Common name (Botanical name)	Height/Spread (feet)	Ornamental features	Butterflies	USDA, AHS Zones
Asters (<i>Aster</i> / <i>Symphotrichum</i> spp.)	2–5/1–3	Clusters of white to purple flowers late summer to fall	bf, bl, cp, mo, pl, sk, su, wh	Zones vary
Beebalm (<i>Monarda</i> spp.)	1–4/1–4	Annuals and perennials with aromatic foliage and summer flowers	bl, wh	Zones vary
Milkweeds (<i>Asclepias</i> spp.)	2–6/1–3	Easy-care perennials with clusters of tubular flowers in summer	bf, bl, cp, hs, mo, pl, sk, su, st	Zones vary
*Chrysanthemums (<i>Chrysanthemum</i> spp.)	1–4/1–3	Perennials and annuals with colorful flowers in late summer	bf, mo, sk, su, st	Zones vary
Coneflowers (<i>Echinacea</i> spp.)	1–4/1–3	Easy-care perennials with daisylike white to purple flowers in summer	bf, pl, sk, su, st, wh	4–9, 9–1
Coreopsis, tickseeds (<i>Coreopsis</i> spp.)	2–4/1–2	Easy-care perennials and annuals with yellow flowers in spring to summer	bf, mo, pl, sk, su	Zones vary
*Lantanas (<i>Lantana</i> spp.)	2–8/2–6	Fast-growing annuals or warm-climate shrubs with colorful summer flowers	bf, hs, mo, sk, su, st, wh	7–12, 12–1
*Lavenders (<i>Lavandula</i> spp.)	1–4/2–4	Drought-tolerant perennials or shrubs with spikes of white to purple summer flowers	bf, hs, pl, sk, su, st	Zones vary
*Salvias (<i>Salvia</i> spp.)	1–5/1–3	Annuals and perennials with spikes of colorful tubular flowers in summer	bf, hs, pl, su, sk, wh, st	Zones vary
*Zinnias (<i>Zinnia</i> spp.)	1–4/1–2	Heat-loving annuals that bloom from summer until frost	bf, mo, pl, sk, su, st, wh	9–11, 12–1

bf = brushfoots; bl = blues; cp = coppers; hs = hairstreaks; mo = monarchs; pl = painted ladies; sk = skippers; su = sulphurs; st = swallowtails; wh = whites *Good for containers

CONTAINER BUTTERFLY PLANTS

Whether in the form of planters, hanging baskets, or window box gardens, container plantings are a quick and compact way

to dish up a portable feast for butterflies, especially where space is limited.

The key to creating an attractive display that both people and butterflies can enjoy is to have some of the same color themes and plant types in a container while varying the heights, textures, and bloom times. You can achieve this by combining trailing, bushy, and upright plants—either by grouping pots, each containing a single species, or by planting several species in one container. You can also arrange your containers at varying heights by putting them on

bricks, pedestals, upside-down pots, or plant stands.

To get the most out of your butterfly container gardens, place them in areas you spend a lot of time in or can view from inside the house, such as a patio, deck, courtyard, or entrance area. You can also use potted plants to fill in bare spaces in a newly planted perennial bed or garden border. Stagger them on steps, encircle a tree, or use them to line a walkway or path.

Whether your butterfly attraction of choice is a container garden, a small bed, or an entire garden or meadow, one thing is for certain: With a little planning and the right selection of plants, it's easy to provide an enticing habitat for butterflies—not to mention other pollinators and hummingbirds—and a beautiful oasis for yourself.

Where garden space is limited, you can grow nectar-rich plants like verbena in containers to attract butterflies.

Kris Wetherbee's garden in Oakland, Oregon, is a haven for butterflies.



the Bulbs of Summer

Add an exotic touch to your garden with an alphabet's worth of summer-blooming bulbous plants from *Agapanthus* to *Zephyranthes*.

BY DAVID J. ELLIS

MOST OF US have an established design or theme in our gardens, but even the most conservative gardener enjoys trying something slightly exotic or unusual to add a splash of color in a bed or container. One easy way to accomplish this is with tropical or subtropical bulbous plants that bloom in summer. The plants profiled in this article are selected from those I have tried over the last decade in my Maryland garden along with others recommended by experts in different regions of the United States. Many of these plants are hardy only in the warmest regions of the country but can be grown as annuals or container plants in most gardens, while others may perennialize in moderately temperate gardens—or can be dug in fall and stored indoors during winter. With the increased minimum average temperatures American gardeners have experienced over the last few decades, it's worth experimenting with some of these plants in areas where they were not previously successful.



Crinum × *powellii*

AFRICAN LILY, AGAPANTHUS (*Agapanthus* × *hybridus*, USDA Zones 7/8–11, AHS Zones 12–5)

Native to southern Africa, African lilies are rhizomatous bulbs in the onion family. Clumps of elegant, straplike foliage emerge in midsummer, followed by globular clusters of purple, blue, or white flowers on long stems. There are both evergreen and deciduous varieties. Some hybrids are hardy to USDA Zone 7 (possibly 6), but the limiting factor for success in temperate gardens is their aversion to winter moisture. “It’s a great plant for Mediterranean climates like California, but difficult for the rest of us,” says Brent Heath, co-owner of Brent and Becky’s Bulbs in Gloucester, Virginia. “However, it can be grown successfully in containers if you can give it a warm, dry dormant period in winter.” Se-



Agapanthus ‘*Ellamae*’

lections to consider include ‘Ellamae’ (Royal Ama™) (dark blue flowers on four-foot stalks) and ‘Storm Cloud’ (dark blue flowers on three- to four-foot stems). Short selections suited for containers include ‘Peter Pan’ (blue flowers on one- to two-foot stems) and ‘Snow Storm’ (white flowers on two- to three-foot stems).

Planting and care Plant the bulbous rootstock so the crown is just below soil level in free draining, loamy soil. They will thrive in full sun or part shade; afternoon shade is advisable in regions with hot summers. Once established, they are fairly drought tolerant.

CRINUMS, SWAMP LILIES (*Crinum* spp., zones vary by species)

Members of the amaryllis family, crinums are found in tropical regions around the

globe, usually in marshy or seasonally wet habitats. Growing from large bulbs, crinums develop clumps of broad leaves that are evergreen in regions with mild climates. Striking clusters of lilylike flowers bloom on upright stems in late spring or early summer. Recommended crinums include the hybrid ‘Ellen Bosanquet’ (Zones 8–10, 10–7), a classic southern passalong plant with large, deep pink to burgundy flowers on three- or four-foot stems. “It’s pretty long-blooming for a crinum and has a sweet fragrance,” says Pam Baggett, a garden writer and former nursery owner in Cedar Grove, North Carolina. Other choices to consider are Powell’s crinum (*C. ×powellii*, Zones 6–9, 9–5), a hardy hybrid with fragrant pale pink or white flowers on two-foot stems, and fragrant white-flowered swamp lily (*C. americanum*, Zones 8–11, 12–8), which is native to wetlands in the southern United States.

Planting and care Crinums are adaptable to a range of soils and will tolerate drought when not in active growth. At the upper limit of their hardiness range, growers advise planting the large bulbs extra deep—as much as a foot.

CROCOSMIAS (*Crocosmia* hybrids, Zones 6/7–9, 9–3)

In the category of easy-to-grow bulbous perennials for summer bloom, crocosmias have few rivals other than lilies. Growing from corms, these iris family members from subtropical Africa send up tight clumps of rapier-thin foliage two to three feet tall in late spring or early summer. Soon thereafter, tidy clusters of funnel-shaped, bright red, orange, or yellow flowers unfurl at the end of arching spikes, drawing hummingbirds. Dozens of cultivars are available, including time-tested and vigorous ‘Lucifer’ (bright red flowers). More compact selections include ‘Solftare’ (yellow flowers and bronze-tinted foliage) and ‘Emily McKenzie’ (orange flowers with red bases).

Planting and care Plant corms two to four inches deep in free-draining, moderately fertile soil in full sun. They are fairly drought tolerant but should be watered during prolonged spring or summer dry periods. Clumps spread slowly (they can spread rapidly in fertile soil) and should be divided every two to four years to maintain vigor.

PINEAPPLE LILY (*Eucomis comosa*, Zones 7–10, 10–6)

Whether planted in the ground or in a container, pineapple lily is a surefire conversation starter. Native to the tropics of southern Africa, this lily relative forms a rosette of straplike leaves in early summer. Two- to three-foot spikes of densely clustered, greenish white flowers with pink or purple highlights bloom in mid- to late summer. Each spike is crowned with leafy bracts that look like the tops of pineapples. Baggett grows them in a perennial bed with companions such as bronze fennel and purple euphorbias that mirror the pineapple lily’s coloring. ‘Sparkling Bur-

gundy’, a selection with deep purple foliage, “is a real tough plant that comes back reliably,” says Baggett.

Planting and care Plant bulbs six to eight inches deep (more shallowly in containers) in a sunny spot in fairly fertile, free-draining soil. Water regularly while in active growth. Divide bulbs every five years or so to ensure continued vigor.

SUMMER HYACINTH (*Galtonia candicans*, Zones 6–9, 9–5)

These lily family members, native to South Africa, look like spring-blooming hyacinths on steroids. Large clumps of straplike leaves emerge in early summer, followed by four-foot spikes of fragrant,



Crococsmia ‘Lucifer’



Eucomis comosa 'Sparkling Burgundy'



Gladiolus murielae



Galtonia candicans

drooping, creamy white flowers that open in mid- to late summer, drawing pollinators of all kinds. The foliage can look a bit unruly late in the season. “They tend to bloom around the time daylilies peter out,” says Jim Shields, the now retired owner of Shields Gardens, a mail-order nursery in Westfield, Indiana. Shields grows his galtonias in a raised bed that also holds daylilies and daffodils.

Planting and care Plant bulbs six to eight inches deep and at least a foot apart in a sunny site with free-draining, moderately fertile soil. Watch for slug or snail damage.

ABYSSINIAN GLADIOLUS (*Gladiolus murielae*, syn. *Acidanthera bicolor*, Zones 8–II, II–5)

Prized for its fragrant, evening blooming flowers, Abyssinian gladiolus is easy to grow in borders or containers. Native to

eastern Africa, this iris family member grows from corms to form clumps of upright foliage two to three feet tall. Its white flowers, graced with a maroon or chocolate-colored splotch around the base of the petals, bloom in late summer to early fall. “The longer you garden, the more you appreciate plants like this,” says Scott Kunst, owner of Old House Gardens nursery in Ann Arbor, Michigan. “They are beautiful from when they first start forming flower spikes.” According to Kunst, they are well suited to coastal regions. “We grow them as annuals, but you can dig them and store them over winter very easily,” he says.

Planting and care Plant corms two to three inches deep in free-draining, moderately fertile soil. They do best in full sun except in warmer regions, where afternoon shade would be beneficial.



Gloriosa superba

GLORIOSA LILY, FLAME LILY (*Gloriosa superba*, Zones 8–11, 11–7)

Native to open woodlands of southern Africa, this sprawling climber grows from a fleshy tuberous rootstock. Its wiry four- to six-foot stems are cloaked in sparse, lilylike leaves featuring twining tendrils. The striking red-and-yellow flowers, composed of six curling tepals with crinkled edges, bloom on side shoots in mid- to late summer. It can be trained on a mailbox or trellis, grown up through a shrub, or allowed to sprawl out of a container. Brent Heath says gloriosa lilies are “a cut-and-come-again plant—you take old flowers off and new ones develop” that make excellent cut flowers. ‘Rothschildiana’ is a vigorous selection with large flowers. *Note:* All parts of gloriosa lily are poisonous.

Planting and care Plant rootstocks horizontally in free-draining, moderately fertile soil (a blend of coarse sand and organic matter is ideal). Full sun is best except in very hot regions, where they appreciate some afternoon shade.

GIANT CHINCHERINCHEE (*Ornithogalum saundersiae*, Zones 7–10, 10–5)

Another little-known garden showstopper with a mouthful of a name (it is sometimes called star-of-Bethlehem, but that name is used more for its seedy relative *O. umbellatum*), this plant announces its presence with a clump of straplike leaves in early summer. In mid- to late summer, large clusters of star-shaped, creamy white flowers with greenish black eyes bloom atop

three- to five-foot spikes. “It provides extremely long lasting flowers in the garden and in the vase,” says Heath, who grows it at the back of the border in his tropical garden. These South African natives tend to be a one-year wonder in the garden, but can be dug and stored overwinter or planted in containers. Although fairly easy to grow from seed, they do not exhibit the self-seeding tendency of *O. umbellatum*.

Planting and care Plant bulbs two to

TIPS FOR SUCCESS

Because a number of the plants in this article are from the Southern Hemisphere and require a dry, dormant period in winter, planting them in sites with free-draining soil is vital. Amend garden or container soil if needed with a combination of either coarse sand or fine gravel and organic matter such as compost or leaf mold.

In regions where bulbs are borderline hardy, look for planting sites in warm microclimates, such as at the base of south- or east-facing walls or foundations.

Avoid planting summer bulbs too early. “Most summer-flowering bulbs should not be planted outdoors until the soil temperature is above 60 degrees or they become more susceptible to fungal diseases,” says Brent Heath. To give bulbs a head start, plant them so their crowns are just above the soil level in a container and place them under a growing light. Move them outdoors once the soil is warm enough. —D.J.E.



Zephyranthes candida

four inches deep and four to six inches apart in free-draining, loamy soil in full sun. Once established, they are relatively drought tolerant.

RAIN LILIES (*Zephyranthes* spp., Zones vary by species)

Rain lilies, sometimes called zephyr lilies, provide serendipitous delight with their tendency to magically bloom after summer showers. Native primarily in the southern United States and Central and South America, these diminutive amaryllis family members tend to do best in containers for most American gardeners, but a few species thrive outdoors in free-draining sites in Texas and the Gulf Coast states.

“Rain lilies are one of the most endearing summer bulbs for southern gardens,” says Chris Wiesinger, owner of Southern Bulbs Co., a mail-order nursery in northeastern Texas. “They provide a lot of bloom for little bulbs and are easy-to-work-with, versatile plants.” Wiesinger mostly grows *Z. grandiflora* (syn. *Z. carinata*, Zones 9–11, 11–5), a



Ornithogalum saundersiae

Central American native that has lax, foot-long, grasslike foliage and two- to four-inch-wide, trumpet-shaped, rosy-pink flowers. Wiesinger sometimes mixes rain lilies in with low groundcovers such as liriopse, but prefers growing them in pots. “The nice thing about having them in pots is you can keep them close to the house to enjoy them in the heat of summer,” he says. “You forget about them

Resources

Bulbs (revised edition) by John E. Bryan. Timber Press, Portland, Oregon, 2002.

Garden Bulbs for the South (2nd edition) by Scott Ogden. Timber Press, Portland, Oregon, 2007.

Herbaceous Perennial Plants (3rd edition) by Allan M. Armitage. Stipes Publishing, Champaign, Illinois, 2008

Sunset Western Garden Book (9th edition), edited by Kathleen Norris Brenzel. Sunset Publishing, Menlo, California, 2012.

Sources

Brent & Becky's Bulbs, Gloucester, VA. (877) 661-2852.

www.brentandbeckysbulbs.com.

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

Old House Gardens, Ann Arbor, MI. (734)995-1486.

www.oldhousegardens.com.

The Southern Bulb Co., Golden, TX. (888) 285-2486.

www.southernbulbs.com.

and then all of sudden it rains and they pop back into your life.”

Unlike most rain lilies, white rain lily (*Z. candida*, Zones 8–10, 11–6) thrives in seasonally moist sites. Wiesinger plants them in pots submerged in water, but says they also do well in bog gardens. Blooming in late summer to fall, they have creamy white flowers that are smaller and more star-shaped than *Z. grandiflora*. Atamasco lily (*Z. atamasco*, Zones 7–10, 10–5), native to the American Southeast, is another species for bog gardens. It grows two to three feet tall with narrow, rounded leaves and fragrant white spring flowers.

Planting and care Plant rain lilies only an inch or so deep and leave little space between bulbs. In containers, they are reputed to bloom more vigorously when crowded. They grow best in full sun or part shade and, with the exception of the two species mentioned above, require free-draining soils.

David J. Ellis is editor of The American Gardener.

Gardens of Cantigny

by Jo Ellen Meyers Sharp

EACH YEAR, thousands of garden lovers flock to the greater Chicago area's best known sites such as Chicago Botanic Garden and Morton Arboretum. A bit off the beaten path in Wheaton, Illinois, about 25 miles west of downtown Chicago, is a secret garden of sorts—Cantigny Park.

AGRICULTURAL ORIGINS

Cantigny (pronounced can-TEE-knee) was founded as Fair Oaks Farm by Joseph Medill, an 1870s Chicago mayor who owned and published the *Chicago Tribune*. His grandson, Robert R. McCormick, also a *Tribune* publisher, inherited the property in 1920 and cultivated it as an experimental farm to provide fodder for a daily newspaper column about modern farming methods. McCormick, a U.S. Army colonel in World War I, renamed the property Cantigny after the May 1918 battle he fought in the French village of the same name.

When McCormick died in 1955, his substantial fortune was invested in the Robert R. McCormick Foundation, which supports Cantigny and other charitable organizations. The foundation hired landscape architect Franz Lipp to create the gardens in the 1960s. Lipp's de-



The newly developed Reflection Point at Cantigny includes the Spirit of Commitment sculpture.

signs take advantage of the property's natural beauty, incorporating its creeks, hills, and meadows.

THE GARDENS

I recommend visitors to Cantigny get an orientation to the estate at the **Visitor's Center**. Within the larger confines of the 150-acre park, the 22 formal and informal gardens of Cantigny occupy nearly 30 acres. Highlights of the gardens include

the **Formal Garden**, which contains a large water fountain, the **European Tree Garden**, and densely planted annual and perennial beds.

The recently expanded **rose garden** holds 1,200 roses, including many new introductions. In 1962, the 'Chicago Peace' rose—a fragrant, pink and yellow sport of the famous 'Peace' rose—was discovered at Cantigny.

The **Idea Garden** features the latest vegetables and annuals, as well as examples of useful garden structures. There's also an **herb garden** and **children's garden**.

Cantigny's newest addition is **Reflection Point**, which sits amid a two-acre prairie planted with native grasses and forbs. Here, visitors can view the **Spirit of Commitment** sculpture, which celebrates the pioneer spirit.

Cantigny's gardens and the parklike grounds embrace nature throughout the seasons, offering visitors something to explore and enjoy year round.

Garden columnist and author Jo Ellen Meyers Sharp lives in Indianapolis, Indiana.

Additional Information

Cantigny Park, 1S151 Winfield Road, Wheaton, IL 60189. (630) 668-5161. www.cantigny.org.

- Cantigny features a 27-hole golf course, gardens, prairie, and hiking trails.
- For history buffs, Cantigny's McCormick Museum shows how the McCormick family lived in the 1930s to 1950s, and the First Division Museum documents military history.
- As part of the Reciprocal Admissions Program (RAP), AHS members receive free parking. Regular admission: \$5 per car (\$2 at twilight). Hours vary by season.

Other sites worth visiting while in the Chicago area:

Chicago Botanic Garden, Glencoe, IL. <http://chicagobotanic.org>.

Millennium Park, Chicago, IL. www.millenniumpark.org.

Morton Arboretum, Lisle, IL. www.mortonarb.org.

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Making America a Nation of Gardeners, a Land of Gardens

Invasion of the Stinkbugs

by Scott Aker

MOST GARDENERS throughout the country can now add another pest to the list of unwelcomed visitors to their gardens. The brown marmorated stinkbug (*Halyomorpha halys*), first appeared near Allentown, Pennsylvania, in the late 1990s, and has now spread to most of the northeastern quarter of the United States. It has also been seen in parts of the Great Plains and the Southwest, though breeding populations have not been reported there so far. Most recently, there have been reports of sightings in Georgia, Florida, and other areas of the Southeast. Researchers are concerned that it will find the warmer climate of the southern states—and the region’s extensive fruit and vegetable growing industry—to its liking.

As with many of our worst alien invasive species, it is native to China, Japan, Korea, and Taiwan, areas that have a climate similar to our country’s eastern half. It’s an orchardist’s and fruit grower’s nightmare, preferentially feeding on fruits and berries of all kinds, including raspberries, strawberries, apples, peaches, and tomatoes. Even a small amount of feeding results in corky dimples in fruit that diminish its value and make it more perishable. In addition to fruits, the insect also consumes corn, soybeans, ornamental plants, and even weeds. Its broad appetites makes it very difficult to control, since it is impossible to do battle with it in all the places it can live.

KNOW THY ENEMY

As its name indicates, the skin of this shield-shaped insect is marmorated, or marbled, with speckles of brown and tan that provide effective camouflage. You can easily distinguish the brown marmorated stinkbug adult from other stinkbugs by looking for contrasting white and dark bands around the edge of the membranous outer edge of the front wings. There are also white bands



Soft-skinned fruits such as peaches are easily damaged by the feeding of brown marmorated stinkbugs. They also attack other economically important crops, including corn and soybeans.

on the legs and antennae. Like all stinkbugs, it has glands that release odiferous chemicals when it is disturbed. Some describe the odor as that of green apples, while others report a strong cilantro fragrance. The scent is enough to deter many birds and other potential predators.

It bears only one generation per year in cool areas, but there may be as many as six generations per year in subtropical regions. Eggs appear in June on the underside of leaves and are clear or light green and spherical. These hatch into nymphs that are initially orange and black; after their



An adult brown marmorated stinkbug, above, can be identified by white and dark bands edging their wings. Stinkbug eggs, right, can be found clustered on the underside of leaves.



first molt they are black and ticklike. They shed their skin five times as they grow to adults. The speed of their growth is related to temperature, and they grow to maturity more rapidly at high temperatures. In October, they invade homes looking for sheltered locations to spend the winter.

Like all true bugs, these hemipterans have a front set of wings that are half membranous and half leathery, and they feed by piercing plant tissues with their mouthparts and sucking out the sap. The damage often appears as corky sunken spots on fruits, sometimes concentrated at the stem end. Damaged leaves bear scattered yellow or white spots where the bugs have sucked out all the chlorophyll-laden cell contents. Succulent stems of some plants may be distorted or wilted.

PREVENTION AND CONTROL METHODS

In the garden, one of the best ways to control stinkbugs is to knock them into a

azadirachtin, a pesticide that comes from the neem tree, has also had its label expanded to offer a solution for organic growers. But be aware that this organic control may also harm beneficial insects.

Floating row covers offer another way to protect crops, particularly raspberries, strawberries, tomatoes, peppers, and green beans. Keep in mind that you may also be excluding bees that are needed to pollinate your vegetables and berries, so leave the covers off during the peak bloom season to allow the bees to do their job. Inspect thoroughly for eggs, nymphs, and adults before you put the row cover back on.

Entomologists have been working with a tiny wasp that lays eggs in stinkbug eggs. The wasp larva hatches and feeds on the developing stinkbug larva, killing it. Although this wasp species only feeds on the eggs of brown marmorated stinkbugs, further research is needed to confirm that it will not harm



In the garden, use floating row covers to protect vulnerable crops such as strawberries, peppers, and green beans from stinkbugs and other flying pests.

bucket of soapy water. In the fall, when they congregate on buildings, they can be vacuumed up with a shop vac. In June, check the underside of leaves and destroy the eggs before they can hatch. Continue to monitor weekly, and kill any nymphs that you find on your plants.

Pesticides don't appear to be a good control option. The Environmental Protection Agency is allowing fruit growers to use dinotefuran on an emergency basis, due to the huge potential for crop losses. A combination of pyrethrum and

native ecosystems. Trial releases of the wasps may come as early as 2013.

Until then, arm yourself with a bucket of soapy water and a shop vac that can be aired out for several days after use. Unfortunately, it seems this is a very adaptable insect, so if you aren't coping with it yet, you may be soon.

Scott Aker is a Washington, D.C.-based horticulturist who wrote the "Digging In" gardening column for The Washington Post for a decade.

Gardening Q&A with Scott Aker

SPARSELY FLOWERING WITCH HAZEL

I have a witch hazel well over six feet tall that I transplanted in the spring of 2010. It bloomed beautifully in February 2011, but this year it had very few flowers. What can I do to encourage more flowers?

—C.A., Long Island, New York

Excessive blooming is sometimes a sign of decline, which might explain the heavy bloom the year after you moved the plant. Starting at the tip of a branch, look for the closely spaced bud scale scars that mark the end of the previous season's growth and record the length of the growth that took place last year. Continue down the twig, looking for the same bud scale scars on the twig that mark the end of each year's growth. You should be able to measure the growth of the shrub for each of the past three or four years. If it is progressively less with each passing year, it is suffering from the move and may just need more time to recover. If you moved it to a much shadier location, that might also explain the lack of blooms. Witch hazels need at least four hours of direct sun to bloom well.

DECLINING SPRUCE

My Colorado blue spruce is gradually dying from the top down. What is causing this and can the tree be saved?

—L.R., Kansas City, Missouri

If the tree put on a respectable amount of growth last year, it is likely that the problem stemmed from an attack of white pine weevils, *Ips* bark beetles, or perhaps a canker fungus. At any rate, the damage has been done. If the tree otherwise appears to be healthy, eventually one or more of the branches just below the damaged portion will turn upward to replace the lost top of the tree. If the tree develops multiple leaders, remove all but one.

—S.A.

E-mail your gardening questions to Scott Aker at saker@ahs.org.

Refreshing Mint

by Tammie Painter



Getting Started

Because it often doesn't breed true, mint is rarely propagated by seed. Instead, start mint using a rhizome cutting from established healthy plants. To start a new mint plant, take a two-inch piece of a rhizome with a node in the center (preferably one that has already formed small roots). Plant the runner in a pot one inch deep in potting soil in early spring and keep the soil moist but not wet. After a few weeks, a new shoot will emerge and then can be transplanted into your garden or a larger container. Plant one mint per 12-inch pot or space plants at least one foot apart in a garden bed. Two or three plants should provide enough leaves to use fresh with extra to dry or freeze. —T.P.

THERE ARE some 25 species of mint (*Mentha*), all of which are characterized by square stems, opposite and often aromatic leaves, and clusters of tiny flowers. The most commonly grown mints are peppermint (*M. ×piperita*, a sterile cross between *M. spicata* and *M. aquatica*) and spearmint (*M. spicata*).

Peppermint produces pale lavender flowers on two- to three-foot-tall stems that are tinged with red; its leaves are dark green. Spearmint grows to two feet tall with medium green leaves and stems, and it bears either lavender or white flowers. The flavor of spearmint is milder than that of peppermint.

GROWING TIPS

Mints are easy to grow. So easy, in fact, you may need to contain them. If kept moist and out of strong sun, mint will grow in almost any region. Although mint thrives with morning sun, partly shaded areas are best since intense afternoon sun can burn the oil-rich leaves.

Throughout the growing season, keep the soil moist but not wet.

Mint is a perennial (USDA Hardiness Zones 5–9, AHS Heat Zones 9–5) that spreads via rhizomes—underground stems—and can quickly take over a gar-



Peppermint produces pale lavender flowers.

den bed. I use this rambunctiousness to my advantage by allowing mint to fill in the spaces between stepping stones in an area where little else will grow. As I walk by, my legs brush the leaves to release a lovely scent. If you don't want it to run wild, however, plant mint in containers. Place the pots on a partly shaded patio or bury them so the rim of the pot is about an inch above the soil level.

Mint requires little care other than regular water, an occasional trim to encourage lateral growth, and a protective layer of mulch when the plants die back in the winter. Mint needs little fertilizer; a topdressing of compost or well aged manure in the spring should be sufficient. Although it will come back year after year, mint produces best if you renew it every three to four years using rhizome cuttings or divisions (see "Getting Started," above).

PESTS AND DISEASES

In most home gardens, mint is a trouble-

Resources

The Cook's Herb Garden by Jeff Cox. DK Publishing, New York, New York, 2010.

Mints: A Family of Herbs and Ornamentals by Barbara Perry Lawton. Timber Press, Portland, Oregon, 2002.

Sources for Plants

Always Summer Herbs, Slippery Rock, PA. (724) 735-4700.

www.alwayssummerherbs.com.

Nichols Garden Nursery, Albany, OR. (800) 422-3985.

www.nicholsgardennursery.com.

Richters Herbs, Goodwood, Ontario, Canada. (905) 640-6677.

www.richters.com.

Sandy Mush Herb Nursery, Leicester, NC. (828) 683-2014.

www.sandymushherbs.com.



Pineapple mint, above left, is an attractive variegated variety with a luscious fruity fragrance. The leaves of chocolate mint, above right, have a slightly chocolate flavor.

free herb. Sometimes verticillium wilt, caused by a soil-borne fungus, can be a problem. Symptoms include stunted growth, malformed leaves, and sudden wilting. Destroy any infected plants and don't replant mint in the same area for at least three years.

Insects such as mint flea beetle and mint bud mite typically affect only vast commercial mint fields. If you see non-beneficial insects on your mint, spray them off with a blast of water from the hose.

MORE GREAT MINTS

Apple mint (*M. suaveolens*) Rounded, somewhat hairy leaves with a fruity-mint flavor.

Pineapple mint (*M. suaveolens* var. *suaveolens*, syn. *M. suaveolens* 'Variegata') Variegated leaves with a sweet pineapple flavor; less aggressive than most mints.

Ginger mint (*M. ×gracilis*, syn. *M. gentilis*) Light green or variegated leaves with a spicy aroma and taste reminiscent of fresh ginger.

Chocolate mint (*M. ×piperita* forma *citrata* 'Chocolate') Maroon stems bear minty-chocolate-flavored leaves—perfect with strawberries.

Orange mint (*M. ×piperita* 'Citrata') The flavor of the red-tinged leaves is similar to bergamot, the flavoring in Earl Grey tea.

ENJOYING THE HARVEST

New growth appears in early spring and by May you can pluck individual leaves as needed. Starting in June, cut sprigs just above a leaf to encourage the plant to branch out and produce more leaves. Avoid harvesting more than a third of a plant at one time.

For the strongest flavor, harvest mint early in the morning. Although you can take leaves from mint throughout the

growing season, the leaves taste best when taken before the plant blooms.

Mint leaves can be dried, frozen, or used fresh. Dried mint is great for tea—alone or in combination with other herbs. To dry, hang stems in an area with good air circulation or, if you have a food dryer, place them on trays and dry at low heat for one to three hours. Once dry, discard the stems and store the leaves in a sealed bag or jar. Drying mint leaves will result in some flavor loss.

To retain more of the fresh minty flavor, I prefer to freeze leaves—even though this will change their texture—in a single layer on a cookie sheet before placing them in bags to prevent clumping. Alternatively, chop the leaves, mix them with a little water, and freeze the slurry in ice cube trays. When you're ready to use your mint, just pop out a cube or two.

Fresh mint leaves can be used to flavor side dishes, sauces, drinks, and desserts. To infuse a container of sugar with a hint of mint, add a few leaves to your sugar jar for a few days. And, of course, it's an essential ingredient for mint juleps.



When harvesting mint, avoid removing more than a third of each plant to maintain vigor.

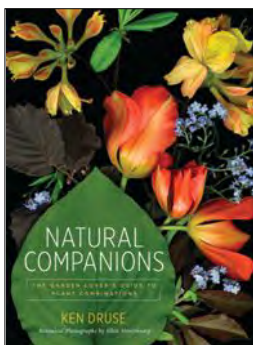
Freelance writer Tammie Painter grows mints and many other herbs in her Portland, Oregon, garden.

Recommendations for Your Gardening Library

Natural Companions

Ken Druse and Ellen Hoverkamp. Stewart, Tabori & Chang, New York, New York, 2012. 256 pages. Publisher's price, hardcover: \$40.

THERE IS AN art to combining plants in aesthetically pleasing ways, and *Natural Companions* offers a refreshingly original approach. Ken Druse, a horticulturist *par excellence*, and Ellen Hoverkamp, a non-traditional plant photographer, teamed up to create and photograph incredible arrangements of flowers and foliage that “hit their high points simultaneously.” Each of the more than 200 images in the book is like a still-life work of art—capturing a moment in time—accompanied by a fascinating discussion of why the parts of the composition work well together.



The combinations are organized to illustrate five themes: Seasons, Families, Form Follows Function, Color, and Spirit of Place. Most of the arrangements feature foliage, flowers, fruits, and seeds of temperate plants, but there are also some from warmer climates. Every combination is instructive to gardeners anywhere, however, because the design concepts remain the same, allowing for substitutions of similar but regionally appropriate plants if need be. And frequently, the arrangements include plants that have the same requirements for light, soil, and moisture, so they can easily be grown together. Because designers tend to concentrate on trees and shrubs and forget the rest, I loved the fact that Druse and Hoverkamp included a more varied plant palette: trees, shrubs, vines, perennials, annuals, and bulbs.

My only criticism is a nitpicking one—while the botanical names in the text were uniformly correct, some of the ones listed in the captions identifying the plants in the photographs were misspelled. For one of the images, the names in the caption don't match the plants depicted, which could be misleading to someone unfamiliar with those plants.

Having been a plantaholic for 43 years and a landscape designer for 35, I was happy to find myself making notes of plants and combinations to try. *Natural Companions* itself is beautifully produced, but it is much more than a coffee table book; it is an inspiration.

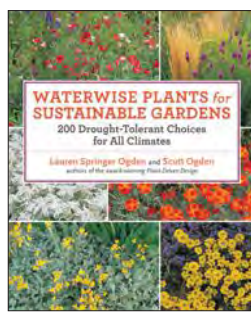
—Bobbie Schwartz

Bobbie Schwartz is a certified, award-winning landscape designer, a past president of the Association of Professional Landscape Designers, and author of The Design Puzzle: Putting the Pieces Together. Her designs emphasize four-season interest, sustainability, and habitat.

Waterwise Plants for Sustainable Gardens: 200 Drought-Tolerant Choices for All Climates

Lauren Springer Ogden and Scott Ogden. Timber Press, Portland, Oregon, 2011. 248 pages. Publisher's price, softcover: \$24.95.

DROUGHT CYCLES and increased public water demands are straining gardeners' water budgets, particularly in the Mountain West and other naturally arid regions. Coping strategy number one? Grow plants that thrive on less water. But how, given the bewildering array of plants available, does one zero in on which plants will do best?



“If a plant is beautiful, well adapted to the site and region, and not overly aggressive or invasive, it deserves consideration,” opine the authors, Lauren Springer Ogden and Scott

Ogden. “If it needs little input in terms of soil amendment, fertilizer, or ongoing care, better yet. If it supports a range of creatures with food, cover, or nesting places, it's a win-win for all.”

These are the criteria the authors considered when selecting 200 plants for their latest book, *Waterwise Plants for Sustainable Gardens*, which they describe as a “distillation of our three decades of experience designing and tending gardens in [USDA] zones 4 through 10.” This practical handbook offers detailed, illustrated descriptions of water-thrifty trees, shrubs, vines, grasses, perennials, annuals, succulents, and other plants suited to a wide range of climates and humidity levels, many of which are natives.

The selected plants all have conservative moisture needs: one inch of rain or irrigation weekly during their first growing season, trees sometimes for a second season; and, once established, one inch every two weeks during the hottest part of the year. As an added benefit, the authors claim that none of the plants in this book require any fertilizer in order to thrive in garden situations.

To my mind, the book has a couple of minor drawbacks. First, the authors fail to list which plants are adapted to heavy soils—an important consideration for those who garden in clay soils. Second, the copious photographs, though beautifully composed, have a slightly dulled, washed-out quality that doesn't do justice to the full beauty of their subjects. Those quibbles aside, *Waterwise Plants for Sustainable Gardens* is a useful and authoritative guide to some of the most drought-tolerant options available.

—Rand B. Lee

Rand B. Lee gardens in Aurora, Colorado, as much as the bionic squirrels will let him.

Heirloom Gardening in the South: Yesterday's Plants for Today's Gardens

William C. Welch and Greg Grant, with Cynthia W. Mueller and Jason Powell. Texas A&M University Press, College Station, Texas, 2011. 537 pages. Publisher's price, softcover: \$29.95.

WHEN FIRST published in 1995, *The Southern Heirloom Garden* by William Welch and Greg Grant transported me back



in time to the origins of many plants I enjoy in my own Texas garden. The authors have collaborated once again to write *Heirloom Gardening in the South*, which is essentially an expanded and updated version of their first book. This new tome retains the same conversational style, but includes even more stories that illuminate our garden heritage. Integrating historical background, their experiences, and recollections from diaries and letters, Welch and Grant take readers on a fascinating journey into the past that allows us to better understand and appreciate the gardens of today.

The book starts off describing the various influences upon southern gardening, melded from Native American, European, African, and Asian contributions to everything from design and art to the plants themselves. The authors have directly contributed to our garden beds as well. For example, Welch ex-

plains how he brought the foundling 'Maggie' rose into cultivation, and Grant details how he developed the salmon-pink 'Pam Puryear' Turk's cap mallow by making careful crosses.

Among chapters on naturalizing bulbs, gardening for wildlife, and edibles, the book includes a couple of new guest-written chapters. One satisfies the renewed interest in homegrown fruit, contributed by Jason Powell, co-founder of Petals from the Past nursery. And Master Gardener Cynthia W. Mueller penned a chapter on propagation with slips, starts, woody cuttings, and seeds, which I found really instructional. Another great addition is Welch's discussion of designing with heirlooms. It's one thing to fall in love with a plant; quite another to give it a visually pleasing residence among its companions.

The bulk of the book is dedicated to expanded plant descriptions that explain the origins, useful properties (medicinal, food, wildlife), and cultivation practicalities of the "most commonly cultivated plants in early Southern garden," accompanied by the authors' photographs. I especially enjoyed how Welch and Grant turn plant names into stories that stick.

Even readers prone to "skimming" books may find themselves drawn in by the larger color photos, sidebars, and plant lists. Not just for Southerners, this one's for any gardener who values personal experience and the backstory on heirloom gardening.

—Linda Lehmusvirta

Linda Lehmusvirta is producer of *Central Texas Gardener*, KLRU-TV, Austin, PBS. Watch online and follow her blog that chronicles the survivors in her Austin, Texas, garden at www.klru.org/ctg.



2012 "Gardener's" Calendar

One of the benefits that TGOA/MGCA offers its members is the opportunity for TGOA/MGCA and AHS members to participate in our annual photography contest. From these entries, photos are chosen for our annual calendar. We encourage all men and women to become a member of TGOA/MGCA and enjoy the benefits of a worthwhile organization. For more information about TGOA/MGCA or to order calendars for \$6.95 postpaid, please call or e-mail:

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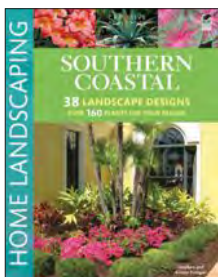
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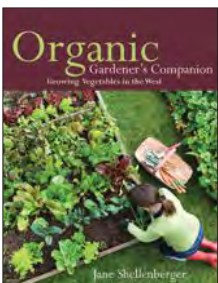
EACH YEAR, there's a fresh crop of books on gardening in various regions of the United States. Some aim to give a general overview of best practices for a particular state or region, while others focus on a particular plant group such as natives or edibles, or specific aspects of gardening such as design or sustainability. Here's a sampling of some that have recently crossed our desks.



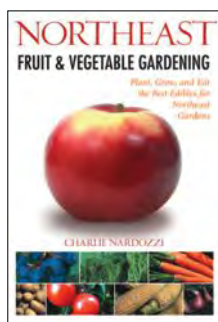
A Time to Plant (Gibbs Smith, 2011, \$40) is a guide to garden living, Southern-style. Landscape designer James T. Farmer III invites readers into his world of “all things Southern, a culture heavily influenced by gardening and the land,” through colorful photographs and prose. While the author draws from his own experiences growing up in the Deep South, many of the ideas for planning, planting, harvesting, and decorating are applicable anywhere.



Creative Homeowner offers a line of regional books on the practical aspects of landscaping. The newest addition is *Southern Coastal Home Landscaping* (2011, \$16.95) by Stephen and Kristin Pategas. Covering the Gulf states from Texas to Florida on up the coast to South Carolina, it includes designs, plant profiles, and a “how-to” section for projects such as laying a patio, soil preparation, and problem-solving. In 2011, third editions of the Northwest and Texas versions also were released.



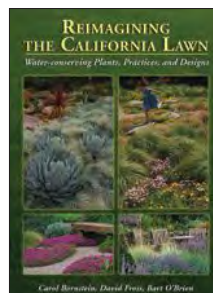
On the edible gardening front are several new books, including *Organic Gardener's Companion: Growing Vegetables in the West* (Fulcrum, 2012, \$24.95) by Jane Shellenberger, aimed at the semiarid, high-altitude regions of the Rocky Mountains and West. *Backyard Bounty* (New Society Publishers, 2011, \$24.95) by Linda Gilkerson is the “complete guide to year-round organic gardening in the Pacific Northwest.” And for those living in the Great Plains or the Canadian prairies, there's *Edible Plants for Prairie Gardens* by June Flanagan (Fifth House Publishers, 2011, \$19.95).



Cool Springs Press produces numerous books that focus on gardening in various states or regions. This spring, it launched a new “*Fruit & Vegetable Gardening*” series with the release of the Northeast, Texas, and California editions. Priced at \$22.99, these guides are written by experts in their respective locations, who provide insider advice about soil, climate, plants, and more. Inspirational and informative color photographs, graphs, charts, and sidebars complete the package.



Native plants have been receiving a lot of interest these days. *The Midwestern Native Garden* (Ohio University Press, 2011, \$26.95) by Charlotte Adelman and Bernard L. Schwartz takes an encyclopedic approach to providing native alternatives to non-native plants that are commonly grown in the region. *California Native Gardening* (University of California Press, 2012, \$29.95) by Helen Popper guides the reader month-by-month through caring for and enjoying species native to the Golden State.



Love lawns but wish they weren't so high-maintenance and resource-hogging? *Reimagining the California Lawn* (Cachuma Press, 2011, \$27.95) by Carol Bornstein, David Fross, and Bart O'Brien offers a solution in the form of water-conserving plants, designs, and practices that provide more sustainable alternatives to the traditional turfgrass lawn. Plenty of color photographs illustrate design concepts and show off suggested plants.

—Viveka Neveln, Associate Editor



AMERICAN HORTICULTURAL SOCIETY

HOMEGROWN HARVEST

EDITOR IN CHIEF: RITA PELCZAR

A season-by-season guide to a sustainable kitchen garden



MITCHELL BEAZLEY



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Horticultural News and Research Important to American Gardeners



A 1908 photograph shows greenhouses on the grounds of the U.S. Department of Agriculture in Washington, D.C.

USDA TURNS 150

This year, the United States Department of Agriculture (USDA) celebrates its 150th anniversary. Since its establishment by Abraham Lincoln in 1862, the USDA has aimed to protect the interests of American ranchers and farmers and to provide a “safe and ample food supply” to the country and the world. Today, the department still plays important research and regulatory roles in the lives of gardeners and farmers alike, whether it’s developing new crop varieties or combating invasive exotic species.

“Through our work on food, agriculture, economic development, science, natural resource conservation and a host of issues, USDA still fulfills President Lincoln’s vision as ‘The People’s Department’—touching the lives of every American, every day,” says Agriculture Secretary Tom Vilsack. “As we commemorate 150 years, we will look for lessons from the past that can help us strengthen USDA in the future to address the changing needs of agriculture and rural America.”

In addition to a list of celebratory events taking place throughout the year,

a short film recounting the USDA’s history, “Secretaries of Agriculture—30 Leaders, 150 Years,” is available for viewing at www.usda.gov.

TRIGGERING PLANT SELF-DEFENSE

Given that insect pests tend to be most active during the day, it would make sense that the majority of plant damage would occur then. What is surprising is that plants are actually better able to fend off attacks during the time predators are most active, according to a study published in the February 2012 issue of the *Proceedings of the National Academy of Sciences*.

Biologists at Rice University in Houston, Texas, used a light system in the lab to alter the circadian rhythms of *Arabidopsis* plants—commonly used for plant physiology experiments because of its relatively



A cabbage looper caterpillar feeds on the leaf of an *Arabidopsis* plant.

simple genetics—and their predators, cabbage looper caterpillars, so they were no longer in sync. When compared to a control group of plants and caterpillars with normal circadian rhythms, “we found that the plants whose clocks were in phase with the insects were relatively resistant, whereas the plants whose clocks were out of phase were decimated by the insects feeding on them,” says Danielle Goodspeed, the graduate student who devised the experiment.

The explanation for this distinct difference? The *Arabidopsis* plants’ circadian rhythm stimulated them to produce more

jasmonate, a hormone that activates various chemical defenses, during the day when caterpillar feeding was most likely to occur. Further investigation by the Rice researchers into what stimulates the production of jasmonate revealed that touch can also trigger increased chemical defenses, according to a recently published study in *Current Biology*.

Such defenses are “employed by virtually all plants, including tomatoes, rice, and corn,” explains Wassim Chehab, a faculty fellow in Rice’s Department of Biochemistry and Cell Biology. Figuring out what controls these defenses “could be important for understanding why some pests are more damaging than others, and it could help suggest new strategies for insect resistance,” he adds.

KUDZU BUGS CAUSE CONSTERNATION

One might think that insects that chow down on invasive kudzu would be a thing to celebrate rather than dread, but this spring these brown-speckled little beetles were not met with much joy by residents in the southeastern states. Introduced from Asia in 2009, kudzu bugs (*Megacopta cribaria*) came out of hibernation in plague-like numbers this year. While the insects don’t bite or sting people, they have a tendency to swarm on homes, cars, plants, and even someone who stands still too long. They also release an unpleasant odor when crushed.

Perhaps of greater concern is the fact that, in addition to kudzu, these insects

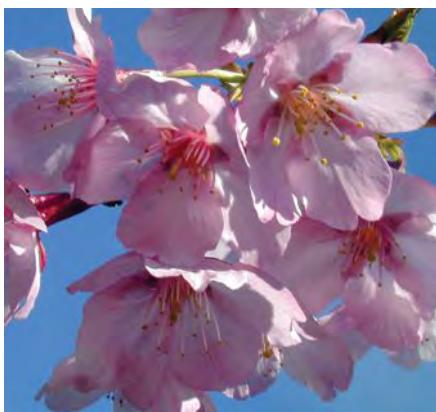


Kudzu bugs swarm on a kudzu vine.

feed on other legumes, including soybeans. Scientists are closely monitoring the threat the kudzu bugs pose to important crops, while trying to determine ways to control their rampant spread.

NEW ORNAMENTAL CHERRY TREE VARIETY HONORS FORMER FIRST LADY

In honor of the 100th anniversary of the Japanese gift of ornamental cherry trees that Washington, D.C., is now famous for, a new selection developed by the U.S. National Arboretum has been released.



The new 'Helen Taft' cherry tree, above, is named in honor of the First Lady, shown left in a 1909 photograph, who planted one of the first cherry trees at the Tidal Basin in Washington, D.C.



'Helen Taft' is a cross between Yoshino cherry (*Prunus xyoedoensis*) and a Taiwan cherry (*P. campanulata*). It is the second in a series of ornamental cherries the arboretum is creating and naming in honor of America's First Ladies. Helen Taft, wife of 27th President William Howard Taft, along with the wife of the Japanese ambassador, planted the first two of the cherry trees at the Tidal Basin in March 1912.

Growing up to 35 feet tall and 35 feet wide at maturity, 'Helen Taft' has large, pale pink, single flowers that turn darker in the center with age. While most Yoshino cherry blossoms are white or fade to white, the 'Helen Taft' flowers remain pink. The initial variety in the series, 'First Lady,' is a 25-foot-tall, upright tree with dark pink, single, semi-pendulous flowers.

BREAKTHROUGHS IN UNDERSTANDING HOW PLANTS TOLERATE DROUGHT

They say what doesn't kill you makes you stronger, and when it comes to drought, that certainly applies to plants. Researchers at the University of Nebraska have discovered that *Arabidopsis* plants appear to "remember" and "learn" from a drought experience, enabling them to cope better with subsequent droughts. Unraveling the mechanisms that control these "memories" and modified responses will require further study, but the scientists hope their work will lead to the development of more drought-resistant plants.

Another piece of the puzzle has to do with why some plants are more drought tolerant than others in the first place. During a dry spell, plants can either make their cell walls stiffer or increase salts in their cells to avoid wilting and remain functional, but biologists have debated which strategy explains drought tolerance across species and ecosystems. When analyzing drought tolerance trait data for plant species worldwide, a team at the University of California—Los Angeles (UCLA) found a strong correlation between drought tolerance and the saltiness of the cell sap.

The data revealed that "many drought-tolerant plants with lots of salt also had stiff cell walls," explains Megan Bartlett, lead author of the UCLA study published online in the journal *Ecology Letters*. On the flip side, "drought-sensitive plants often have thick cell walls because the tough leaves are also good protection against herbivores and everyday wear and tear," she says. This new understanding will make it possible to predict drought tolerance "across entire ecosystems or plant families," she adds, in order "to develop better strategies for their conservation in the face of climate change."

UNDERSTANDING INVASIVENESS

Non-native or exotic plants find their way across United States borders in various ways. Unfortunately, some become invasive, taking a devastating toll on native ecologies. When investigating patterns that influence invasiveness, a team of U.S. Forest Service researchers determined that human populations are the primary factor behind the introduction and spread of invasive species. This con-

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clusion, recently published in the journal *NeoBiota*, resulted from an analysis of an unprecedented amount of state-level data—both new and from previous studies—such as human population size and area, and native and exotic plant richness.

“We found that though the number of native plant species is largely controlled by natural factors such as area and temperature,” says Qinfeng Guo, research ecologist at the U.S. Forest Service’s Eastern Forest Environmental Threat Assessment Center and a co-author on the study, “exotic species are predominantly influenced by social factors, such as human population levels and dates when states were first settled.”

The researchers also found that when analyzing data from previous studies, the number of invasive species in a given state could vary greatly depending on how an “invasive” species was defined. For example, some studies included species introduced from outside of a particular state, while other studies only counted plants hailing from other countries. This shows the need for “consistent quality control,”

say the study’s authors, “to ensure data quality and to standardize the data collected from different habitats and regions so that accurate and meaningful comparisons can be made.”

UNUSUAL WINTER AFFECTS GREAT BACKYARD BIRD COUNT

Almost every garden gets avian visitors of some kind, and the annual Great Backyard Bird Count (GBBC) provides an opportunity to really tune in to them. The results from the 2012 event, held over four days in February, revealed some unusual patterns.



The number of blue jays observed in some regions was down from two years ago.

“The maps on the GBBC website this year are absolutely stunning,” says John Fitzpatrick, executive director of the Cornell Lab of Ornithology, one of the administrators of the project. “Every bird species has a captivating story to tell, and we’re certainly seeing many of them in larger numbers farther north than usual, no doubt because of this winter’s record-breaking mild conditions.”

In addition to many species observed in more northerly locales, species such as sand-hill cranes, red-winged blackbirds, and snow geese appeared to begin their spring migration much earlier than previously recorded. In terms of numbers of birds, almost four times as many snowy owls were reported this year than were the previous year. However, tallies of blue jays were only a third of what they had been in the previous two years in some regions. Visit www.birdsource.org/gbbc for more information.

News written by Editorial Assistant Helen Thompson and Associate Editor Viveka Neveln.

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PEOPLE and PLACES in the NEWS

Logee's Celebrates 120 Years

In 1892, William D. Logee took over an abandoned greenhouse in Danielson, Connecticut, to start a cut-flower business. He also enjoyed collecting rare and exotic plants; one of his first acquisitions was a 'Ponderosa' lemon tree, which still stands in the original greenhouse at Logee's.



Today, this family business—now run by the founder's grandson, Byron E. Martin, and his business partner, Laurelynn G. Martin—specializes in tropical fruiting and flowering container plants. It offers more than 1,500 varieties of plants, of which over 100 are edible—through its onsite location and by mail-order. For more information, visit www.logees.com.

Gibbs Gardens Opens in Georgia

After more than three decades in the making, Gibbs Gardens in Ball Ground, Georgia, officially opened to the public on March 1 of this year. The 220 acres of landscaped gardens boast one of the largest Japanese gardens in the United States, an impressive water lily collection, and a daffodil display that *Southern Living* magazine editor M. Lindsay Bierman has dubbed the "most spectacular display of blooms this side of Holland." Hundreds of other plant varieties provide a nonstop riot of color throughout the year.



The Japanese garden at the newly opened Gibbs Gardens

The man behind it all is landscaper Jim Gibbs, whose life's passion was to create a "world-class public garden." That dream came true, he says, when the garden made its public debut. "I'm sure my three children and 11 grandchildren will enjoy this garden for years to come," he says, "as I hope the public will enjoy visiting and viewing the legacy I leave behind." For more information, visit www.gibbsgardens.com.

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Expanded Aggregates Solve Soil Problems

by Rita Pelczar



WHEN I MOVED to western North Carolina nearly five years ago, I was introduced to Carolina clay—very different from the sandy loam of southern Maryland, where I had gardened for 20 years or so. The sticky, reddish soil seems better suited for making pottery than for gardening—at least until it’s amended.

Organic matter—large quantities of compost, manure, and pine fines—that I had added regularly to my sandy Maryland soil to help retain moisture, I now add to my heavy clay for the opposite reason, to improve drainage and porosity. But organic matter breaks down and needs to be regularly replenished. That’s not a problem for the vegetable garden and other annual plantings, but for more permanent plantings, I needed a longer-lasting solution.

Many public gardens across the country have employed expanded aggregates to resolve a variety of soil problems and to incorporate into “designer soil mixes” for specific uses. A bit of research and a trial of my own has convinced me of the value of expanded aggregates in the home garden.

PUFFED PARTICLES

When a slate, shale, or clay particle is exposed to very high heat, it expands. The result is a stable, lightweight granule—or aggregate—with lots of pores. When added to soil, the pores provide space for

the air and water necessary for healthy plant growth, offering a long-term solution to opening up heavy soils, adding porosity, and preventing root compaction.

Expanded aggregate products have other landscape uses: a component in the growing mixes for rooftop gardens and container gardens; a porous medium for rain gardens; root bridges to protect tree roots; a lightweight option for backfilling retaining walls; and for porous walkways. They also provide a physical barrier to protect plants from vole damage. Sold under a variety of brand names, many are regionally distributed, although some brands are nationally available. The following are just a few of the brands that have found wide usage in horticulture.

Stalite PermaTill® and Espoma’s **Soil Perfector™** are derived from slate heated to over 2,000 degrees Fahrenheit. It is then crushed and graded by size. **Utelite E-Soil®** and **TXI TruGro®** are derived

from shale. There are several other brands of expanded slate and shale.

Hydroton® and **Surface®** are made from clay and the resulting expanded particles are round. They are commonly used in growing media for plants such as orchids and bonsai. They are also used in terrariums and hydroponic systems.

EXCELLENT DRAINAGE REQUIRED

At Mount Vernon Estate, Museum, & Gardens in Alexandria, Virginia, PermaTill has been used in several garden areas, including the large boxwood parterres, where excellent drainage is essential. “Our flourishing boxwood parterres have survived for 13 years without losing a plant. I credit much of the success in these formal plantings to the benefits of PermaTill,” says Dean Norton, Mount Vernon’s director of horticulture. “The expanded aggregates improve soil structure, allowing for roots to breathe.”

At the Dallas Arboretum in Texas, Jimmy Turner, senior director of gardens, considers expanded shale “an indispensable component of our standard soil improvement regimen...if you have clay it’s the miracle cure.”

Turner also recommends mixing expanded shale with potting soil to increase drainage and reduce weight in large containers. He adjusts the ratio of shale to potting soil based on the plant. “I have some agaves and yuccas planted in 80

Sources

- Espoma Soil Perfector**, www.espoma.com.
- Growco Indoor Garden Supply**, www.4hydroponics.com.
- Stalite PermaTill Horticultural Aggregates**, www.permatill.com.
- TXI TruGro**, www.txi.com.
- Utelite E-Soil**, www.uteliteesoil.com.



Soil aggregates have been added to the soil underlying Mt. Vernon's boxwood parterre.

percent shale; for most plantings though, I do 30 percent," says Turner.

At the Gardens at Post Hill in Morris, Connecticut, Ron Burch propagates, displays, and sells orchids. He uses a combination of Soil Perfector and Turface for some tropical orchids grown in pots and temperate terrestrial orchids in the garden. "We use these materials for orchids that require high moisture: *Phragmipedium* and *Maxillaria* in pots, and *Cypripedium* in the garden," says Burch. "These orchids require consistent moisture but they must always have excellent air capacity around the roots. Use of expanded aggregates allows for both conditions."

RAIN GARDEN

In 2003, PermaTill was used in the construction of the Baker Exhibit Center Rain Garden at the North Carolina Arboretum

in Asheville, which was designed to capture stormwater runoff. Downspouts and underground pipes direct runoff from a portion of the Exhibit Center roof to the adjacent Events Lawn. The stormwater fills perforated culverts below the surface of the lawn, which are supported by bioretention media composed of PermaTill and recycled brick chips. Water then drains into the rain garden nearby, which also collects runoff from the surrounding parking area. In addition to its function as a sub-grade filtering material, PermaTill, combined in this garden with composted leaf mold, provides a porous growing medium.

"PermaTill has been incorporated into several other projects at the Arboretum, including an undersurface layer in sod replacement areas, incorporated into soil in landscape beds, and as a planting media

for plants requiring very sharp drainage," says Clara Curtis, director for design and exhibit assets at the Arboretum.

SCREE GARDEN

Sharp drainage is a necessity for the Scree Garden that was developed in 2006 at the JC Raulston Arboretum in Raleigh, North Carolina. "We tilled about six inches of PermaTill into the beds," explains assistant director and curator of collections, Mark Weathington, "then built berms composed of one third PermaTill and two thirds good sifted topsoil." A PermaTill mulch prevents soil splashing onto plant foliage.

During the severe drought of 2007, the scree beds actually retained more moisture than other gardens at the arboretum. "This was presumably due to the capillary space in the slate particles," says Weathington.

Based on the positive results in the Scree Garden, expanded aggregates have been used as a soil amendment in other projects at the arboretum including the expanded Xeric Garden, the Asian Valley Garden, and the Rooftop Garden.

ROOFTOP GARDENS

Expanded aggregates are a good fit for roof gardens. "Being one-third to one-half the weight of regular sand, soil, or rock, expanded shale reduces the weight load requirements," says Scott Jensen, landscape and horticulture sales manager for Utilite Corporation. In Salt Lake City, Utah, Utilite E-Soil—expanded shale mixed with compost and topsoil—was used to create a five-acre, low-maintenance rooftop garden at the Latter-Day Saint's



Left: The Baker Exhibit Center Rain Garden at the North Carolina Arboretum in Asheville supports a variety of plants. Above: During the garden's construction in 2007, slate aggregate was a component of its foundation soil.

Conference Center. It was also used for an intensive rooftop garden at the Salt Lake City Main Library, where it supports a variety of small trees, shrubs, and grasses. “Expanded shale will not degrade, decompose or break down over time—even in freeze-thaw climates,” says Jensen. “It maintains its porosity and drainage properties, is consistent and predictable.”

At the Atlanta Botanical Garden (ABG) in Georgia, nearly 50 percent of the roof area of the Visitor Center is a garden, and PermaTill is an important component of the growing medium. “The engineered soil has held up very well since it was installed,” says Amanda Campbell, ABG’s manager of display gardens. PermaTill has been employed in other areas of the garden, including the conservatory, as a component of various container mixes. It is also being used as a root bridge to protect large tree roots. “In the Camellia Walk, the best location was chosen for the sidewalk but that still meant getting closer than we’d like to a couple of large trees,” says Campbell. “The sidewalks are actually built on a mix that includes PermaTill in order to protect



A worker shovels a shale-aggregate soil mix on the roof garden of the Latter-Day Saint’s Conference Center during its installation.

the tree roots, ensuring water and nutrient availability because it resists compaction.”

FOR HOME GARDENS

Expanded aggregates work as well in home gardens as they do in public gardens. By combining them with other ingredients, such as compost and good topsoil, designer soils can be created to suit specific plants.

For heavy or compacted soils, Turner suggests applying a two- to three-inch layer of the aggregates over the intended planting area, tilling it in six to eight inches deep, then working in three more inches of composted organic matter. The resulting bed will be slightly raised, further improving drainage.

Their light weight means that container plants grown in a medium that contains significant amounts of aggregates will be easier to move. I also found that mulching with Soil Perfector prevents wind from drying out and blowing away loose soil from the surface of large containers.

Last year I gave PermaTill a try in my red clay. I incorporated it along with composted manure into a new bed near my driveway. So far, the results are good—sinking a shovel in the prepared bed was a breeze. And despite a very wet spring, the bed has handled the moisture easily, drainage is good, and my winter jasmine is growing well.

Rita Pelczar is contributing editor for The American Gardener.

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REGIONAL HAPPENINGS

Horticultural Events from Around the Country

NORTHEAST

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

JUNE 1. **Perennial Sale.** Plant sale. Historic New England. Lyman Estate Greenhouses. Waltham, Massachusetts. (781) 891-1985. www.historicnewengland.org.

JUNE 7. **Grandiflora Garden Tour: Glamour in the Garden.** Garden Education Center of Greenwich. Cos Cobb, Connecticut. (203) 869-9242. www.gecgreenwich.org.

JUNE 10. **Pathways & Blooms.** Garden tour, plant sale. Down To Earth Garden Club. South Windsor, Connecticut. (860) 289-1783. www.swgardenclub.org.

JUNE 14. **Ethnobotany at Strawberry Banke.** Course. New England Wild Flower Society. Portsmouth, New Hampshire. (508) 877-7630. www.newfs.org.

RĚ JUNE 16–AUG. 5. **Celebration of Color.** Garden display. Buffalo & Erie County Botanical Gardens. Buffalo, New York. (716) 827-1584. www.buffalogardens.org.

JUNE 23–JULY 29. **National Garden Festival.** Buffalo, New York. (800) 283-3256. www.nationalgardenfestival.com.

JUNE 30 & JULY 1. **Lake Sunapee Garden Tour.** Tour of private gardens. The Fells Historic Estate and Gardens. Newbury, New Hampshire. (603) 763-4789 ext. 3. www.thefells.org.

Looking ahead

JULY 4–10. **Perennial Plant Symposium.** Perennial Plant Association. Boston, Massachusetts. (614) 771-8431. www.perennialplant.org.

RĚ JULY 27. **Natural Communities of Maine.** Course. Coastal Maine Botanical Gardens. Boothbay, Maine. (207) 633-4333. www.mainegardens.org.

MID-ATLANTIC

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

MAY 25. **Spring Iris Show.** Chesapeake & Potomac Iris Society. Winchester, Virginia. (540) 678-8822. www.irises.org.

MAY 29 & 30. **Miniature Rock Garden.** Workshop. Brookside Gardens. Wheaton, Maryland. (301) 962-1400. www.brooksidegardens.org.

Botanical gardens and arboreta that participate in AHS's Reciprocal Admissions Program are identified with the RĚ 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.

RĚ JUNE 1. **Shade Gardening.** Class. Green Spring Gardens. Alexandria, Virginia. (703) 642-5173. www.fairfaxcounty.gov/parks/gsgp.

JUNE 6. **Pitcher Plant Dish Garden.** Workshop. Mt. Cuba Center. Hockessin, Delaware. (302) 239-4244. www.mtcubacenter.org.

JUNE 7–9. **2012 Native Plants in the Landscape Conference.** Millersville University. Millersville, Pennsylvania. (717) 871-2189. www.millersvillenaiveplants.org.

JUNE 10–22. **Historic Landscape Institute: "Preserving Jefferson's Gardens and Landscapes."** Short course—lectures, workshops, field trips, and practical working experiences. Monticello. Charlottesville, Virginia. (434) 984-9816. www.monticello.org/hli.

JUNE 16. **Richmond Area Daylily Society Show and Sale.** Lewis Ginter Botanical Garden. Richmond, Virginia. (804) 262-9887. www.lewisginter.org.

SOUTHEAST

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

RĚ MAY 26. **Hydrangea Propagation Workshop.** Aldridge Gardens. Hoover, Alabama. (205) 682-8019. www.aldridgegardens.com.

JUNE 2. **Native Plant Propagation.** Class. North Carolina Botanical Garden. University of North Carolina. Chapel Hill, North Carolina. (919) 962-0522. www.ncbg.unc.edu.

RĚ JUNE 2. **Orchids 101.** Class. Marie Selby Botanical Gardens. Sarasota, Florida. (941) 366-5731. www.selby.org.

JUNE 9. **Blooming Bardstown Garden Tour and Market.** Nelson County Extension Service. Bardstown, Kentucky. (502) 348-9204. E-mail: robsmith@email.uky.edu.

RĚ JUNE 9. **Herb Symposium.** Memphis Botanic Garden. Memphis, Tennessee. (901) 636-4116. www.memphisbotanicgarden.com.

RĚ JUNE 22–30. **Dazzling Daylilies 2012.** Exhibit, activities. Western Kentucky Botanical Garden. Owensboro, Kentucky. (270) 852-8925. www.wkbg.org.

Looking ahead

JULY 18–21. **Cullowhee Native Plants Conference.** Western Carolina University. Cullowhee, North Carolina. (800) 928-4968. www.wcu.edu.

NORTH CENTRAL

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

THROUGH OCT. 28. **Vanishing Acts: Trees Under Threat.** Exhibition. The Holden Arboretum. Kirtland, Ohio. (440) 946-4400. www.holdenarb.org.

RĚ MAY 26. **Young Tree Development.** Class. The Dawes Arboretum. Newark, Ohio. (740) 323-2355 Ext. 1217. www.dawesarb.org.

RĚ JUNE 2 & 3. **Garden Fair.** Workshops and plant sale. Minnetrista. Muncie, Indiana. (765) 282-4848. www.minnetrista.net.

RĚ JUNE 3. **Iris Show.** Madison Area Iris Society. Olbrich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. www.olbrich.org.

JUNE 16. **Through the Garden Gate.** Tour of private gardens, Bridge Communities. Glen Ellyn, Indiana. (630) 545-0610 x19. www.bridgecommunities.org.

JUNE 19–23. **2012 American Public Garden Conference (APGA) and Garden Tours.** Hyatt Regency. Columbus, Ohio. (610) 708-3010. www.publicgardens.org.

JUNE 21. **Small Space Kitchen Gardens.** Lecture. Rochester Garden & Flower Club. Rochester, Minnesota. www.rgfc.org.

JUNE 23. **Annual Garden Walk.** Gardeners of Central Lake County. Libertyville, Illinois. (847) 204-6720. www.gclcil.com.

JUNE 23. **The Perennial Plant Peddler.** Plant sale, garden tour, activities. Findlay, Ohio. (419) 387-7230. www.pplantpeddler.com.

Native Plant Conference in Ohio

THE MIDWEST NATIVE PLANT SOCIETY will convene July 27 through 29 for its annual conference in Dayton, Ohio, to celebrate and raise awareness about the importance of native plants to natural ecosystems. The event will feature lectures and workshops with experts as well as guided tours and field trips to native landscapes, forests, wetlands, and prairies throughout the area.

Keynote speakers will include environmental photographer Ian Adams giving a presentation on dragonflies and damselflies, New York City-based urban plant ecologist Marielle Anzelone talking about habitat preservation and native plant landscape design in urban environments, and entomologist David Wagner lecturing about caterpillars and their relationship with native plants. Attendees also can select from breakout sessions on pollinators, edibles, conifers, coexisting with wildlife, and many other topics. A silent auction, native plant sale, and garden product market will be available, with proceeds going to conservation projects and organizations that are working to preserve native plant communities.

For more information, visit www.midwestnativeplants.org.

California Conservatory Goes Prehistoric

THIS SUMMER, the Conservatory of Flowers in San Francisco, California, will take a trip back in time with its prehistoric plant exhibition, “Plantosaurus Rex,” which runs until October 21. The living displays will feature models of dinosaurs and emphasize the co-evolution of flora and fauna from the Mesozoic Era, when flowering plants first appeared on Earth.



A model of a plant-eating *Stegosaurus* is part of the “Plantosaurus Rex” exhibit.

The exhibition begins with the Triassic Period, about 200 to 250 million years ago, when cycads, conifers, ferns, horsetails, and giant insects covered the supercontinent Pangea. Then it proceeds chronologically to the Jurassic Period, during which lush green plants continued to thrive and tropical ecosystems and swamps began to form as Pangea broke up and both herbivorous and carnivorous dinosaurs emerged. The exhibit ends in the Cretaceous Period when angiosperms—flowering plants such as magnolias, orchids, and water lilies—took root. This last period also features a life-size *Tyrannosaurus rex* and flying pterodactyl models.

The exhibition includes tours, talks, and demonstrations on fossils and other artifacts throughout the summer, as well as activities for younger audiences. For more information, visit www.conservatoryofflowers.org.

—Helen Thompson, Editorial Assistant

Looking ahead

JULY 7–11. **Botany 2012: The Next Generation.** Conference. Botanical Society of America. Greater Columbus Convention Center. Columbus, Ohio. (740) 927-8501. www.botanyconference.org.

JULY 11–14. **National Convention.** American Hemerocallis Society. Columbus, Ohio. (614) 475-7551. www.columbusdaylilies.org.

JULY 12–14. **American Conifer Society 30th National Meeting.** Ann Arbor, MI. (336) 945-0483. www.conifersociety.org.

JULY 14. **A Walk in the Garden and Garden Thyme Market.** Garden tour. Thornapple Garden Club. Hastings, Michigan. (269) 948-8234. E-mail: ibvngangs@att.net.

JULY 14–17. **OFA Short Course.** Conference. Ohio Florists Association. Greater Columbus Convention Center, Columbus, Ohio. (614) 487-1117. www.ofashortcourse.org.

JULY 15. **Chicago's Dearborn Garden Walk.** Tour of private gardens. North Dearborn Association. Chicago, Illinois. (312) 632-1241. www.dearborngardenwalk.com.

JULY 21. **Tour le Jardin.** Garden walk. Milwaukee, Wisconsin. (414) 771-7979. E-mail: carolehopp@wi.rr.com.

SOUTH CENTRAL

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

RĈ JUNE 2. **English Gardens Texas Style.** Course. Dallas Arboretum. Dallas, Texas. (214) 515-6500. www.dallasarboretum.org/AdultEducation/Gardening&Design.htm.

RĈ JUNE 9. **Herbs.** Workshop. Garvan Woodland Gardens. University of Arkansas. Hot Springs, Arkansas. (501) 262-9300. www.garvangardens.com.

JUNE 19. **Daylily Show.** Will Rogers Garden Exhibition Center. Oklahoma City, Oklahoma. (405)943-0827. www.okc.gov/parks.

RĈ JUNE 30. **Booms & Blooms Festival.** Powell Gardens. Kingsville, Missouri. (816) 697-2600. www.powellgardens.org.

RĈ JUNE 30. **Burden Center Garden Festival.** Burden Horticulture Society. Baton Rouge, Louisiana. (225) 763-3990. www.burdenhorticulturesociety.org.

SOUTHWEST

AZ, CO, NM, UT

RĈ MAY 20. **Central Arizona Cactus and Succulent Society Meeting.** Desert Botanical Garden. Phoenix, Arizona. (480) 941-1225. www.dbg.org.

Rĉ MAY 23. **Follow the Wildflowers.** Lecture and hike. Red Butte Garden and Arboretum. Salt Lake City, Utah. (801) 585-0556. www.redbuttegarden.org.

Rĉ JUNE 2. **Connecting Plants with People.** Guided tour. Tohono Chul Park. Tucson, Arizona. (520) 742-6455. www.tohonochulpark.org.

Rĉ JUNE 3 & 10. **2012 Garden Tour.** Santa Fe Botanical Garden. Santa Fe, New Mexico. (505) 471-9103. www.santafebotanicalgarden.org.

Rĉ JUNE 7. **Alpine Tour.** Betty Ford Alpine Gardens. Vail, Colorado. (970) 476-0103. www.bettyfordalpinegardens.org.

Rĉ JUNE 14. **Bonsai Lecture and Tour Shofusen Japanese Garden.** Denver Botanical Garden. Denver, Colorado. (720) 865-3500. www.botanicgardens.org.

Looking ahead

Rĉ JULY 13 & 14. **Summer Plant Sale & Penstemon Festival.** The Arboretum at Flagstaff. Flagstaff, Arizona. (928) 774-1442. www.thearb.org.

WEST COAST

CA, HI, NV

MAY 27. **Tropical American Trees.** Guided tour. Foster Botanical Garden. Honolulu Botanical Gardens. Honolulu, Hawaii. (808) 522-7066. www.honolulu.gov/parks/hbg/calendar.htm.

Rĉ JUNE 2. **25th Anniversary Spring Celebration.** Lecture, plant sale, tours, auction. Quarryhill Botanical Garden. Glen Ellen, California. (707) 996-3166. www.quarryhillbg.org.

JUNE 7. **Vanilla Orchids.** Class. Foster Botanical Garden. Honolulu Botanical Gardens. Honolulu, Hawaii. (808) 522-7060. www.honolulu.gov/parks/hbg/calendar.htm.

Rĉ JUNE 9. **California's Flowering Perennial and Shrub Borders: How to Design Your Own.** Class. San Francisco Botanical Garden at Strybing Arboretum. San Francisco, California. (415) 661-1316. www.sfbotanicalgarden.society.org.

JUNE 9. **Low Water Use Flowering Plants.** Walk and talk. South Bay Botanic Garden. Claremont, California. (619) 421-6700 ext 5371. E-mail: whomyak@swccd.edu. www.swccd.edu/5thLevel/index.asp?L4=574.

Rĉ JUNE 15. **Life After Lawn: Toward a New American Front Lawn.** Class. University of California Botanical Garden at Berkeley. Berkeley, California. (510) 643-2755. <http://events.berkeley.edu>.

JUNE 29. **Establishing Your Own Backyard Vineyard.** Class. Master Gardeners of Santa Clara County. Saratoga Library. Santa Clara, California. (408) 282-3131. www.mastergardeners.org/events.

NORTHWEST

AK, ID, MT, OR, WA, WY

Rĉ JUNE 9. **Dirt Cheap Gardening.** Class. The Oregon Garden. Silverton, Oregon. (503) 874-8100. www.oregongarden.org.

Rĉ JUNE 13. **Hydrangeas: What, How, WOW.** Lecture. Northwest Horticultural Society. Center for Urban Horticulture. Seattle, Washington. (206) 780-8172. www.northwesthort.org.

Rĉ JUNE 16 & 17. **Garden Fair.** Alaska Botanical Garden. Anchorage, Alaska. (928) 770-3692. www.alaskabg.org.

JUNE 24. **Annual Garden Tour & Faire.** Plant sale, tours. McMinnville Garden Club. McMinnville, Oregon. (503) 434-4344. www.mcminnvillegardenclub.org.

Rĉ JUNE 24. **Garden Tour.** Tour of local private gardens. Idaho Botanical Garden. Boise, Idaho. (208) 343-8649. www.idahobotanicalgarden.org.

JUNE 29–JULY 1. **Montana Native Plant Society Annual Meeting.** Lubrecht Experimental Forest. Greenough, Montana. E-mail: kmsnelly@msn.com. www.mtnativeplants.org.

Looking ahead

JULY 11. **Healing Garden.** Lecture. Portland Japanese Garden. Portland, Oregon. (503) 223-1321. www.japanesegarden.com.

JULY 15. **West Seattle Garden Tour.** Seattle, Washington. (206) 324-2061. www.westseattlegardentour.com.

JULY 20. **Sequim Lavender Farm Faire.** Sequim, Washington. (360) 452-6300. www.sequimlavenderfarmers.org.

CANADA

JUNE 9. **June Blooms Garden Party.** Plant sale, garden tour, seminar. Plant Paradise Country Gardens. Caledon, Ontario. (905) 880-9090. www.plantparadise.ca/Events.html.

Rĉ JUNE 9. **Native Bees at HCP.** Lecture. Horticulture Center of the Pacific. Victoria, British Columbia. (250) 479-6162. www.hcp.ca.

JUNE 16 & 17. **Desert Plant Society of Vancouver Show & Sale.** Van Dusen Botanical Garden. Vancouver, British Columbia. (604) 257-8335. www.vandusen.org.

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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. Zones listed refer to 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–G

Actaea racemosa ack-TEE-uh ras-eh-MO-suh (USDA Zones 3–8, AHS Zones 12–1)
Agapanthus* × *hybridus ag-uh-PAN-thus HY-brih-dus (7/8–11, 12–5)
Agastache rupestris ah-guh-STAH-she roo-PES-triss (5–9, 9–5)
Apios americana AY-pee-oss uh-mair-ih-KAN-uh (4–10, 10–3)
Aristolochia californica uh-ris-toh-LO-kee-uh kal-ih-FORN-ih-kuh (7–9, 8–4)
A. macrophylla A. mak-ro-FIL-luh (5–8, 8–4)
A. tomentosa A. toh-men-TOH-suh (5–9, 9–3)
Bignonia capreolata big-NO-nee-uh kap-ree-o-LAY-tuh (6–9, 9–5)
Campsis radicans KAMP-siss RAD-ih-kanz (3–9, 9–3)
Celastrus scandens seh-LAS-trus SKAN-denz (3–8, 8–1)
Clematis glaucophylla KLEM-uh-tiss glaw-ko-FIL-uh (6–8, 8–5)
C. morefieldii C. mor-FEELD-ee-eye (6–8, 8–1)
C. pitcheri C. PITCH-ur-eye (5–9, 10–5)
C. texensis C. teks-SEN-sis (4–10, 9–1)
C. viorna C. vy-OR-nuh (4–9, 9–1)
C. virginiana C. vir-jin-ee-AN-uh (3–8, 8–3)
Clinopodium georgianum klih-no-PO-dee-um jor-jee-AN-um (7–8, 8–7)
Crinum americanum KRY-num uh-mair-ih-KAN-um (8–11, 12–8)
C. ×powellii C. pow-ELL-ee-eye (6–9, 9–5)
Cunila origanoides ku-NIL-uh o-rig-uh-NOY-deez (6–8, 8–6)
Echinacea angustifolia ek-ih-NAY-see-uh ang-gus-tih-FO-lee-uh (4–9, 9–1)
E. pallida E. PAL-lih-duh (4–8, 8–1)
E. purpurea E. pur-PUR-ee-uh (4–9, 9–1)
Eryngium yuccifolium ee-RIN-jee- yuk-ih-FO-lee-um (4–9, 12–1)
Eucomis comosa YOO-kah-miss kuh-MO-suh (7–10, 10–6)
Eupatorium perfoliatum yew-puh-TOR-ee-um per-fo-lee-AY-tum (3–8, 8–1)
Eutrochium purpureum yoo-TROK-ee-um pur-PUR-ee-um (3–9, 9–1)
Galtonia candicans gal-TOH-nee-uh KAN-dih-kanz (6–9, 9–5)
Gelsemium sempervirens jel-SEE-me-um sem-pur-VY-renz (7–9, 10–4)
Gladiolus murielae glad-dee-O-lus myur-ee-EL-ee (8–11, 11–5)
Gloriosa superba glor-ee-O-suh soo-PUR-buh (8–11, 11–7)

H–O

Hedeoma hyssopifolia heh-dee-O-muh hiss-op-ih-FO-lee-uh (7–9, 12–6)
Lonicera sempervirens lah-NISS-er-uh sem-pur-VY-renz (4–9, 9–1)
Mentha* × *gracilis MEN-thuh x GRUH-sih-liss (5–9, 9–5)
M. ×piperita M. x pih-pur-EE-tuh (5–9, 9–5)
M. spicata M. spy-KAY-tuh (5–9, 9–5)
M. suaveolens M. swa-vee-O-lenz (5–9, 9–5)
M. suaveolens* var. *suaveolens M. swa-vee-O-lenz var. swa-vee-O-lenz (5–9, 9–5)
Monarda citriodora muh-NAR-duh sih-tree-o-DOR-uh (6–10, 10–2)
M. didyma M. DID-ih-muh (4–10, 10–1)
M. fistulosa M. fis-tyew-LO-suh (3–9, 9–1)
M. fistulosa* ssp. *fistulosa* var. *menthifolia M. fis-tyew-LO-suh ssp. fis-tyew-LO-suh var. men-thih-FO-lee-uh (3–9, 9–1)
Ornithogalum saundersiae or-nih-THO-guh-lum sawn-DURZ-ee-ay (7–10, 10–5)

P–Z

Parthenocissus quinquefolia par-then-o-SISS-us kwin-kweh-FO-lee-uh (3–10, 9–1)
Passiflora incarnata pass-ih-FLOR-uh in-kar-NAY-tuh (5–10, 12–1)
Salvia clevelandii SAL-vee-uh cleev-LAND-ee-eye (8–10, 10–1)
Spigelia marilandica spy-JEE-lee-uh mair-ih-LAN-dih-kuh (5–9, 9–2)
Tagetes lemmonii tah-JEE-teez leh-MO-nee-eye (8–9, 12–1)
T. lucida T. LOO-sih-duh (8–11, 12–1)
Teucrium chamaedrys TOO-kree-um KAM-ee-drees (4–9, 12–4)
Veronicastrum virginicum ver-on-ih-KASS-trum vir-JIN-ih-kum (4–8, 8–3)
Vitis californica VY-tiss kal-ih-FORN-ih-kuh (8–10, 10–8)
Wisteria frutescens wis-TEER-ee-uh froo-TESS-enz (5–9, 9–5)
W. macrostachya W. mak-ro-STAY-kee-yuh (6–9, 9–6)
Zephyranthes candida zef-ih-RAN-theez KAN-dih-duh (8–10, 11–6)
Z. grandiflora Z. gran-dih-FLOR-uh (8–11, 12–9)

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Wall Germander: A Well-Behaved Mint Relative

by Paul Lee Cannon



While grown mainly for its foliage, wall germander has attractive purplish-pink flowers.

MANY MEMBERS of the mint family (Lamiaceae) are rhizomatous wanderers that pop up throughout the garden, often where they're not wanted. However, wall germander (*Teucrium chamaedrys*, syn. *T. ×lucidrys*, USDA Hardiness Zones 4–9, AHS Heat Zones 12–4) is a well-behaved member with a clump-forming habit and a no-frills maintenance regime, making it a welcome addition to any sunny garden.

APPEALING ATTRIBUTES

A moderate to fast grower, wall germander spreads by rhizomes and reaches one foot tall by two feet wide. Native to Europe and southeast Asia, this low-mounding, mostly evergreen perennial with upright woody-based stems is primarily grown for its foliage. The small ovate to oblong, glossy dark-green leaves are oppositely arranged with toothed margins. On close examination, they resemble tiny oak leaves—hence the plant's specific epithet *chamaedrys*, which is derived from

chamae—on the ground, and *drys*—oak. But, from a distance, the plants look more like small boxwood shrubs (*Buxus* spp.).

Wall germander's leaves release a garlicky odor when crushed. In summer, whorls of pinkish-purple or white flowers resembling those of rosemary or catmint bloom on loose spikes, attracting bees and other beneficial insects.

It thrives in hot, dry gardens with poor soil, and works well in a number of design scenarios. Planted *en masse* as a groundcover on a slope, it fills in quickly to help slow soil erosion. I've seen it used effectively to edge and soften the entire walkway leading to a front door. With regular

shearing, wall germander adds an elegant flair to a knot garden. It's also at home in a perennial border or rock garden, as a low hedge, or planted in a container with herbs and annuals.

EASY TO PLEASE

Wall germander prefers full sun, well-drained soil, and average amounts of water, but can tolerate drought, heat, poor soil, salt air, and wind. It's also deer resistant.

I've received favorable reports from gardeners across the country on how it fares in other regions. It stays green all winter as far north as USDA Zone 5; tolerates part sun on a steep slope in Austin, Texas; and has been spied alongside daylilies and lawns in hotter parts of the San Francisco Bay Area, which suggests it can handle higher levels of irrigation. Though not bothered by serious pests, overwatering can lead to diseases including powdery mildew, rusts, and crown or root rots.

Shear wall germander once or twice a year for neatness and especially after blooming to encourage side growth. If plants get unruly in the fall, cut them to the ground, and in a few weeks they will reemerge more vibrant than ever. To propagate, divide plants in spring or take cuttings in summer to root for fall planting.

The four wall germanders I planted five years ago in my California garden have become lovely companions for *Grevillea* 'Constance' and Mexican marigold (*Tagetes lemmonii*). With their roots in heavy clay soil and very little irrigation, the *Teucrium* haven't complained one bit—even the unfortunate specimen that's endured countless clobberings from my truck's swinging passenger door. With so much to recommend it, this plant is definitely worth adding to your garden. 🌿

Sources

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

Mountain Valley Growers, Squaw Valley, CA. (559) 338-2775. www.mountainvalleygrowers.com.

A resident of Oakland, California, Paul Lee Cannon has written for Pacific Horticulture, Salon, and the San Francisco Chronicle.



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