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Photograph by Jerry Pavia

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AMERICAN HORTICULTURAL SOCIETY

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NOTES FROM RIVER FARM

BEING A GOOD gardener and taking good care of the earth go hand-inhand. Gardeners typically have keen observation skills and a heightened awareness of the rhythms of nature, as well as an appreciation, built from experience, for the significance of each decision we make or action we take.

The results of some of our actions occur relatively quickly and are very visible. Garden tasks such as raking up leaves, deadheading a flower bed, or planting a vegetable garden can deliver near instant gratification. The rewards of other endeaverages are the contraction of the results of t

ors may take much longer to materialize, or deliver results that are less tangible. For example, growing an exquisite specimen bonsai is an exercise in patience that spans decades. Or, consider the implications of setting up a compost bin or replacing a water-thirsty and resource-intensive lawn with low maintenance ornamental grasses and perennials. Both





actions will deliver benefits to the garden and to the environment, but over a much greater period. As gardeners, we have the good fortune to enjoy a unique mix of watchful anticipation and outright satisfaction on a daily basis.

The AHS is committed to encouraging gardeners to become good stewards of the earth by helping them make well-informed, responsible decisions about how they garden. We firmly believe that American gardeners can, and should, be role models for citizen action, a philosophy that is ingrained in our educational programs. One example of this is the Green Garage® initiative that is highlighted in each issue of our magazine. To broaden the reach of this program, we created a traveling educational exhibit that has been viewed by thousands of people at flower shows and botanical gardens nationwide. A model Green Garage, now bedecked with a green roof, is on permanent display here at our River Farm headquarters.

In this issue, be sure to read the informative Green Garage article on composters and composting. Feature articles include design advice for water-thrifty gardens, tips for beautifying curbside strips, top choices of dramatic annual foliage plants for summer plantings, and a profile of hardy hibiscuses.

In the course of our outreach through events and programs, AHS Board and staff members have the chance to meet many gardeners and horticulturists from across the country who are doing great things. Earlier this year, while scouting the Portland, Oregon, region for an upcoming AHS tour, we visited the Oregon Garden in Silverton. In addition to its beautiful plant displays, the garden is home to an innovative wetlands project that filters the city's treated wastewater and recycles it as irrigation water for the garden. If your summer travels take you to the Pacific Northwest, be sure to see for yourself how the Oregon Garden and the citizens of Silverton have adopted a creative and collaborative approach to environmental responsibility.

The world is truly our garden and we all have important roles to play. By being informed, making good decisions, and serving as models for our children, neighbors, and communities, together we are making a difference.

Happy gardening!

Susie Usrey, Chair, AHS Board of Directors Tom Underwood, Executive Director

MEMBERS' FORUM

CHRISTMAS CACTUS "MUTATION"

I have owned a Christmas cactus (Schlumbergera spp.) for more than four years. A few months ago I noticed an unusual growth that appears to be a mutation, as seen in the photos I attached (see below). Can you tell me if this is normal?

Maxine Rix Truckee, California



This unusual, atypical spine-covered growth formed on the stem of Christmas cactus.



A more typical-looking Christmas cactus pad later developed from the spiny growth.

Editor's response: We forwarded the images and your question to D. Russell Wagner, editor of the *Cactus and Succulent Journal*. According to Wagner, "It is not uncommon for juvenile growth on this type of cactus to exhibit longer spines and more ribs. A Christmas cac-

Member Services

We love to hear from our members! If you have questions about your American Horticultural Society membership, would like to become a member, renew your membership, give a gift of membership, or update your mailing or e-mail address with the AHS, please call (800) 777-7931 ext. 119 or e-mail us at membership@ahs.org.

tus's 'leaves' are actually stems, and like many cacti, they have ribs, but just two! As you can see, the next set of growth on the 'mutated' stem appears to be more like the normal growth. Also, you can readily see that these two ribs have aureoles (the notches on the edges of this plant's stems) from which the spines and flowers, and even leaves form, though the last are often so much reduced in cacti as to be microscopic."

PERENNIAL VEGETABLES ARTICLE INSPIRES HORTICULTURAL THERAPIST

I am a Master Gardener and part-time instructor in a mental health facility that treats recovering addicts. The program these people are in is a court mandated activity in lieu of going to prison. I try to introduce fun, exciting, and healthy activities for these folks to learn, and, in some cases, to take home and teach their children. Learning about good nutrition is a major focus in my lesson planning. Of course, that can tie right into many quick, easy, and fun gardening activities that can be done anywhere.

I'm always looking for new ideas for activities, so I greatly appreciated Eric Toensmeier's article on perennial vegetables in the March/April issue. The article inspired me to start growing plants the people I work with are not used to eating, such as chayote, which I learned to love as a child in New Orleans.

Rosemary Noel Bronaugh, Missouri

FISH EMULSION AND VERTICILLIUM

In the May/June issue you ran a news article about using fish emulsion to suppress verticillium wilt. I planted an eastern redbud tree (Cercis canadensis), only to have it die about 10 years later due to this infection. However, I saved seedlings from that tree, and one of them is now eight years old. This year, I noticed that two branches seem to have died over the winter. I have been extremely careful about watering and fertilizing on a regular basis to avoid stressing the tree, but in spite of my efforts, it appears it has become infected. Any information you could give me about using fish emulsion to save my precious tree would be greatly appreciated!

> Diane Koza Wheaton, Illinois

Editor's response: We contacted the research team that conducted the initial study and posed your question to them. Here is the response from Pervaiz Abbasi, a research scientist with Agriculture and Agri-Food Canada in London, Ontario: "In our study, which was conducted in a greenhouse setting, fish emulsion prevented verticillium wilt in healthy eggplants. In the case of this eastern redbud, which is already infected with verticillium wilt, I am not sure if fish emulsion will provide any relief. If the gardener has other healthy seedlings, I suggest she plant them in a new pathogen-free location. Prior to planting, the soil in the new location should be treated with fish emulsion according to the label's instructions.

Although the process is still experimental, your reader could also try using fish emulsion to treat the infected tree. Gently loosen the soil around the base of the tree and apply fish emulsion as a drench at the same application rate. I would suggest repeating the application every month or every other month."

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

The AMERICAN HORTICULTURAL SOCIETY presents

Deleventing the Elegance of Simplicity

at RIVER FARM in Alexandria, Virginia



Saturday, September 19, 2009

16th Annual Gala



American Horticultural Society invites you to join us for an evening of fine dining and dancing at our 16th Annual Gala, "Celebrating the Elegance of Simplicity." This year's event will highlight the fresh flavors of locally and sustainably produced foods and wines. Chef Cathal Armstrong, of Restaurant Eve in Alexandria, Virginia, and honorary chair of the evening, has created a special menu just for the event. Chef Armstrong was recently named one of the mid-Atlantic region's "Green Giants" by *Washingtonian* magazine for his dedication to using fresh ingredients and promoting sustainable organic farming practices.

Available for bidding during a silent auction will be one of Armstrong's chef's coats and the original oil painting by Alexandria artist Joan Cox, shown above, generously donated by HDN Studio.

Proceeds benefit the stewardship of River Farm and the American Horticultural Society's outreach and educational programs.

Call (703) 768-5700, ext. 118 or e-mail ccapstack@ahs.org for more information or to reserve tickets for tables of 10.

Sponsorship opportunities also available.



Pictured Above Chef Cathal Armstrong, Honorary Chair

Graphic Design www.HDNStudio.com

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News from AHS

PROGRAMS • EVENTS • ANNOUNCEMENTS

Celebrating the Best in American Horticulture

ON JUNE 4, the AHS welcomed distinguished guests from around the country to River Farm to honor the 2009 Great American Gardeners Award winners and Book Award winners.



Panayoti Kelaidis

The recipients of these annual awards are recognized for their exceptional achievements in various sectors of American horticulture.

The first awards presented on this evening went to the publishers of four outstanding garden books published in 2008. The 12 Great American Gardeners Awards followed, in categories ranging from plant research, communications, conservation, landscape design, education, and more.

Panayoti Kelaidis received the top honor of the evening,

the AHS's Liberty Hyde Bailey Award, for his work at the Denver Botanic Gardens in Colorado. This award recognizes an individual who has dedicated a lifetime to horticultural areas such as teaching, research, communications, plant exploration, administration, art, business, and leadership. Kelaidis concluded the evening by saying, "Gardening is not just a hobby, it's the main way we honor Planet Earth."

To see a full list of the 2009 winners or to submit a nomination for the 2010 awards, visit *www.ahs.org* and click on "Awards." Nominations will be accepted through September 30, 2009.

Webinars on Water-Thrifty Strategies and Wildlife in the Garden

IN THE NEXT AHS members-only webinar, scheduled for July 30, **Scott Calhoun** will discuss "Dry Beauty: Strategies for Designing Water-Thrifty Gardens." Calhoun is an award-winning author and garden designer based in Tucson, Arizona, who has written several books on desert gardening, including his most recent title, *The Hot Garden*. Calhoun also contributed an article to this issue of the magazine, starting on page 20. Registration for the webinar is open in the members-only area of the website.

Douglas Tallamy will present the final webinar for 2009, "Gardening for Wildlife," on September 9. Tallamy currently serves as professor and chair of the Department of Entomolo-

gy & Wildlife Ecology at the University of Delaware, and is the author of *Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens*. Registration for Tallamy's webinar opens August 5 in the members-only area of the website.

The webinars are available to AHS members at no charge, but space is limited, so early registration is advised. A high-speed Internet connection is strongly recommended for best results.

America in Bloom Symposium Headed to Hershey

AMERICA IN BLOOM (AIB), an AHS horticultural partner, will hold its annual symposium and awards ceremony from Oc-



www.americainbloom.org

tober I to 3 in Hershey, Pennsylvania. The event will feature a number of workshops and tours focusing on the "power of plants." Informational sessions for participants will range

from "The History of Hershey" to topics such as sustainable lawn care, plant rotations, and urban landscaping.

Thursday evening's festivities include the unveiling of AIB's annual contest winners in eight categories: floral displays, turf and groundcover areas, landscaped areas, urban forestry, community involvement, environmental awareness, tidiness, and heritage preservation. On Saturday, additional honors will be awarded based on population category of the competing communities.

AIB is dedicated to enhancing America's communities and providing educational resources. Since its establishment in 2001, the organization has improved more than 170 communities in 38 states through beautification efforts. Visit America in Bloom's website at *www.americainbloom.org* or call (614) 487-1117 for additional information and updates on the symposium.

Gardening Experts Abound at Upcoming Homestead Event



André Viette

THE 11TH ANNUAL "In the Garden with the Experts" symposium will take place from August 21 through 23 at the Homestead resort in Hot Springs, Virginia. The AHS has partnered with the Homestead in sponsoring this educational event for several years, giving complimentary AHS membership to all attendees.

André Viette—a Virginia-based horticulturist, author, and lecturer—will once again speak at the symposium, this year on the topic of propagating perennials. **Stephen L. Gable**, a conifer expert and former TV host, will explore "Wonderful Conifers and New and Unusual Plants for Your Garden." Norfolk Botanical Garden Executive Director **Donald R. Buma** will discuss strategies for maintaining a beautiful landscape. **C. Colston Burrell**, another acclaimed author, lecturer, and garden designer, will speak on plant design for shaded gardens. In addition to lectures and demonstrations, the weekend package includes a tour of the Homestead gardens, courtesy of the superintendent, **Forrest Lee**.

To register for this event or for more information on the Homestead, call (800) 838-1766 or visit www.thehomestead.com.

Garden Writers Visit River Farm

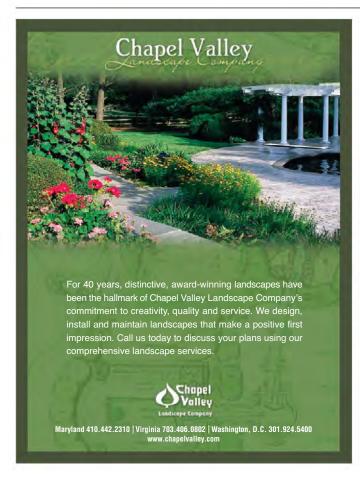
ON MAY 29, River Farm hosted more than 40 members of the Garden Writers Association (GWA) for a regional meeting. GWA is made up of garden communications professionals including authors, editors, photographers, freelance writers, landscape designers, publicists, and columnists.

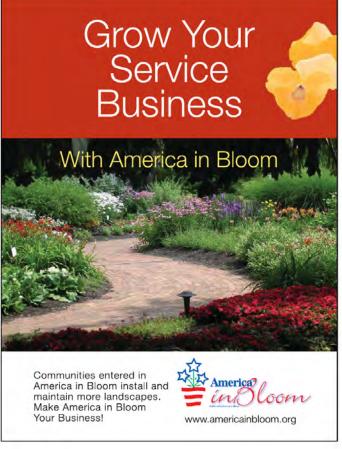
The day's activities included a tour of the AHS gardens and a special lecture on "rainscaping"—strategies for capturing and using rainwater in your garden—by **Joe Keyser**. Keyser is known as "The GreenMan" from his newspaper column, radio program "Eco-Minutes," and award-winning cable television show. He also served as the environmental education specialist for the Montgomery County Department of Environmental

Plant a Seed, Save a Seed



As plants in your garden begin to set seed, don't forget to save some for the 51st annual AHS Seed Exchange. Every year, AHS members are invited to participate in this program and donate their favorite seeds in anticipation of next year's gardens. A catalog of all the seeds will be compiled and posted in the members-only area of the website, and those who donate seeds get first pick. More information will be available in the September/October issue of *The American Gardener*, or go to www.ahs.org/membership/seed_exchange.htm for further details.





Protection in Maryland until 2006. Following Keyser's lecture, the garden writers headed to the nearby Mount Vernon Estate and Gardens for additional presentations and tours.

Annual Photo Competition Open to **AHS Members**

SINCE 2004, the Gardeners of America/Men's Garden Club of America (TGOA/MGCA) has shared a partnership with the AHS. Each year, members of both organizations are eligible to submit garden photographs for the TGOA/MGCA Photography Competition. Winners of the 2009 contest were announced at the organization's National Convention, held in May in Santa Rosa, California.

Several AHS members were recognized for their photos, including **Debra Kayata** from Ocean City, New Jersey, who was awarded 2nd Runner Up in the Best of Show category. Other AHS members who received awards were **Anne Allen** from Brownsville, Vermont; Arabella Dane from Center Harbor, New Hampshire; and **Di Decaire** from Penfield, New York. Their winning photos will appear in the TGOA/MGCA 2010 calendar, which will soon be distributed.

TGOA/MGCA will accept submissions for their 2010 Photography Competition until February 13, 2010. Judges look at composition, color, lighting, and dramatic effect when considering submissions. For information on the 2010 contest, or to request a copy of the 2010 calendar, call (515) 278-0295 or visit www.tgoa-mgca.org.

News written by Editorial Intern Amanda Griesser.



AHS NATIONAL EVENTS AND PROGRAMS 2009 CALENDAR

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

- JULY 23-25. National Children & Youth Garden Symposium. Hosted by Cleveland Botanical Garden. Cleveland, Ohio.
- JULY 30. "Dry Beauty: Strategies for Designing Water-Thrifty Gardens." Webinar presented by Scott Calhoun.
- AUG. 21–23. The Homestead's 11th Annual "In the Garden With the Experts" Symposium. Hot Springs, Virginia.
- SEPT. 9. "Gardening for Wildlife." Webinar presented by Douglas Tallamy.
- SEPT. 19. AHS Annual Gala: "Celebrating the Elegance of Simplicity." River Farm, Alexandria, Virginia.
- OCT. 1-3. America In Bloom Symposium and Awards Ceremony. Hershey, Pennsylvania.
- OCT. 23. Dr. H. Marc Cathey Day. River Farm, Alexandria, Virginia.
- DEC. 1–24. Holiday Trees Display. River Farm, Alexandria,



If you would like to support the American Horticultural Society as part of your estate planning, as a tribute to a loved one, or as part of your annual charitable giving plan, please contact: Stephanie Perez, Development and Membership Manager, at (703) 768-5700 ext. 127 or sperez@ahs.org.

In addition to vital support through membership dues, the American Horticultural Society relies on grants, bequests, and other gifts to support its programs. We would like to thank the following donors for gifts received between April 1, 2009 and May 31, 2009.

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Call for Nominations

AMERICAN HORTICULTURAL SOCIETY 2010 GREAT AMERICAN GARDENERS AWARDS



2009 Liberty Hyde Bailey Award Panayoti Kelaidis, Denver Botanic Gardens

It's an Honor...

Since 1953, the American Horticultural Society's Great American Gardeners Awards Program has recognized individuals and institutions that have made significant contibutions to American horticulture. Nominations are now being accepted for 2010.

Nominate your "horticultural hero" a memorable professor, a favorite garden book author, or the driving force behind an incredible community project.

For additional information and a nomination form, visit *www.ahs.org* or call (703) 768-5700 ext. 132.

Nominations must be submitted by September 30, 2009.



Liberty Hyde Bailey Award

Given to an individual who has made significant lifetime contributions to at least three of the following horticultural fields: teaching, research, communications, plant exploration, administration, art, business, and leadership.

H. Marc Cathey Award

Recognizes outstanding scientific research that has enriched the field of horticulture.

Paul Ecke Jr. Commercial Award

Given to an individual or company whose commitment to the highest standards of excellence in the field of commercial horticulture contributes to the betterment of gardening practices everywhere.

Landscape Design Award

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

2010 AWARDS

Meritorious Service Award

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

B. Y. Morrison Communication Award

Recognizes effective and inspirational communication—through print, radio, television, and/or online media—that advances public interest and participation in horticulture.

Frances Jones Poetker Award

Recognizes significant contributions to floral design in publications, on the platform, and to the public.

Professional Award

Given to a public garden administrator whose achievements during the

course of his or her career have cultivated widespread interest in horticulture.

Catherine H. Sweeney Award

Recognizes extraordinary and dedicated philanthropic support of the field of horticulture.

Jane L. Taylor Award

Given to an individual, organization, or program that has inspired and nurtured future horticulturists through efforts in children's and youth gardening.

Teaching Award

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

Urban Beautification Award

Given to an individual, institution, or company for significant contributions to urban horticulture and the beautification of American cities.

Furbish Company: Using Plants to Create Sustainable Structures

by Talia Goldman

ANY BUSINESSES are hastily jumping on the "green" bandwagon, but Furbish Company, the most recent addition to the American Horticultural Society's corporate member program, clearly practices what it preaches. This sustainable building com-

pany's headquarters in Brooklyn, Maryland, abounds with examples of eco-friendly building methods. These include a heating and cooling system fueled by a geothermal heat pump and solar panels, and pervious pavement—which allows water to pass through it rather than running off into stormwater drains-in the parking lot.

FOCUS ON SUSTAINABILITY

An industrial engineer by training, Michael Furbish started the company in 2003

because of his strong commitment to sustainability through designing more efficient buildings. The company works on targeted projects, where the design/construction focus is "sustainable."

In particular, the firm provides subcontract services for specialty green building components such as living roofs, biofilters, and vegetated retaining walls. Benefits of these components include the mitigation of air and water pollution and reduction of the heat-island effect of impervious surfaces in urban locations. The goal is to do more than reduce the negative impact of buildings on the environment—it is to create regenerative buildings that produce en-

For more information about becoming an AHS corporate member, contact Stephanie Perez at (703) 786-5700 ext. 127 or sperez@ahs.org.

ergy, improve air quality, and allow a natural habitat to be maintained.

"When we started out, we had no idea we would be working primarily with various plant-based building systems," says Furbish. "We started with living roofs, which led to vegetated retaining walls, and



Furbish Company installs vegetated retaining walls, like this one, that feature native plants.

then to biofilters." This relationship with plants is the common ground that Furbish Company and the AHS share. "The AHS promotes not only the beauty of plants but the functional capacity of plants, which is our focus. We are honored to be a part of the AHS community and look forward to actively promoting horticulture in the built environment," adds Furbish.

ENVIRONMENTAL ROOFS AND WALLS

Living roofs can range from sloping to flat, from extensive roofs planted with a colorful variety of sedums-shallowrooted, drought-resistant plants that can survive in harsh conditions—to intensive roofs that allow for almost any garden concept on the top of a building.

Furbish Company has installed more than 60 living roofs in the mid-Atlantic region. These include a 5300-square-foot installation at Swarthmore College dormitory in Swarthmore, Pennsylvania, and a 32,000-square-foot installation atop the new Hilton Hotel in Baltimore, Maryland. Two examples of the company's green roofs can also be seen at the AHS's River

> Farm headquarters in Alexandria, Virginia. Both of these are designed to demonstrate the beauty and functionality of the living roof concept in a home garden setting.

> Later this summer, Furbish will be installing a vegetated retaining wall at River Farm. It will use a variety of plants native to the mid-Atlantic region that attract wildlife, such as summersweet (Clethra alnifolia), switch grass (Panicum virgatum), and northern bayberry (Myrica pensylvanica).

"There is a significant dif-

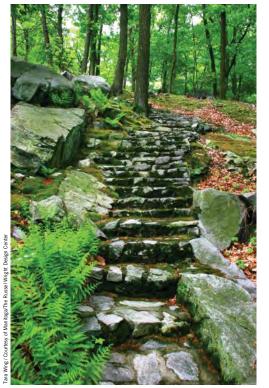
ference between a traditional retaining wall and what we build," says Jimmy Dick, sales and marketing director of Furbish Company. "Instead of looking at a concrete wall, one sees a vertical garden. It uses 40 percent less concrete and reduces both the heat-island effect and stormwater runoff. And planting with native species contributes to restoring the ecosystem."

All of the systems that Furbish Company utilizes work toward the conservation of the environment in ways big and small. The company tracks its successes in sustainability with an up-to-date counter on its website. You can watch the count of gallons of stormwater diverted, vegetation grown in place of hardscaping, and indoor air purified climb higher and read more about Furbish's goals and projects at www.furbishco.com.

Talia Goldman is a freelance writer based in Baltimore, Maryland.



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AHS PRESIDENT'S COUNCIL EXCLUSIVE

PORTLAND, OREGON

with hosts Susie Usrey, AHS Board Chair, and Tom Underwood, AHS Executive Director

August 12-16, 2009

Highlights of this President's Council members-only trip include visits to the International Rose Test Garden, the Portland Japanese Garden, the Classical Chinese Garden, and an excursion to Multnomah Falls Lodge. We'll also tour Swan Island Dahlias, Monrovia nursery, Joy Creek Nursery, Cistus Nursery, and the Oregon Garden. Several members of the Portland Garden Club have agreed to open their personal gardens for us, and Susie and Bruce Usrey have invited us to their home for a very special evening on the final night of the tour.

We will be staying at the Governor Hotel, a luxury hotel that combines historical ambiance with modern convenience.

To register or for more information about the President's Council and this trip, please contact Sue Galvin at (703) 768-5700 ext. 111.











Hardy Hibiscuses for American Gardens

The tropical appearance of these bold and beautiful bloomers belies their hardy temperament.

BY BARBARA PERRY LAWTON

ARDY HIBISCUSES—shrubby perennials that include several American natives and their descendants—are tough, vigorous growers that produce breathtaking summer flowers of great dimensions and powerful colors. Most are hardy to at least USDA Zone 5. Some cultivars, especially some of the older ones, also grow to astounding heights and spreads and can muscle out smaller,

less assertive garden ornamentals. This trait is a potential drawback that calls for careful placement in the landscape, familiarity with varieties, and an understanding of their growth patterns.

ANCESTORS OF TODAY'S HYBRIDS

The genus *Hibiscus* includes more than 200 species that belong to the mallow (Malvaceae) family (see "Hibiscus Rela-

tives," page 17). The modern cultivars of hardy hibiscuses derive primarily from several North American natives. The swamp rose mallow (*Hibiscus moscheutos*), the rose mallow (*H. lasiocarpus*), and the swamp hibiscus (*H. coccineus*) might well have been the first indigenous species brought into cultivation in American gardens; their large flowers immediately captured people's attention.

Modern hibiscuses are derived from American species such as (clockwise from left) H. moscheutos, H. coccineus, and H. lasiocarpus.



'Lord Baltimore', an old garden favorite, produces large, vibrant red flowers.

They were exported to England and Europe as early as the 1700s. John Bartram (1699–1777), America's first great plant collector, listed Hibiscus moscheutos and H. palustris (now H. moscheutos subsp. palustris) in his 1807 Philadelphia nursery catalogs. By 1820, William Prince of Flushing, Long Island, was also selling these natives. He added *H. militaris* (now *H. laevis*), the halberd-leaved rose mallow, to his sales list in 1822, and H. grandiflorus, the great rose mallow, in 1825.

All told, there are at least 14 different North American hardy hibiscus species. Although some inhabit dry climates, it is the wetland species, at least to date, that have given rise to most modern cultivars.

OLD FAVORITES

Many older hybrids are still popular in today's gardens. In 1903, Ernest Hemming of the Thomas Meehan Nursery in Philadelphia, crossed *H. coccineus* with H. laevis and got a red-flowered hybrid that he then crossed with H. moscheutos. Within a few generations he had some remarkable results—satin-textured flowers ranging from white through pink to deep reds with leaf shapes ranging from entire to deeply lobed. First sold in 1907 as Meehan Mallow Marvels, these hybrids are still available as H. 'Mallow Marvels'.

Other long-time favorites are Hibiscus 'Lord Baltimore', 'Lady Baltimore', and 'Anne Arundel', varieties developed by Robert Darby from the 1950s through the 1970s. Lorraine Ballato, a garden writer and photographer who grows the crimsonflowered 'Lord Baltimore' in her garden in Brookfield, Connecticut, says, "I love the sheer exuberance of the plant." Its flowers are 10 inches across with ruffled petals.

Resources

All-American Mallows by Donald Humphrey. The American Gardener (pp. 29-34), July/August, 2001.

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Hibiscus: Hardy and Tropical Plants for the Garden by Barbara Perry Lawton. Timber Press, Portland, Oregon, 2004.

$\operatorname{Sources}$

Ambergate Gardens, Chaska, MN. (877) 211-9769. www.ambergategardens.com.

Dayton Nurseries, Norton, OH. (866) 500-6605 www.daytonnursery.com.

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

Gorge Top Gardens, Coeburn, VA. (800) 673-1134. www.gorgetopgardens.com.

Nature Hills Nursery, Omaha, NE. (402) 934-8116. www.naturehills.com.

Hibiscus mutabilis is an enormous perennial—to 15 feet tall and half as wide. Although native to China, it has been grown in the South for so long that it has acquired common names such as Dixie rosemallow and Confederate rose. It grows well in drier regions, too, but requires supplemental water. Ellen Zagory, director of horticulture at the University of California, Davis Arboretum, where water resources are a precious commodity, says, "Although it grows here and does well with irrigation and has amazingly large flowers, it is not a plant we promote or grow for sale." This species has been used, however, for breeding some very popular varieties.

Sakata Seed Corporation crossed H.moscheutos and H. mutabilis, resulting in the 'Southern Belle' series, which was introduced in 1971. With 10- to 11-inch blooms, the flowers are among the largest



'Disco Belle' thrives in Denny Schrock's garden in Des Moines, Iowa (USDA Zone 5).

of all temperate perennials. Sakata also bred the 'Disco Belle' series, which features more compact plants in shades of white, pink, and red.

Harold Winters, who worked at the USDA plant introduction station in Glenn Dale, Maryland, from the late 1960s to the 1980s, bred hardy hibiscuses in his home garden. His selection, the handsome, white-flowered *Hibiscus* 'Blue River II', is named after the Blue River in southeastern Oklahoma where he found the parent *H. laevis* growing.

From the 1970s through the 1990s, the Fleming brothers—Jim, Bob, and Dave—of Lincoln, Nebraska, bred and introduced many fine selections from *H. moscheutos, H. coccineus*, and crosses between the two. Among their best known cultivars is 'Kopper King', which has redstreaked flowers and copper-red foliage. "'Kopper King' is wonderful for smaller areas. The contrasting color of the flower eye and its colored foliage contribute to its favored status," says Ballato.

Other Fleming introductions include 'Old Yella', with pale yellow, slightly ruffled flowers that feature a crimson eye, and 'Fireball' with purplish red foliage and large burgundy-red flowers.

The story of Morrison's Mammoth Hibiscus dates to the 1970s, when retired electrical engineer William L. Morrison of northern Illinois began growing hardy hibiscuses. Growing *H. moscheutos* with benign neglect—ordinary soil, no fertilizer, no supplemental water—he let the plants cross freely, then chose the best seedlings for cross-pollination. The results of his efforts are several tough, drought-resistant varieties, three- to six-feet tall that bear huge flowers, including 'Pyrenees Pink', 'Rainier Red', and 'Everest White'.

MODERN SELECTIONS

About five years ago, Clarence H. Falstad III and Kevin Hurd of Walters Gardens in Zeeland, Michigan, began hybridizing hibiscuses. Falstad's first introduction, *Hibiscus* 'Summer Storm' PPAF (plant patent applied for) was an immediate success and remains popular. It has finer textured foliage that is darker than 'Kopper King' and eight-inch pink flowers with rose veining and a deep magenta eye. It also has an everblooming habit, with flowers that develop along the stems as well as the tips.

HIBISCUS RELATIVES: A VARIED BUNCH

There are a number of other notable plants in the mallow family (Malvaceae) in addition to the hardy hibiscus. The mallows are native to temperate and tropical regions around the world.

Many are useful as ornamentals while others serve as valuable sources of food, fiber, and even medicine.

Chinese hibiscus (Hibiscus rosasinensis, Zones 10–11, 12–1) is a tropical evergreen with flowers in shades of orange, yellow, red, and white. It can be grown outdoors in frost-free regions and as a house plant or summer patio plant in temperate climates.

Rose of Sharon (*H. syriacus*, Zones 5–9, 9–1), is a temperate shrub native to China and India that grows to 10 feet tall and bears abundant latesummer flowers; many beautiful varieties are available. The symmetrical, five-parted saucer- or bell-shaped flowers as well as the prominent reproductive columns are obvious clues to members of the mallow family.



Okra has decorative flowers and edible seedpods.

Okra (Abelmoschus esculentus), a staple of Southern cooking, is a mallow, and so is flowering maple (Abutilon spp.), deciduous tender shrubs and small trees. These are admired for

their beautiful saucerlike flowers and handsome foliage. Hollyhocks (Alcea rosea) are also mallows; these old-fashioned ornamental biennials or short-lived perennials are now enjoying a resurgence of popularity—their young leaves and buds are considered a delicacy by the Chinese.

Best known and most commercially valuable of all the mallows is cotton (*Gossypium* spp.), which has been used for at least 4,000 years to produce strong, absorbent fabric. Black sheep in the mallow family are the pernicious weeds known as cheeses (*Malva* spp.) because of their round cheeselike fruits. These weedy annuals or biennials commonly invade new lawns, farmyards, cultivated areas, and roadsides.

—B.P.L.

Walters Gardens has also introduced 'Jazzberry Jam', hybridized by Hurd, so named because the flower color is nearly identical to the new Crayola Crayon® color. Three new varieties being launched this fall are 'Party Favor' with pink ruffled flowers and dissected leaves, 'Sultry Kiss' with magenta flowers and bronze foliage, and 'Cranberry Crush' with deep scarlet flowers and dark green maplelike leaves with purple overtones.

"My favorite is 'Cranberry Crush'," Falstad says. "It is the shortest, most compact hybrid we've seen with the everblooming trait. The slightly cupped, deep scarlet flowers develop from nearly black buds and the foliage possesses attractive reddish purpling on the dark green leaves."

Aris Inc. (formerly Yoder Brothers), another wholesale perennial grower, has expanded its extensive tropical hibiscus breeding program to include hardy hibiscuses, focusing on shorter, fuller plants with uniform growth habits. The varieties in their Vintage line come in red, white, and pink, and produce abundant flowers on compact plants. There are two distinct series, Splash and Carafe, differ-



'Grenache', part of the Carafe series, has dark pink flowers and a compact growth habit.

entiated by their size at maturity. Splash varieties, which average two-and-a-half feet tall, include 'Pinot Noir' with red flowers and 'Pinot Grigio', which bears white flowers with a tinge of rose-pink on the petal edges. Carafe varieties have a very dense growth habit and are a bit

taller, averaging three feet in height. 'Bordeaux' and 'Grenache' have pink flowers while the blooms of 'Chablis' are white.

Aris has also introduced the hardy hibiscus Cordials series. All varieties in the series have dissected foliage on plants three-and-a-half feet tall and three feet

wide. 'Cinnamon Grappa' features solidred blooms; 'Peppermint Schnapps' has pink flowers accented with darker pink stripes and smudges; 'Brandy Punch' has pink flowers and bronze foliage with purple and green accents; and 'Cherry Brandy' has solid red flowers with striking foliage similar to 'Brandy Punch'. (For details on these and other selections, see "Hardy Hibiscus Cultivars at a Glance" linked to this article on the AHS website.)

DESIGN TIPS

Hibiscuses bring a lot of late-season drama into the garden, making their entrance when early summer bloomers are fading. "The perennial forms are fun—the size of

PRUNE TO CONTROL SIZE

With their bold, coarse-textured foliage and significant size, placing perennial hibiscuses can be a challenge in a small garden. Many of the older varieties in particular can become gangly and grow to excessive heights and widths—six feet both ways—especially in fertile soils. Pinching them back hard two to three times will make them bushier and shorter.

To avoid overcrowding or having to cage or stake them, treat them to a heavy tip pruning, cutting off about half of the new spring growth once it reaches about one foot. Cut back again by about six inches when stems reach about two feet. Do not tip prune after the first of June or you may delay flowering too long.

—B.P.L.

the blooms makes them so tropical looking," says garden designer Lucy Hardiman of Portland, Oregon, who plants them both directly in the garden and in containers, although she notes that she has experienced some losses in hard winters.

Compact varieties can be used to create a spectacular seasonal hedge. They grow rapidly, forming a colorful mass of foliage and flowers that can transform a backyard in summer, but disappear from the landscape when cut back in winter.

"Hardy hibiscuses can't be beat for the texture and bold color that they give to the





border," says Kirk Brown, a landscape designer in Orefield, Pennsylvania. "During summer, they combine well with fine-textured shrubs...[and they] love to romp with ornamental grasses like *Pennisetum* and *Miscanthus*. They give us northern gardeners a shot of tropical splendor."

Garden designer Kristin Yanker-Hansen of Danville, California, says that in the Tri-Valley area, where days are warm but nights rarely are, "We don't get the huge sizes that they do in the East. But they come up earlier—I start seeing growth in late April and early May, and many are full-

Two selections from the evocatively named Cordials series are 'Peppermint Schnapps', above, and 'Cinnamon Grappa', left. These relatively small hibiscus cultivars have deeply dissected foliage.

size by the end of May." She likes using the compact varieties in beds with early-blooming bulbs such as *Narcissus* 'Ice Follies' and *Anemone coronaria* that provide color before the hibiscuses emerge.

CULTURAL NEEDS

Modern hybrids generally grow best in full sun with moist soil that has good texture. Since many of these floriferous beauties descend from plants that grow in wetlands, they are tolerant of wet soil, although, like many bottomland natives they can handle droughty conditions fairly well. "Hardy hibiscuses do very well in the normally sandy soils of Cape Cod, Zone 6b, or in the soil I have that is a mix of clay and sand," says C.L. Fornari, a garden writer and radio host who lives in Sandwich, Massachusetts.

If grown in soils of decent quality, they do not need fertilizer; in fact, they may need staking if spurred to grow too vigor-

ously. Hardy hibiscuses are not particularly fussy about soil pH, but prefer a range of 6.5 to 7.5. They are long-day plants stimulated to develop flowers by the relatively short nights of summer.

"I've grown hardy hibiscuses in Iowa, Minnesota, Colorado, Missouri, and Illinois. I have about 30 in my yard, some named cultivars and others I've started from seed...[they] thrive in heat and humidity and also stand up well to proUSDA Zones 8 and 9, we grow Hibiscus moscheutos primarily as an annual," says Robert Bowden, director of Harry P. Leu Gardens in Orlando, Florida. An exception is the southern native scarlet mallow (H. coccineus), which Bowden says "is good for areas where homes are built on moist soils."

Remember that hardy hibiscuses are late to emerge in spring, so be patient. Once the first flush of blossoms has faded cus breeders should be aiming for better disease and pest resistance," says Doug Gilberg of Wildwood, Missouri, who has bred and introduced several cultivars of hardy hibiscuses.

Plant breeders continue to develop new varieties that have a more compact habit, an asset for those who have small gardens. And the new everblooming selections provide color over a significantly longer period. Even though I



Given enough space, hibiscuses such as 'Rainier Red' match up well with statuesque plants such as Joe pye weed and maiden grass.

longed summer droughts," says Denny Schrock, a garden book editor in Des Moines, Iowa, (USDA Zone 5). "You'll find attractive colors and bicolors as well as a variety of leaf forms and colors, although my experience is that varieties with deeply hued leaves are less hardy than green forms," says Schrock.

Although hardy hibiscuses endure environmental extremes once they are established, most do not thrive in subtropical climates such as in southern Florida. "Here, in the region between

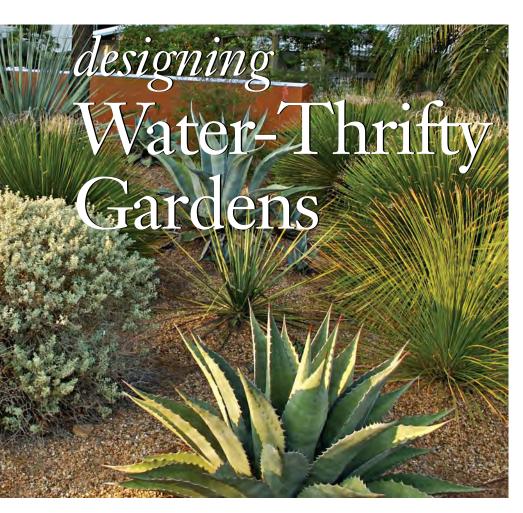
in midsummer, deadhead the old flowers. This should encourage new flower buds to develop, extending the blooming season.

In the fall, after a hard freeze, the foliage will die back, but you don't need to prune the current year's growth until new growth begins in the spring. If you prefer, you can prune the old growth to about five to six inches above the ground.

COMING ATTRACTIONS

What's next for this group of sensational summer bloomers? "Today's hardy hibismust prune and pinch it back to keep it within reasonable bounds, 'Blue River II' remains my personal favorite among the hardy hibiscuses. I hope that some plant breeder will eventually introduce a smaller, more compact selection that has the beautiful pure white flowers that keep me in love with 'Blue River II'. .

The author of Hibiscus: Hardy and Tropical Plants for the Garden (Timber Press, 2004), Barbara Perry Lawton lives in Valley Park, Missouri.



Using strategies learned from the Southwest, gardeners anywhere can plan and create a beautiful landscape that requires minimal watering. BY SCOTT CALHOUN

ITH DROUGHT affecting many different regions of the United States—most notably the Southeast—in the last decade, waterthrifty gardens have become relevant almost everywhere. Water shortages and rationing in some areas have generated news stories on a variety of ways gardeners are trying to cope, ranging from drilling wells in order to water their garden, using graywater from the household, and putting down artificial turf in lieu of lawns. In some regions, communities are proposing or investigating legislation that would ease homeowner association and municipal restrictions on what gardeners can plant so that thirsty lawns and plants can be replaced with drought-tolerant species.

As a garden designer in Arizona, I have had to face the challenge of creating attractive and drought-tolerant landscapes. Few would dispute that the region I work in—which encompasses major urban areas such as El Paso, Tucson, Phoenix, Las Vegas, and Palm Springs—is the most difficult and extreme area of the United States in which to garden. Part of this is due to extreme heat, but the bigger issue is water, or the lack thereof. We are running out of water in the West, and the price of this precious commodity keeps rising.

Given our triple-digit heat and aridity, you might think this is a ridiculous place

Spacing plants widely reduces water use and enhances the plants' sculptural qualities.

to attempt a garden. But when viewed through perspicacious eyes, a whole new gardening paradigm presents itself. This new paradigm has two main tenets: create gardens that look good and use a lot less water than traditional landscapes. Although I'm working in the driest part of the country, the approaches that work here can easily be applied to wetter regions that are now experiencing periodic—or regular—droughts. In the following pages I'll share some of my favorite strategies for designing water-thrifty gardens.

KILL YOUR LAWN

During the last five years, I've designed more than 100 residential gardens for clients in Arizona. Of those people, only one has requested a lawn. Conversely, many clients have requested turf removal. My admonition is: if the only time you step on your grass is to mow it, remove it. The popularity of turf removal is partly the result of rising water bills. One of my clients, when faced with a \$300-a-month water bill, decided that her turf was no longer a financially sustainable part of her yard. Replacing a monoculture of turf with a vibrant fabric of drought-tolerant native plants is the fast road to water savings in residential gardens. Many municipalities in the West, including Las Vegas, have even developed programs that pay homeowners (up to \$1.50 per square foot) to replace their grass with drought-tolerant plants.

Removing a swath of water-sucking lawn also offers a huge design opportunity. The removal of turf creates a blank canvas that allows homeowners and garden designers to reinvent a space in three dimensions—complete with a diverse palette of trees, vines, and wildlife-attracting plants—rather than a flat, green plane.

ADOPT EFFICIENT IRRIGATION PRACTICES

Even in desert regions, relatively inefficient methods of garden irrigation are still, unfortunately, commonplace. In home landscapes, a water-wise garden irrigated via drip irrigation can reduce water use by at least 75 percent when compared with turfgrass watered by sprinkler systems. Drip technology pinpoints the delivery of water exactly to a plant's root zone and makes it possible to grow plants without flooding or sprinkling a large area. Because drip emitters only wet a small circumference of soil near the root zones of desirable plants, they also don't encourage weed seeds to germinate elsewhere in the garden.

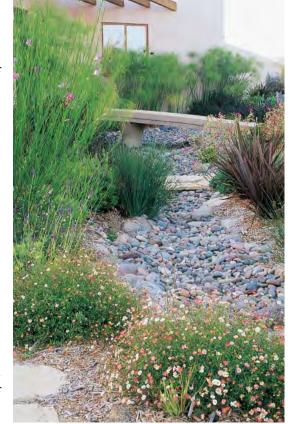
For more water-needy plants, it's easy to create different zones based on water requirements. Modern drip irrigation systems can be programmed to deliver water more frequently in one zone of the garden than in others, to take into account these variable planting zones.

ADAPT TO RAINFALL

The concept of rain gardens is becoming popular in many areas, but in different regions they can have slightly different functions. In regions with high annual rainfall levels, rain gardens function primarily to slow down and contain runoff from roofs and hardscapes, reducing the flow into storm sewers and water

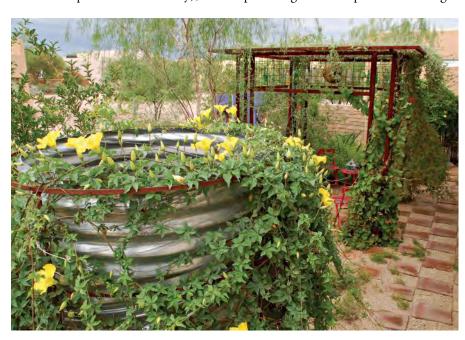
bodies. In drier regions of the country, they also serve to channel water into garden areas that can be maintained without regular irrigation.

Although the phrase "desert rain garden" might seem like an oxymoron, with careful planning such a garden can be built. By design, the rain garden is the most water-efficient type of garden you can install. Long term (because of salt build-up and water scarcity), rain



In this California garden, water-thrifty plants such as Mexican daisy and New Zealand flax flank a decorative dry steam bed.

gardens are probably the only truly "sustainable" gardens that extremely dry regions like the Southwest will support. A desert rain garden will be composed of the very toughest and most drought-tolerant native plants and will use a high percentage of the superstars of drought



In dry regions, cisterns like this one, cloaked in yellow morning glory vine or yuca vine (Merremia aurea), provide a way to capture and store rainwater for later use.

tolerance: cacti and other succulents. As I discuss further in the sidebar on page 23, rain gardens can be created by contouring the land to form depressions that will collect rainwater.

Another effective method is the use of tanks, or cisterns, that collect rainwater from your roof during wet spells and store it for use during dry times. The technology to connect rainwater collection cisterns to drip irrigation systems is already at hand and I suspect that in the near future, rainwater storage tanks will be as common as downspouts—especially in drought-prone regions.

EMBRACE MINIMALISM

In my region, gardens save water not only because they use water-thrifty plants, but also because those plants are spaced further apart than in a

traditional garden design. It may take some getting used to, but sparse landscapes have their own beauty that grows on you over time.

Minimalist gardens are characterized by stillness and equilibrium between planted and unplanted spaces. In minimalist desert garden design, the placement of each plant and rock is important. Minimalist desert gardens often rely on long-lived succulent plants for structure; for this reason, they can be more satisfying and enduring than gardens that employ a higher percentage of shorter-lived herbaceous plants.

Chinese and Japanese gardens have long embraced the idea of negative space between plants and this concept can be used even in regions where water is not as scarce as it is in the desert. When working in a minimalist theme, make sure to carefully consider the top dressing you use—whether it is gravel, river rock, or shredded bark—since more of it will be visible than in intensively planted beds and borders.

Although sculptural succulents fit well in a minimalist planting, perennials and woody plants can work as well. In Duchess County, New York, designer Duncan Brine uses perennials and grasses in a manner that accentuates each plant. At the back of the border, the plantings are more dense, but as the plantings encroach on a gravel walkway, they are set apart in

Resources

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The Weather-Resilient Garden by Charles W.G. Smith. Storey Publishing, North Adams, Massachusetts, 2004.

a space that is neither pathway nor planting bed. The bed has a sort of New England Zen feel to it.

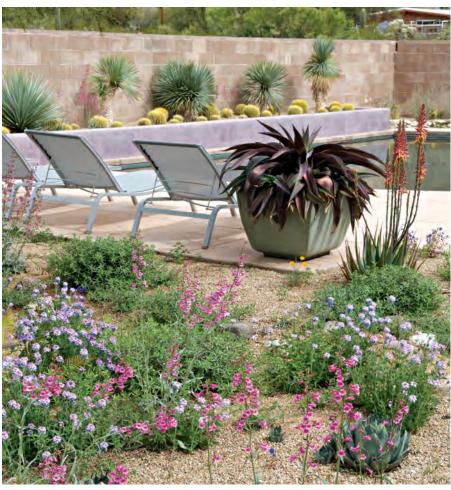
SUCCULENTS RULE!

It almost goes without saying, but because it is often ignored, it bears repeating: You can't design a water-thrifty garden with water-guzzling plants. The good news is that for nearly every thirsty exotic plant, there is usually a water-wise substitute that will serve the same landscape purpose.

Cacti and succulents are more than mere accent plants in the Southwest; they form the sculptural backbone of arid gardens. Creative designers and gardeners have created incredible showcases for how to use these plants, including Peckerwood Garden in Hempstead, Texas, and the Ruth Bancroft Garden in Walnut Grove, California. Public gardens such as the Desert Botanical Garden in Phoenix, Arizona, also provide gardeners with inspiration and practical tips for planning and planting gardens using a diverse palette of succulents.

Plants such as agaves and yuccas come in varieties that thrive in every part of North America. Lest you think that this





Top: A mixture of American natives and Mediterranean plants thrive without supplemental irrigation on this rocky slope in Karen Bussolini's Connecticut garden. Above: Succulents and regional natives replaced lawn in this Southwest garden.

mania for spiny plants is limited to the Southwest, take a look at the variety of agaves that nursery owner Tony Avent is growing at Plant Delights Nursery in North Carolina; visit Chanticleer garden in Pennsylvania and admire the wonderful and strange beaked yuccas in its display gardens; or stroll by Thomas Hobbs' smaller scale "jewel box" garden in Vancouver, British Columbia.

It is clear that these plants are immensely appealing to gardeners—no matter where they live—who love strong forms. In addition to their alluring forms, agaves and many other similarly rosetteshaped plants are morphologically designed to harvest rainfall and direct it to their roots. In this way, each plant is like a small water-harvesting sculpture.

BORROW THE VIEW

Seeing that so many garden settings are graced with dramatic mountain, sky, forest, or ocean views, the Japanese design principle of Shakei, or "borrowed landscape," can often be well employed in drought-tolerant gardens.

Framing and fronting a picturesque view of mountains or wild plantings is an inexpensive way to add plants and extra dimension to your garden. Panayoti Kelaidis, senior curator and director of outreach for Denver Botanic Gardens, says that this practice, which he terms "vista and vignette," is a hallmark of western gardens. In other parts of the country, the view you borrow might be more about enclosure than horizons. But whether you frame a distant grove of oak trees or a neighbor's vibrant hedge of shrub roses, it is still a way to incorporate plants that you don't have to water (or prune) into your garden.

TARGET YOUR SHADE

In my region, cities like Las Vegas and Phoenix have become "heat islands" in which increased paving and development cause the mean temperature to rise by as much as 10 degrees compared with surrounding areas. The urban heat island effect can be found in all North American cities, which means, more than ever, that we need trees to cast shade and serve as passive solar coolers to help reduce temperatures in our homes and gardens.

CONSIDER A RAIN GARDEN

Like the first syncopated raindrops falling on a tin roof, a new kind of gardening is drumming up interest across the United States. This movement—sometimes referred to as "rain gardening"—aims to create gardens that will absorb runoff from roofs and hardscaping and thrive on rainwater alone. The idea is based on the philosophy that gardens should live within a sustainable water budget. This is generally defined as the amount of rain that falls on your lot over the course of a year.

MUNICIPAL APPLICATIONS

Driven by the need to find alternatives to traditional (and expensive) stormwater management systems, municipalities have provided much of the initial momentum in promoting the idea of rain gardens. For this reason, many of these water-efficient gardens appeared first in commercial projects. In Portland, Oregon, the New Seasons Seven Corners Market is designed to direct rainwater runoff from the roof and paved areas toward concave garden beds planted with horsetail reed and other plants that withstand both drought and deluge.

Closer to my home base, in Tucson, our city council has recently approved a measure that will require all new commercial landscapes to supply half of their outdoor

watering needs through rainwater collection. This progressive movement means rain gardening is probably coming to the planting beds around the parking lot of a new gas station or grocery store in your neighborhood.

HOME RAIN GARDENS

In a home landscape. rain gardening can begin with a shovel. By digging depressions in your garden to retain rainwater that runs off of hard surfaces such as roofs and driveways, you can create beautiful concave garden areas and fill them with free-draining soil mixes.

The trick to designing these bowl-shaped spaces is to include a range of plants suited to



A gravel basin collects precious rainwater and steers it to sedges, rushes, and other plants on its perimeter.

the different moisture zones. Some plants will only tolerate the slightly drier marginal edges of a rain garden, while others that like wet feet will thrive despite occasional submersion at the bottom of the basin. As a starting point, consider the small sampling of American natives (linked to this article on the AHS website) that are appropriate for rain gardens in many areas of the country. Supplement or replace these with plants native to your region; in many municipalities, water companies, departments of environmental resources, or similar agencies offer guidelines and plant lists for creating rain gardens. —S.C.





Trees can greatly ameliorate the effect of urban heat islands. In our home gardens, we can actually grow our own "air conditioning" by planting trees around our homes. Even though shade trees usually require more water to establish than smaller plants, the expenditure is worth it. Then, you might ask, "How does planting trees save water?" Because most power plants use large quantities of water to produce electricity, by reducing your need for air conditioning, you are saving both water and energy.

CREATE STUNNING BEAUTY

When the concept of drought-tolerant gardens started coming into vogue some three decades ago, the term "xeriscape" was coined to describe the idea. Because some of these early gardens were rather drab and unimaginative, critics called them "zeroscapes" and the concept received much negative publicity.

Left: Indian blanket, shrubby cinquefoil, and 'Mainacht' salvia carpet the ground in this drought-tolerant garden in central Washington. Bottom left: In the West, lowwater gardens benefit from "borrowing" the view of the surrounding natural landscape.

The diversity of plants suitable for water-thrifty gardens has evolved tremendously in the intervening years, but aesthetics might still be the most neglected aspect of drought-tolerant garden design. Certainly our native plants and some well-adapted exotics from Mediterranean regions are every bit as beautiful as many of the thirsty non-natives that have become standard in our landscapes, but we need to arrange them in a way that shows off their best characteristics.

To put it another way, if we are going to encourage other gardeners to tear out or reduce their lawns and standard border plantings, the replacement garden had better be dynamic, colorful, graceful, and well balanced. Just because a garden is drought-tolerant doesn't mean that it is exempt from commonsense design principles.

Garden designer and award-winning author Scott Calhoun lives in Tucson, Arizona. His most recent book, The Hot Garden, has just been released by Rio Nuevo Publishers.



NICE DIGS!

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sizzling Summer Foliage Plants



ROWING UP in Montreal and going to school in wintry Quebec essentially cemented the notion for me that foliage plants only meant tropical house plants. We were awash in pothos and Swedish ivy, and for real excitement we could even buy some piggy-back plants (*Tolmiea* spp.) or a dumb cane (*Dieffenbachia* spp.) with variegated leaves. What would we have done without the indestructible cast iron plant (*Aspidistra elatior*) next to the fireplace? Somehow I still can't rid myself of the

to be reformed hippie house plants.

I believe this transformation of foliage plants from Clark Kent to Superman began in the early 1990s, when the first series of Sun Loving coleus was introduced. As gardeners and landscapers discovered them, there was no turning back.

Perhaps that alone would have been enough to propel foliage plants into the mainstream, but the final impetus came with, of all things, the introduction of a culinary plant—the sweet potato. When 'Blackie' was first mentioned as a potential

Purpleheart (*Tradescantia pallida* 'Purpurea') and piggy-back plant are now available as outdoor plants, Rex begonias have been transformed into trendy container items, and cast iron plants are as common in southern landscapes as kudzu.

Color has always been the defining characteristic for garden plants, and it accounts for the huge resurgence of interest in foliage. This ascendency has also been supported by the ease of nursery production, and by the relatively low maintenance needs of these plants.

Beat the heat in colorful fashion with these annuals and tender perennials that offer flamboyant foliage for summer containers and borders.

ARTICLE AND PHOTOGRAPHS BY ALLAN M. ARMITAGE

mental image of those last poor stems of what we used to call wandering Jew (*Tradescantia* sp.) pathetically hanging from a salt-encrusted pot.

I recall listening, many years ago, to a well-known horticulturist expounding on the various types of ornamental plants used in the industry. He talked about the importance of the emerging foliage plant industry for interiorscapes, the movement of cut-flower production overseas, and the significance of color in the landscape. He said that color would be the dominant theme in American landscapes, and would come from flowers. He barely mentioned leaves other than for providing texture in the landscape. When asked about foliage, he simply stated, "There is no future for foliage in the landscape; once you get past coleus, what else is there?"

He was right on almost everything else, but boy did he miss the boat on the future of foliage. Of course, for many years there was not much available for mainstream gardeners other than coleus, and it was a bit of a wimp, mostly relegated to shade. That is not to say that people were not using burning bush (Kochia spp.) or calico plants (Alternanthera spp.) somewhere; selections simply were not widely available.

THE FOLIAGE RENAISSANCE

Times have certainly changed. Today, growers can't keep up with the demand for new foliage plants, many of which turn out

garden plant, people scoffed, "Who could make money selling a sweet potato?" The introduction of chartreuse-leaved 'Margarita' a year later resulted in sales that were nothing short of superheroic.

After that, old-fashioned plants like burning bush, bloodleaf (*Iresine* spp.), and copperleaf (*Acalypha* spp.) were dusted off, new cultivars were introduced, and suddenly these old plants became new again.

CHOOSING FAVORITES

In my roles as a horticulture professor, trial garden coordinator, and writer, I have been growing, researching, and introducing foliage plants for many years, with an eye for those that are heat and drought tolerant. At the University of Georgia's Trial Gardens in Athens, we cannot keep up with all the new introductions. When asked which are my favorites, I rub my chin and constantly change my mind depending on what we have been trialing recently.

Inevitably in articles or presentations there's insufficient space or time to include more than a handful of my favorites from different genera. But here are a few of my top picks. My apologies in advance for leaving out any of your favorites.



ESTABLISHED FOLIAGE PLANTS

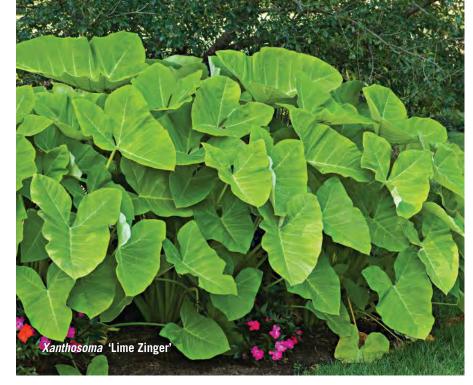
Copperleaf plants (Acalypha spp.)

When it comes to acalyphas, most gardeners are familiar with chenille plant (Acalypha hispida), which has long, dangling red flowers that remind me of the braids on a red-headed girl I knew in the fourth grade. But the brightly colored foliage forms developed from species such as copperleaf (A. wilkesiana) and A. godseffiana have proven to be exceptional. Many selections are available, ranging from the wispy foliage of 'Tricolor' or 'Cypress Elf' to the classic 'Bourbon Street', which combines well with so many plants in containers or the garden. For sheer bold color, it is tough to top 'Bronze Pink', but my all time favorite still is 'Raggedy Ann'.

In the tropics, acalyphas are woody plants commonly grown as large shrubs or hedges. When grown as summer annuals, in most regions these plants can reach three to five feet. All thrive in full sun; pinch young plants to encourage bushiness.

Calico plants (Alternanthera spp.)

Originally made popular by Victorian gardeners, calicos made their debut as fillers for containers, then later found a function as edging plants. 'Red Threads' is still hard to beat as a colorful edging or groundcover plant, and recently 'Royal



Tapestry', even shorter, with a more subdued color and excellent vigor, appeared on the scene as well. For a bold multicolored look, I like 'Brazilian Red Hot'. 'Crème de Menthe', with its white and green foliage, is a little easier on the eyes. When I need consistently dark foliage all season to contrast with brighter colors, however, I opt for 'Gail's Choice'.

Most calico plants grow best in full sun, but I have found the Party series, especially 'Party Time', to be highly tolerant of shady areas while still providing handsome

color. Heights vary from six to 12 inches for groundcovers—to two to three feet.

Ornamental Sweet Potatoes (Ipomoea batatas)

With the advent of 'Margarita', which is still one of my favorites, the breeding of ornamental sweet potatoes began in earnest. What the sweet potato introductions accomplished was to provide quick growing, colorful fillers and spillers ideal for containers and mixed beds. 'Blackie', 'Margarita', and 'Tricolor' were the building blocks, followed by at least a dozen more introductions in the last five years, including one of my newer favorites, 'Bewitched', which has shiny, deep bronze foliage. It is part of the Sweet Caroline series.

I used to think I could use them in mixed containers, but they grow so vigorously they often eat their roommates. They revel in heat and humidity, but perform admirably in almost every part of this continent.

Taros or Elephant Ears (Colocasia, Alocasia, and Xanthosoma)

In some ways, this is a confusing group of plants; in others, they are simplicity personified. The confusion comes because plants in at least three different genera— Alocasia, Colocasia, and Xanthosoma—are commonly called either taro or elephant ear. The naked truth is that the morphological differences between the genera are very slight, and if the plants weren't labeled, most of the people who sell these





things would not be able to tell you the difference between them. The simplicity part is that they all perform well in similar conditions, all essentially provide the same fascinating foliage effect, and all are easy to grow. New cultivars continue to appear and I am quite taken with a few of them, especially *Colocasia* 'Diamond Head', *Alocasia* 'Sarian', and *Xanthosoma* 'Lime Zinger'.

Growing from bulbous rootstocks, these aroids thrive in full sun and reasonably moist soil. They revel in heat, but I have seen magnificent plantings in gardens as far north as Madison, Wisconsin, so even moderate summer heat is sufficient. Of the three genera, colocasias are the most cold tolerant, overwintering as far north as USDA Zone 7b. In cool regions, potted plants can be wintered over in garages or covered porches where temperatures stay above freezing; the bulbous roots can also be dug up before first frost and stored in sphagnum moss or perlite until spring.

Coleus (Solenostemon spp.)

Asking a gardener to name their favorite coleus is like asking a chocoholic for their favorite sweet. The market has exploded so much in the last 10 years that it is almost impossible to choose only one or two.

If I have trialed one, I have trialed 500, and there are very few I would not recommend to my daughters, who simply don't have time to figure out which is which. The main limitation to anyone's recommendations is locating the cultivars, because retailers seldom stock a wide selection. If possible, take some cuttings of your favorites in the fall (they root like... well, coleus) and keep them in a sunny window over the winter.

One thing that should be made clear is that most coleus today are adaptable to full sun as well as part shade conditions. The colors will be more intense in the sun, but less water will be required in shadier conditions. Do not fertilize heavily or some of the colors may fade.

DESERVING OF MORE ATTENTION

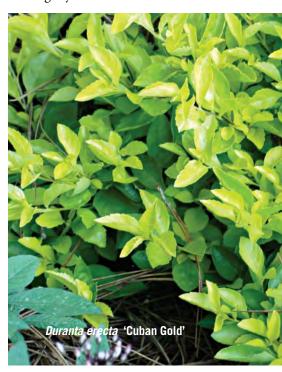
Durantas or Dewberries (Duranta spp.)

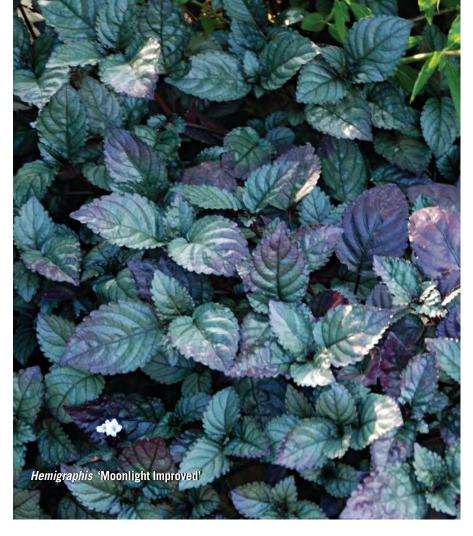
When a group of plants does not have a common name, it means either it is so well known that none is necessary, or it has not been around long enough to have earned one. Although durantas have been floating around in American horticultural circles for some time, they have only recently become reasonably easy to obtain.

The parent plant for the foliage durantas is golden dewberry (*Duranta erecta*). A large evergreen shrub in the subtropics, it bears prolific blue flowers and produces dangling clusters of golden fruit in the fall, hence the name dewberry. The fruits are not for human consumption, but birds seem to like them.

In gardens north of USDA Zone 7, the advent of winter will likely preclude formation of any berries, but the foliage forms such as 'Green and Gold', 'Gold Edge', and 'Cuban Gold' are compact—growing one to two feet tall—colorful, and easy to grow almost everywhere. They are perennial in USDA Zones 9 to 11.

Two things should be noted: First, few if any flowers or fruits will develop on the foliage cultivars; second, be aware that plants often bear small sharp spines, particularly in the center, so wear gloves when handling them. Full sun is best; fertilize lightly.







Waffle Plants (Hemigraphis spp.)

I have had a long like affair (love affair may be a little strong) with these interesting little plants, whose common name derives from the wavy indentations on the leaves. In general, waffle plants have deep green leaves and small, white flowers but the cultivar 'Black Wizard' has spotted purple leaves with purple undersides. I enjoy this selection, but find it a little harsh on hot summer days, which is perhaps why I so enjoy the calmer multicolored foliage of 'Moonlight Improved'. The muted silvery green and purple leaves serve as a soothing groundcover in garden beds.

Growing no more than six inches tall and spreading slowly, these plants are best viewed up close. They make ideal "fillers" for border edges, rock gardens, and containers in full sun to part shade.

Red Shield Hibiscus (Hibiscus acetosella)

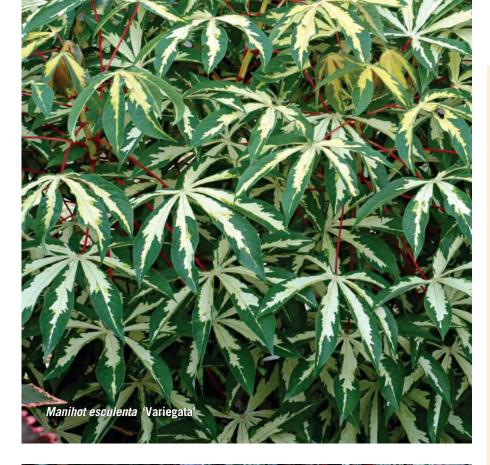
Most people equate hibiscus to plants with dinner-plate sized flowers, and as beautiful as many of them are, there are a number of wonderful hibiscuses whose foliage is stunning throughout the summer. The selection 'Panama Red' is particularly satisfying because the lustrous red foliage never fades no matter the summer temperature.

Plants can be cut back once in the spring and the subsequent branching results in full bodied plants all season. They will grow six to eight feet tall with an upright form, but will only flower in areas that do not experience frost. They are fully perennial in USDA Zones 9-11.

Variegated Tapioca (Manibot esculenta 'Variegata')

There is nothing I can say that does justice to this truly spectacular plant, sometimes called variegated cassava, which offers green, white, cream, and pink hues throughout the large, palmately lobed leaves and stems. It will not flower, yet flowers are not missed at all. In its tropical habitat, it develops into a large shrub or small tree, but in most of North America it serves as an annual, growing three to four feet tall and wide over the course

Plants are relatively drought tolerant and perform best in warm summers, but





since more and more of us have those, I can only hope it will become easier to find. If you see it, buy it and enjoy it. It's reportedly root-hardy south of USDA Zone 9.

Rex Begonia Vine (Cissus discolor)

As much as I enjoy climbing roses and clematis, there are many other magnificent vines that are way too underused. I discovered the rex begonia vine a number of years ago and now will not be without it.

Like other members of the grape fam-

ily, this vine has clinging tendrils that allow it to climb without support. The flowers are nondescript but the foliage is simply wonderful. The deep green centers of the silvery leaves contrast well together—and even better with the red undersides. The bright red stems complete the picture.

Rex begonia vine grows about 10 feet in a single season; site in part shade in warmer areas. Grow it on a trellis, or let it cascade from a hanging basket. I staple a

Resources

Armitage's Garden Annuals by Allan M. Armitage. Timber Press, Portland, Oregon, 2004.

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

Coleus: Rainbow Foliage by Ray Rogers. Timber Press. Portland, Oregon, 2008.

Tropicalismo! by Pam Baggett. Timber Press, Portland, Oregon, 2008.

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Avant Gardens, North Dartmouth, MA. (503) 998-8819. www.avantgardensne.com.

Brent and Becky's Bulbs, Gloucester, VA. (804) 693-3966. www.brentandbeckys.com.

Glasshouse Works, Stewart, OH. (740) 662-2142. www.glasshouseworks.com.

Kartuz Greenhouse, Vista, CA. (760) 941-3613. www.kartuzgreenhouse.com.

Logee's Greenhouse, Danielson, CT. (888) 330-8038. *www.logees.com.*

Plant Delights Nursery, Inc., Raleigh, NC. (919) 772-4794. *www.plantdelights.com.*

piece of dark plastic or wire mesh to our fence, or between two posts, and let the vine have at it. The vine grows so quickly it hides the wire in no time.

It can be difficult to locate, so once you have it, propagate from cuttings in the fall and overwinter it indoors.

The author of more than a dozen garden books and CD ROMs, Allan M. Armitage is a horticulture professor at the University of Georgia in Athens.

Curbside Gardens



Discover how to transform the barren strip of land between your sidewalk and the curb into a welcoming and beautiful space. BY LISA ALBERT

NE DAY almost 16 years ago, our builder gave us what he thought was bad news. The city's planning department had increased the cul-de-sac's diameter for easier fire truck access, effectively eliminating the three-foot-wide strip of weedy grass that lay between our front sidewalk and the curb. I put on my best "gee, that's too bad" face, but secretly I was pleased to be relieved of the burden of maintaining this tiny patch of land. My gardening skills and knowledge weren't up to the challenge at the time, nor did I see the possibilities for this no-man's land. The concept of curbside gardening was still in its infancy, but

since then, gardeners across the country have been discovering innovative ways to make the most of these awkward spaces.

HELL STRIP VISIONARY

Lauren Springer Ogden, a garden designer and author with residences in Austin, Texas, and Fort Collins, Colorado, appropriately labeled these curbside zones "hell strips" because "they were places that were hellish, full of dog poop and weeds. They're hard to do something with because they're almost impossible to irrigate."

However, that didn't stop her from tackling the strip of land between sidewalk and street that surrounded her newly ac-

quired corner property. After all, how could any gardener worth her weight in compost disregard potential garden space that measured 220 feet long and ranged from five to eight feet in width?

In August 1990, Springer Ogden planted her first hell strip garden with droughttolerant plants that thrived in poor soil with little care and—to meet city height ordinances-grew no more than 18 inches tall. For her initial installation, she used plants she was familiar with from her years of professional gardening in Europe and on the East Coast, many of which hadn't been grown in Colorado before. She designated the site a no-water zone; she hand-

In this Seattle curbside planting, a mosaic of groundcovers complements the design of the owner's main garden.



watered plants to get them established, but after that, they were on their own.

The garden flourished with few losses. However, as is often the case with plants that grow well in poor soil, they peaked at a young age. Three years after the initial planting, Springer Ogden tore out the dianthus, penstemons, helianthemums, and others of their ilk. She replaced them with longer living plants, including many native to high elevation regions of Turkey, Iran, and Iraq, such as prickly thrift (Acantholimon spp.), Turkish speedwell (Veronica liwanensis), Iris histrioides, grape



The barren hell strip, above, bordering garden designer Lauren Springer Ogden's home in Fort Collins, Colorado, inspired her to create the lush, colorful garden, left, shown three years after the initial planting in full bloom despite receiving no supplemental water after establishment.

hyacinth (Muscari spp.), Crocus ancyrensis, and rigid spurge (Euphorbia rigida).

OREGON EXPERIMENT

A decade later and hundreds of miles away, Laura Crockett, a garden designer in Hillsboro, Oregon, planted her 100foot-long by eight-foot-wide curbside garden. Because heavy clay soil can spell death for many Mediterranean-type plants that generally love the region's wet winters and dry summers, Crockett amended with fine gravel, pumice, and compost and bermed it slightly to improve drainage even more.

While still in the design phase, she parked her car and opened her doors to make sure she had provided "landing pads" for visitors. She chose low-growing conifers, grasses, and other architectural plants, adding in textural perennials that bloom and bulbs for seasonal changes to give the garden year-round presence with a minimum of care.



Laura Crockett's elaborate curbside planting at her home in Hillsboro, Oregon, above and right, is a popular addition to her neighborhood and makes her home a regular stop on garden tours. She designed the curbside garden using plants and textures that echoed the plantings across the sidewalk in her private garden.

She mirrored her curbside garden's textures, forms, and a few plants in an eight-foot-wide strip of garden on the other side of the sidewalk; both full sun beds received similar irrigation treatment and soil preparation. These two beds, one city-owned and the other on her property, are her garden's public face.

Crockett views her curbside garden as a gift to the neighborhood while acknowledging the potential for loss because it is a public space. "One of the issues, especially as a plant collector, is that people will steal plants," she says. "Same with ornamentation."

Thankfully, these rare thefts haven't deterred Crockett from continuing to use her curbside garden as a place to showcase interesting plants. "As a designer, it's important to throw things out there to see what they do," she says. "As a horticultural community, those of



us with public spaces can teach people that there's more than just what the local do-it-yourself home and garden center has available."

These are just two examples of what can be done with this narrow parcel of land, and the philosophies and methods that molded these gardens. Your climate, soil, cultural methods, plant choices, and philosophy about the space will determine how your garden takes shape and grows.

DO YOUR HOMEWORK

But before you get too excited, the first, very important step is to call your municipality to find out what you can and cannot do in the right-of-way space. Height ordinances for plants vary from 18 inches to three feet tall and street tree limbs usually must be above a certain height, usually eight feet above grade. In general, the primary goal is to maintain visibility for traffic entering and exiting the street. Even if you meet the required

CITY-SANCTIONED PLANTING PROJECTS

Many communities around the country have developed programs for planting and maintaining curbside or median strip gardens. For example, Boy Scout Park in Dublin, Ohio, is a third-of-an-acre triangular garden sandwiched between various intersecting major roads. Originally planted as a Boy Scout project in the mid-1980s, this space has undergone a revision in recent years. Plants that were diseased or long past their prime have been replaced, giving the garden a fresh, updated look. A very basic irrigation system was installed in 2003.

The goal was to create a low maintenance, multi-layered, seasonally changing garden that was big, bold, and visible as people drove by. Plants were selected for their tolerance of the site's harsh conditions, including highway pollution, road salt, snow-



Boy Scout Park in Dublin, Ohio, in summer bloom

drifts created by snowplows, groundhog grazing, and the occasional car that jumps the curve. Hardiness was also a factor in selection, although Rhonda White, assistant horticulturist for the City of Dublin, admits that there's one small corner where they push the zones to accommodate some plants that wouldn't normally be planted. "I wouldn't be a good horticulturist if I didn't try to push the limits," she says with a chuckle.

The public has greeted these efforts with approval, often inquiring about the plants they see in the garden. Additionally, White received the Perennial Plant Association's 2008 Merit Award for the park's design.

Head northwest of Dublin and you'll encounter Roy Diblik's boulevard plantings in Fontana, Wisconsin, and Chicago's Kennedy Expressway median strips. These are essentially curbside gardens between lanes of traffic. Diblik, co-owner of Northwind Perennial Farm in Burlington, Wisconsin, draws on his 31 years of growing perennials to determine which plants are the best fits for these harsh sites, which are subject to drought, huge snow drifts, and salt spray, among other challenges.

Diblik also explores ways to reduce demand on maintenance hours. One example is using a mulching mower to cut down large perennial beds at a local park, reducing many hours of pruning and mulching labor to 30 minutes of mowing. His method can be translated to residential curbside gardens planted with herbaceous material: Set the mower high and make six passes over the garden. Diblik cautioned that not all plants will appreciate being mowed. Plants with a high growing point, such as grasses that form

hummocks, may not survive so choose plants that will accept this annual treatment.

At a time when money is tight, it might seem counterintuitive for municipalities to spend money on curbside gardens, but proponents are quick to point out the many benefits. These plantings soak up rainwater, reducing run-off and easing demand on storm water and wastewater treatment systems. Additionally, studies have shown that boulevard plantings can reduce crime rates in the area. Lastly, curbside gardens help alleviate the urban heat-island effect, positively affecting the environment.

—L.A.

height limits, circumstances may require pruning or removal of plants that impede a clear line of sight.

Roy Diblik, co-owner of Northwind Perennial Nursery in Burlington, Wisconsin, ran into this issue recently in one of the boulevard plantings he created in Fontana, Wisconsin. Although he had alternated feather reed grass (*Calamagrostis* sp.) with catmint (*Nepeta* sp.) to provide visibility, it did not allow drivers in sports cars to clearly see people on bicycles. He replaced the feather reed grass with lower-growing moor grass (*Sesleria* sp.).

It's not a bad idea to check local weed ordinances, too, particularly if you intend to use native plants. Make the de-

sign look thought-out and composed and present it to the city. To prevent misunderstandings and aesthetic differences of opinion, it's a good idea to talk to your neighbors, too.

Permits are generally required to build a permanent structure and to plant a street tree. Fees vary, as do the departments that issue the permits. For example, in Portland, Oregon, street tree permits are free from the Urban Forestry Department. A permit to build a structure such as a planting box costs about \$360 from the Development Services Center. It determines what is appropriate for the space, including height and set back requirements.

Brighton West, program director for Friends of Trees, a non-profit organization that spearheads street tree planting efforts in the Portland-Vancouver metro area, strongly believes that the tree permit process is a good thing. The people who issue the permit are trained to recognize power lines just like the power company does. While all overhead lines look the same to the layperson, trees are only pruned away from high voltage power lines where safety is a concern. Trees can freely grow up and through phone and cable lines, and even lower-voltage power lines. The inspector also considers distances to permanent structures and traffic signs to determine where a tree can be







planted. The City of Portland and Friends of Trees, a member of the Alliance for Community Trees, work together to compile a list of trees suitable for curbside gardens, focusing on those that will live in tough environments and whose roots will not lift or break pavement.

OTHER CONSIDERATIONS BEFORE DIGGING IN

If your utilities are underground, call 811 (www.call811.com) before you dig. This na-

tional free service coordinates with local utilities to send out a professional locator to mark underground lines within a few days of your call. You may be able to plant over the utility line but dig carefully. Gas lines are electrified for accurate location. Sewer, phone, and cable lines are marked according to a map; planned location and actual location do not always match.

Decide if you'll irrigate and how. While many plants will grow without supple-

Choices of plants for curbside gardens vary by region and by the creator's whims. A mixed vegetable and ornamental plant garden, above left, designed by Kate Gossert in Oregon. A drought-tolerant curbside planting on the street outside the Delaware Center for Horticulture in Wilmington contains purpleheart, *Euphorbia myrsinites*, and *Portulaca* Yubi 'Red'. A mixture of ornamental grasses and herbaceous perennials form a lush curbside planting in Seattle, Washington, left.

mental water, even drought-tolerant plants will look better longer into the season if they get a little bit of water. Neither Crockett nor Springer Ogden is fond of soaker hoses for curbside gardens. They wear out too quickly and they are hard to camouflage in narrow beds. Crockett installed a Netafim drip system, a commercial grade product that has never clogged for her even though the emitters are buried in the soil. They are also easy to repair, as she learned, when she accidentally sliced through the line with her shovel.

In lieu of an irrigation system, West suggests the following trick for watering street trees during their first two to three seasons. Drill a ¹/16-inch hole in the bottom of a five-gallon bucket, set it next to the tree, fill it up, and let it slowly seep into the ground for the next few hours.

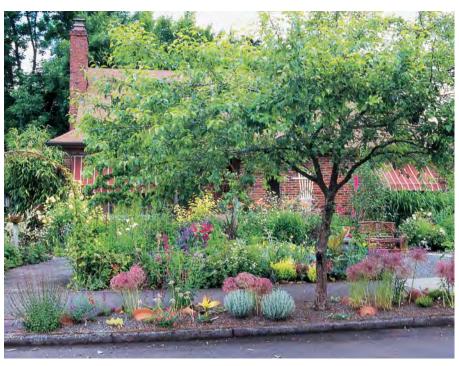
Repeat weekly, twice a week when the weather is very warm. He also recommends planting annuals at the base of the tree. Not only does this prevent the tree from getting damaged by lawn mowers and weed whackers, a leading cause of death for newly planted trees, but when the flowers wilt, you know it's time to water the tree.

PLANNING YOUR CURBSIDE GARDEN

Next, assess the site. If your hell strip is currently planted with turf and it's halfway healthy, you probably have a decent soil profile. Dig a hole and check for soil depth and drainage. Decide whether you are

ing any soil. In narrow strips, you'll need to remove some soil before amending to prevent raising the grade and having the soil wash away when it rains. If you can build raised beds, curbside strips are an ideal place for a rock garden.

"A hell strip is already a weird space, you might as well have some fun with it," says Springer Ogden. In her opinion, creating a rock garden in your hell strip "actually works very well because it keeps people from trampling on your plants and you can create pathways through the hell strip. You can show off some really special little jewels that would get lost in a bigger garden."



Gravel mulch sets off an intriguing curbside planting of alliums, half-buried pots, and lavenders opposite Nancy Goldman's garden in Portland, Oregon.

going to amend the soil or whether you will select plants that will thrive in the existing soil. Either way, Diblik recommends killing the existing turf with an herbicide or by sheet mulching, where you kill turf by smothering it with alternate layers of newspaper and organic matter. Solarizing with clear plastic is also an option, but is an eyesore in a public location. The less you disturb the soil, the fewer weed seeds you'll uncover, making maintenance more manageable.

Crockett's curbside garden's generous width allowed her to mix amendments in and create a slight berm without remov-

In snowy regions, curbside gardens are subject to drifts—both natural and those created by snow plows—and potential contamination with de-icing compounds. Diblik relies on herbaceous perennials and grasses; since they're cut down every spring, heavy snow load doesn't faze them. Any salt spray is leached out naturally with heavy spring rains or water applied manually with sprinklers. Selecting plants that tolerate higher salt levels also helps.

Lastly, consider the strip's width, how much pedestrian and street traffic your strip will get, and whether you'll design

Resources

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The Undaunted Garden by Lauren Springer. Fulcrum Publishing, Golden, Colorado, 2000.

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it to have a seasonal peak, to relate to your garden or to the neighborhood.

FINISHING TOUCHES

Don't look at these parameters as limitations. Consider them, as Crockett does, as tools to winnow down the lengthy list of possibilities for the space. Visit nursery display gardens, rock gardens at local botanic gardens, and curbside gardens in your neighborhood. Look for plants that keep their form and stay within bounds and consider plants that don't have a lot of bells and whistles. You'll appreciate their stability and longevity in hell strips; in fact, this is a great place to let them shine.

Round out your curbside garden with creative mulches, such as gravel and sea shells—anything that you have a lot of so it won't be missed if children pocket a few pieces on their way to school. These strips also provide opportunities to experiment with eclectic pathway designs. Brick, stone, recycled concrete, found objects, and pebble mosaics are just a few possibilities.

"If you've done your homework, defined your intentions, and put your compositions together, it's pretty amazing how beautiful curbside gardens can be," says Crockett.

A contributor to the Sunset Western Garden Book, Lisa Albert is a freelance writer who gardens in Tualatin, Oregon.



Composting: Making Treasure from Trash

by Rita Pelczar

OMPOSTING JUST makes sense. You start with assorted items that seem inherently worthless—grass clippings, coffee grounds, banana peels, apple cores, egg shells—and, with minimal effort, transform them into a valuable soil amendment. And while you are accomplishing this Rumpelstiltskinlike feat, you are sparing the local landfill a good chunk of debris. According to the Environmental Protection Agency, waste from our kitchens and gardens accounts for nearly a quarter of the municipal solid waste stream. It's a no-brainer to compost this material instead.

WHAT GOES INTO THE COMPOST PILE

Although all organic matter is subject to decomposition, certain types are best suited to a backyard compost pile. Stick to plant wastes rather than meat and dairy wastes, which tend to smell bad and attract more nuisance critters. And unless you're certain that the compost will heat up sufficiently to kill disease organisms, it's best to avoid adding diseased plants or plant parts from the garden—these should be discarded in the trash or composted in a separate area.

To supply the organisms needed to turn wastes into compost, spread a thin layer of good topsoil or previously finished compost over each layer of organic material. These organisms require a certain ratio of carbon and nitrogen—about 25:1—for maximum efficiency. Carbon and nitrogen are supplied in all the organic matter you add: most high carbon material is brown and dry, such as straw, dry leaves, shredded newspaper, and sawdust, in contrast with the greener, wetter nature of nitrogenous matter. Good sources of nitrogen include grass clippings, coffee grounds, and vegetable scraps.

A good balance of water and air is also necessary for these aerobic decomposers. If the material becomes too wet and dense, there will be little air. If the material is too coarse, it may dry out quickly. Either extreme slows the process.

COMPOSTING TECHNIQUES

Hot composting requires less time than other systems—usually less than eight weeks—but more labor, given the need to





A thermometer, above, helps monitor compost temperatures. Top: A wire cage holds layers of "brown" and "green" compost material.

turn the pile every few days. For this style of composting, the entire pile should be assembled at once, watered, and covered. After a few days, the center reaches a temperature of about 150 to 160 degrees Fahrenheit, indicating that the thermophilic (heat-loving) bacteria are actively engaged. At this point, the pile needs to be turned so that the bacteria can work on the remaining contents of the pile. Every few days the temperatures will peak again, requiring further turning. A compost thermometer is a handy tool for monitoring your pile's progress. Eventually things start to cool down and once it is cool, the compost is ready.

I practice a lazier style of composting. **Cold composting** is easier but it usually



Having two compost piles—as shown here in the author's garden—makes it easy to use finished compost from one while continuing to add new material to the other.

takes from six months to over a year to obtain finished compost. Since it never gets really hot, many disease organisms and weed seeds survive; on the other hand, beneficial organisms also survive. The two biggest advantages to this style of composting are that you can add to it continuously, and you don't have to turn it. As long as you maintain a good C:N ratio, and provide sufficient air and water, the composting process continues. It is a good idea to occasionally poke it with an aerating tool because over time the material settles and air flow is reduced.

I have found it helps to have a second compost pile close by the first. That way, when the material at the bottom of one is ready for use, you can lift the unfinished material from the top and place it on the second pile where it can continue along the road to complete and utter decomposition. Meanwhile, you can be using the finished product at the bottom of the first pile.

Another method, called **sheet composting**, incorporates organic waste directly into the soil, burying or tilling it in and allowing it to decompose below ground. While this does recycle organic wastes, the decomposition is usually less even and may lead to nitrogen deficiencies as the organic matter breaks down.

Tilling under a cover crop as green manure or spreading and incorporating animal manure are variations on sheet composting.

TYPES OF COMPOSTERS

The type of composter you select will depend on factors such as the size of your property, the likelihood of attracting nuisance animals such as raccoons, rats, and mice, and what system (hot or cold) you plan to use. In most backyards, compost piles should be contained for both efficiency and appearance. Composters may be built in place, to the exact size you need, and are easily constructed of wood, chicken wire, brick, cinder blocks, or a combination of materials. A bin that is at least three feet in all directions will accommodate enough mass so that the desired heat will build up. Don't make it so big that it's difficult to turn, or that it becomes too compressed.

Alternatively, a variety of ready-made composters are available. These may be stationary bins or tumblers that rotate, usually on a fixed axis. Many are constructed of recycled plastic. Some stationary types have lids that limit rain and exclude critters, others are open. Models such as the Deluxe Pyramid Composter and the Earth Engine Wood Compost

WHAT GOES ON IN THE COMPOST PILE

The transformation of organic garbage into a high quality soil builder requires a lot of activity, although most is microscopic (for more on this topic, see "Compost Critters" in the July/August 2001 issue of this magazine, available on the AHS website). To accomplish their mission, these beneficial creatures—both micro- and macroscopic—simply require water, air, and a little time.

Certain types of bacteria jump into action when the compost pile is still relatively cool, consuming and digesting the organic matter and reproducing. In the process they release heat, creating conditions that favor different types of bacteria—those that like a warmer environment.



As mesophilic bacteria give way to thermophilic bacteria, the pile continues to heat up. A hot compost pile can reach 160 degrees Fahrenheit, a temperature that kills weed seeds, insects, and most diseases. Actinomycetes—a more complex form of bacteria—and fungi tend to take over as the decomposition process nears completion. It is the actinomycetes that are responsible for the pleasant, earthy smell of finished compost.

Some of the players in the composting process are large enough to see, or nearly so. These include snails and slugs; millipedes, centipedes, and sowbugs; nematodes; earthworms; and certain insects, mites, and spiders.

—R.Р.



Pyramid composter from Gardener's Supply

Bin have sliding doors or removable slats to make accessing the finished compost easier. Tumbler-type composters are closed systems consisting of a drum that is rotated to reduce the effort of turning the compost. The **Tumbleweed** drum sits vertically, while Sun-Mar Autoflow®



Tumbleweed composter

composters and the Backporch Compost Tumbler are oriented horizontally. These closed systems work well for hot composting, but it's best to have a pair so that you can continue to compost wastes in one while the other is "working." Because they take up little space and the compost is enclosed, these may be the best choices for small or urban gardens.



Gardener's Supply's tumbler composter

Consider the placement of your compost pile as you build or select your composter. A rectangular shape fits easily into a corner or can be placed flush with a fence or wall. If you have the choice, place your compost pile on level ground and in full sun, to help it heat up. Ideally, it should be handy to both the kitchen and the garden where the raw material is generated. It should be easily accessible for loading, turning, and unloading.

WHAT COMES OUT OF THE COMPOST PILE

Organic matter that has been digested to a point where it is resistant to further decomposition is called humus, and that is the ultimate prize of composting. Humus is a stable colloidal material—a mass of tiny particles in a gel-like suspensionthat benefits soil in both physical and chemical ways.

Physically, humus is hands-down the best remedy for improving soil structure. It helps bind soil particles together into aggregates, facilitating aeration and drainage by adding pore spaces. It also improves a soil's waterholding capacity and the rate of moisture infiltration. which provides protection from drought and reduces erosion.

On the chemical front, humus helps store nutrients in the soil until they are needed by plants. Humus has lots of negatively charged sites that attract and hold positively charged nutrients such as calcium, magnesium, potassium, iron, and others. By adding humus-rich compost, fewer nutrients are lost by leaching. Because nutrients are released slowly, compost provides a steady source of them for plants. Depending on the variety of material that went into the compost, the types and amounts of nutrients will vary; however in addition to furnishing many of the major plant nutrients, most compost contains a well-balanced supply of micronutrients. A further benefit of humus is its ability to act as a buffer; it helps plants overcome the limitations of alkaline or acid soils by making nutrients more readily available as they are needed.

Of course, not everything in the compost pile gets broken down at the same rate, so you may find large chunks of organic debris still remain when your compost is otherwise ready to use. This is where sifting through wire mesh can be useful. Anything that doesn't go through the sifter can be returned to the compost heap for another go-round.

USING COMPOST

Compost is most commonly used as a soil amendment. In addition to the physical and chemical benefits noted above, it has a lasting effect on the life of the soil. By adding more compost and less—or no chemical fertilizer, your soil provides a welcome environment to beneficial microorganisms, earthworms, and other types of subterranean life forms that help sustain a garden over the long haul.



Compost makes a useful potting soil amendment for both indoor and outdoor containers.

Because weed seeds are killed, compost derived from a hot composting system makes great mulch. In addition to its attractive, uniform appearance and providing the advantages of other mulches—moisture retention, weed suppression, temperature moderation—it supplies a slow, steady release of nutrients. The same benefit can be had by applying compost as a top- or side-dressing of fertilizer.

Compost is also useful as potting soil, alone or added to other ingredients. It is great for fast-growing vegetables or flowers grown in patio containers, window boxes, or raised beds, and it is a nutritious addition to potting mixes used for house plants.

Composting is recycling at its most elemental. Plants grow, drop leaves, flowers, and fruit, and eventually die. In a natural ecosystem, that spent vegetation returns to the soil where organisms break it down into a form that nurtures future plants. Backyard composting simply adds a little definition to the process.

Rita Pelczar is a contributing editor for The American Gardener.

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ONE ON ONE WITH...

Pearl Fryar: Topiary Artist

by Mary Yee

T IS THREE-ACRE garden in tiny Bishopville, South Carolina, is a spectacle of abstract forms created from Leyland cypress, hollies, and other trees and shrubs that has intrigued both the horticultural and art world for two decades, but Pearl Fryar doesn't claim to be a gardener and hesitates to call himself an artist.



He's just a creative person who shapes plants with a power trimmer. His topiaries about 400 in all—draw scores of visitors each day to his garden and have been featured in magazine and newspaper articles, TV shows, a museum exhibition, and in a 2006 documentary called "A Man Named Pearl." Fryar's topiaries represent not only his skill as an unconventional artist but his determination to overcome social obstacles.

A son of North Carolina sharecroppers, Fryar grew up in the segregated South and worked for more than 35 years as a maintenance engineer for a large aluminum can manufacturer. "I've always been a go-getter," says the now-retired Fryar. "I wanted to do something in my lifetime that I would be respected for. I had a good job and took care

of my family, but there was still a void." When he and his wife went house-hunting in Bishopville, they were turned away from its white neighborhoods, in part because of a pervasive stereotype that black families did not maintain their yards. So in 1981 the Fryars built a house on a former cornfield just outside the city limit. Then Fryar set out to create a garden so ambitious that it would make all of Bishopville take notice. Not only was Fryar the first African-American to receive the Yard of the Month award given by the Bishopville Iris Club, his garden has become a world-famous tourist attraction.

The Fryar garden was recently accepted as a conservation project by the New York-based Garden Conservancy, which seeks to preserve culturally significant American gardens. Managing Editor and Art Director Mary Yee talked to Fryar about how the garden developed, what its becoming a Garden Conservancy project has meant, and his larger plans for its future.

Mary Yee: What was your gardening experience before beginning topiary? Pearl Fryar: I knew absolutely nothing about gardening and landscaping. This is the first garden I've ever had. We lived in apartments in New York and Atlanta. We came to Bishopville with my job and when we decided to stay, we bought this property. It took a few years to clear the land and prepare the soil.

I got serious about gardening about 1984 to try to win Yard of the Month. We lived outside the city limit, so I knew I had to do something exceptional for the garden club to make an exception to give me the award. I got the idea for topiary when I went to a nursery in Camden and saw a tree that looked like two balls of foliage. It wasn't for sale, so the nurseryman gave me a three-minute lesson on how to make a topiary. One day I went to my front yard and cut up a holly bush. That's how I got started.

Fryar's Topiary Garden is located at 145 Broad Acres Road in Bishopville, South Carolina. Admission is free, but donations are accepted. For more information, visit www.pearlfryar.com or call (803) 484-5581.

How do you describe your artistic style? My style is creating a skeleton look with

dense foliage complementing the branches. I'm into the abstract and working with the negative spaces. I'm not into animals and teapots. It's kind of unique because I never read about topiary in the books to see what other people did.

Without knowing anything about topiary, how did you go about working with plants in the beginning?

If I could visualize it, I did it, because I didn't know any better. I didn't read the books, so I didn't know some of the things I did wasn't supposed to work. I



wasn't supposed to be able to make topiary with dogwood, but mine in spring look like a snowball. Gardening for me is not about plants. The plants are just a canvas for expressing my creativity.

You didn't always consider what you are doing as art. What changed your mind?

I took an art appreciation class when I was in college. I thought art had to be painting or sculpture. I was basically a guy cutting up bushes! Then I met Jean Grosser about 1987—she's the art professor at Coker College [in Hartsville, South Carolina]—and when she told me what I was doing was art, I thought the lady had lost it! I'm thankful to her and all the other people who have helped me make the garden what it is.

How do you maintain your topiaries?

The trouble with living sculpture is that you have to keep pruning or you lose it. I prune my live oaks once a month; the pines, twice a year. The hedges of yaupon and compacta holly and juniper, every four to six weeks to keep the foliage dense.

I don't water, spray [pesticides], or fertilize. If I got to use pesticides on a plant, I don't need that plant. In a forest, trees don't get watered or fertilized and they grow, so I create the same environment in my yard. I use pine mulch and I dig a trench around my trees to catch rainwater.

What tree or shrub is best for someone who would like to try topiary?

The number-one plant is yew. I also like yaupon holly. Boxwoods are commonly



Tourists who come to Pearl Fryar's garden are likely to get a personal tour from the artist.



Left: Pearl Fryar's free-form topiary is set off by smooth lawn. Above: The garden includes selections of "junque art"-sculpture that Fryar makes from salvaged materials.

used, but I don't like them; they're fussy and have trouble with spider mites.

Now that the garden is a Garden Conservancy project, what's in the future?

Until the Garden Conservancy came along, I felt the garden was an art that would only last my lifetime. I created it because I have a passion for it, but Old Man Time is catching up with me and I can't do everything like I used to, so I was prepared to let some of the topiaries go. Now I've got an apprentice—eventually we'll have two or three gardeners here—and the Conservancy is helping set up a foundation.

My hope is the foundation will fund scholarships for the "C" students, the "average" kids-like I was-who can fall through the cracks of society because they aren't gifted in academics or sports and don't have a chance to go to college. We need to let them know they have other abilities and give them a chance to get an Associate's Degree for a start. In the final analysis, the goal of preserving the garden is to help students find their potential.

I hear you're going to be giving talks in San Diego, Chicago, and New York, and taping a TV segment for the BBC. You're Bishopville's biggest celebrity!

I don't think of myself as a celebrity. A celebrity is someone who brings attention to themselves by what they do. What I want to do is bring attention to the community and how we can all help each other be better human beings.

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

HOMEGROWN HARVEST

Hardy Kiwis Offer Beauty and Flavor

article and photographs by Lee Reich

NTRODUCED INTO this country over 100 years ago, hardy kiwi is a vine that marries great beauty with great flavor. Yet until the 1980s, the flavor half of that marriage was largely overlooked—a testimonial to the beauty of the plant and the inconspicuousness of the fruit.

The moniker "hardy kiwi" usually refers to one of two species of cold-tolerant Actinidia. (Vines that bear the fuzzy kiwifruits of our markets aren't cold-hardy below about zero degrees Fahrenheit.) Actinidia kolomikta (USDA Hardiness Zones 3-7, AHS Heat Zones 7-3), has leaves variegated silvery white and pink, its patches of green sometimes so neatly presented that they seem painted on with an artist's brush. Its fruits ripen in August. Actinidia arguta (Zones 4-9, 9-4) has apple-green leaves on red petioles that maintain their exuberant spring freshness into fall. The bark on older A. arguta plants is very ornamental, peeling in long, gray strips. Compared with A. kolomikta, A. arguta is much more vigorous and bears somewhat larger fruits, ripening from mid-September onwards.



Fruits of hardy kiwi are smaller than the market varieties but have a sweeter flavor.

Both species bear grape-sized fruits with the same emerald-green flesh and tiny black seeds as the familiar fuzzy kiwis found in grocery stores, but the fruits of the hardy species have smooth, green, edible skins and the flavor is sweeter and more aromatic. You can eat them whole without peeling them.

GROWING GUIDELINES

Once established, hardy kiwis are heat and cold tolerant. However, young plants are susceptible to winter injury, and a late freeze can burn the leaves, which unfold early in spring. I suggest starting with sturdy plants and wrapping them in winter with corn stalks, straw, or other protection while they are young.

Hardy kiwi plants (like market kiwi plants) are dioecious—that is, male and female flowers are produced on separate plants—so a nonfruiting male vine is needed nearby for female vines to bear fruit. One male plant can fertilize the flowers of up to eight females. And males are not only valued for their pollen; in the case of *A. kolomikta*, it is the males that display the most flamboyantly ornamental leaves. A variety named 'Issai', possibly a hybrid of the two hardy



The variegated, heart-shaped leaves of Actinidia kolomikta are ornamental in their own right.

species, is often billed as self-pollinating; it is not, or at best only mildly so.

Full sun or a bit of shade is fine for these decorative vines, with that bit of shade preserving the variegation of male A. kolomikta plants for longer. Hardy kiwi plants need well-drained soil. If drainage is poor, you can create wide, raised mounds of soil on which to plant.

There are a few options for training and pruning hardy kiwis. The twining stems can clamber up lattices or wires held just off pillars or walls, or up and over pergolas. Left to their own devices, the unsupported stems create a rangy sort of shrub. Where vines are grown mostly dons)—one trained in each direction along the middle wire—fruiting arms can grow off at right angles to the cordons and drape down on the outer wires.

Fruiting shoots originate near the bases of one-year-old canes, so shortening the previous year's stems to just a few buds keeps those shoots originating near the cordons. These fruiting units move further and further away from the cordon over the years, so need to be periodically rejuvenated by being cut back more drastically. Plants get congested over time, so late-winter pruning also entails thinning out stems growing off cordons so there is about half a foot of space be-



A sturdy arbor works well for supporting hardy kiwi vines. The author, above, recommends pruning out wayward or crowded branches in winter to promote good fruit production.

as ornamentals—as they were at many old estates—cutting back wayward branches in winter and perhaps a couple of times in summer suffices and provides a certain amount of fruit. Because male plants are grown primarily for pollen production, they can be cut back dramatically right after blossoming.

When grown for their fruit, vines are generally trained to a trellis made up of three to five parallel wires strung between the tops of six-foot-high T-posts. A spacing of about 15 feet apart in the row allows each vine adequate space to develop. With a permanent trunk up to the wires and two permanent lateral branches (cortween them. Follow-up pruning through summer entails removing any stems arising along or at the base of the trunk so that the vine does not shade itself or become a tangled mass of stems.

PESTS AND DISEASES

Hardy kiwis are relatively pest-free, although Japanese beetles are fond of them. Hand-pick any you see and drop them in a container of soapy water.

The vines sometimes suffer the attentions of one unique pest: cats. The effect on the animals is similar to that of catnip, and young vines cannot tolerate the chewing and clawing that sometimes en-

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One Green World, Molalla, OR. (877) 353-4028. www.onegreenworld.com.

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sues. Place cylinders of chicken wire around young plants to protect them from neighborhood felines.

RECOMMENDED VARIETIES

Selecting varieties of hardy kiwis grown for their fruits is still a work in progress. Among A. arguta varieties, 'Anna'—short for 'Ananasnaja'—is a reliable producer of relatively large, tasty fruits. The varieties 'Geneva' and 'Dumbarton Oaks' also have great flavor and ripen a couple of weeks earlier than 'Anna'. The qualities of the few varieties of A. kolomikta that are available have yet to be evaluated.

ENJOYING THE HARVEST

Hardy kiwis will ripen off the vine but only if harvested when the first fruits start to soften, at which point fruits with their stems or whole clusters can be harvested. Soft fruits are ready for eating. Firm ones can be allowed to soften at room temperature or can be refrigerated for a couple of months, then brought out to room temperature to soften.

Lee Reich covers growing kiwis and other edible plants in his most recent book, Landscaping with Fruit (Storey Publishing, 2009).

GARDENER'S NOTEBOOK

Horticultural News and Research Important to American Gardeners

BUTTERFLIES PICKY ABOUT CULTIVARS

If you enjoy attracting butterflies to your garden, you've probably consulted lists of plant species recommended as nectar sources or larval food sources. However, did you ever wonder if butterflies had any particular preferences for various cultivars? When it comes to zinnias, widely recommended for attracting butterflies, researchers at the University of Kentucky have discovered that not all cultivars are equal.



Variegated fritillary on 'Pinwheel' zinnia.

The study, published in the March 2009 issue of the Journal of Environmental *Horticulture*, compared how often various butterflies visited four commonly available cultivars of zinnia over a seven-week period. Out of 2,355 total butterflies counted, more than twice as many visited Zinnia violacea 'Lilliput' as did any of the three other cultivars—Z. violacea 'Oklahoma' and 'State Fair', and Z. marylandica 'Pinwheel'. No significant differences in preference were observed between the three less popular cultivars. The researchers observed that 'Lilliput' "not only had the largest number of butterfly visitors, but it also had the greatest number of species."

Of the three double-flowered varieties tested ('Pinwheel' is single-flowered), 'Lilliput' has the smallest flowers and the plants themselves are an intermediate size. All cultivars were planted in mixed

colors. Therefore, the researchers didn't feel there were any obvious physical traits that would explain the preference butterflies exhibited. Rather, they suggest it might be attributable to the quality and quantity of the nectar produced, since 'Lilliput' is an heirloom from the 1870s, while the other cultivars are products of breeding efforts that focused on traits such as disease resistance and flower color. In summation, the researchers questioned whether "nectar characteristics might have been inadvertently affected during more than a century of breeding for other traits."

PECKERWOOD GARDEN EAGER TO EXPAND

Peckerwood Garden in Hempstead, Texas, has purchased the 20 acres of property that once served as the grounds for its neighbor, Yucca Do Nursery. When Yucca Do relocated to Giddings, Texas, in 2008, Peckerwood decided to expand onto the newly vacant property. A land donation from one of the garden's supporters allowed them to generate enough proceeds to buy the Yucca Do

property. The new space provides Peckerwood with a large parking area, office space, a small residence, six greenhouses, and a large structure for housing plants or storage space.

Peckerwood and Yucca Do were founded by the artist John Fairey, and both specialize in cultivating and promoting heat and drought-tolerant plants. While they were neighbors, they shared a symbiotic relationship of sorts—Yucca Do's catalog included many of the plants featured at Peckerwood, and on days the garden opened to the public, the nursery offered parking space and other facilities.

Peckerwood Garden is a preservation project of the Garden Conservancy and is working towards becoming a public garden. Connie Stegen, administrator for the Peckerwood Garden Conservation Foundation, says that the acquisition "has given us a huge jumpstart" in the quest to go public. Peckerwood Garden is part of the Garden Conservancy's Open Days Program and will open its gardens to the public on October 17 and 18 and November 7 and 8.



The Mysterious Garden is one of several themed garden areas at Peckerwood.

PESTICIDE SYNERGY MAY INCREASE RISK OF PARKINSON'S DISEASE

Previous studies have identified links between long-term pesticide exposure and Parkinson's disease, but a new study, published in January in *Environmental Health News*, is the first to look at the synergistic effects of a combination of pesticides, namely maneb and paraquat. Maneb is a fungicide commonly sprayed to protect crops such as potatoes and tomatoes. Paraquat is a component of weed killers that has been designated as a restricted-use pesticide by the Environmental Protection Agency, meaning it can be used only by certified pesticide applicators.

Researchers found that study participants who lived within 550 yards of a field sprayed with the two pesticides in combination ran a 75 percent higher risk of developing Parkinson's disease than a control group. The study also found that participants who suffered long-term chemical exposure before the age of 60 were five times more likely to be diagnosed with Parkinson's. Researchers concede that although a growing number of

people with Parkinson's report exposure to chemicals common on farms, there are other factors to consider before a definitive conclusion is made about the connection between pesticides and the degenerative brain disorder.

INVEST IN A LITTLE SHADE

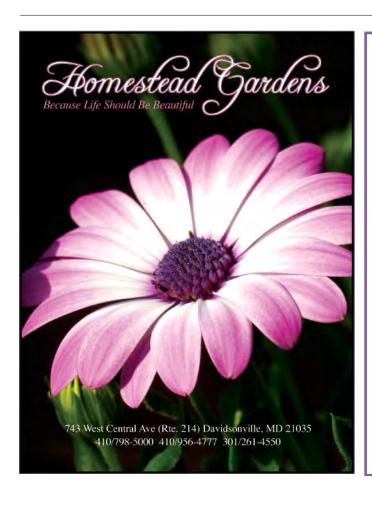
Numerous studies have been conducted over the years that explore the benefits of planting trees in just the right spot around



a home. For the first time, the National Institute of Standards and Technology (NIST) and the U.S. Department of Agriculture (USDA) have put together a report that quantifiably proves shade trees can cut costs. "The previous studies had used either computer simulation or small-scale field experiments to measure the results," explains David Butry, co-author of the report. "We were able to measure the effect using a large sample of consumer billing data, which had not been done before."

The study, which took place over the summer of 2007 in Sacramento, California, measured the effects of shade trees planted on the south and west sides of 460 single-family homes. The result: summertime electricity use was cut by five percent, on average. Less electricity use leads to lower costs, but also means reduced carbon emissions from the production of electricity.

However, the study found that planting trees on the north side of houses actually increased electricity use by one-and-a-half percent. Researchers speculate that this increase came about





2009 "Gardener's" Calendar

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Box 241, Johnston, Iowa 50121-0241 (515) 278-0295 www.tgoa-mgca.org from either a decrease in cooling from the wind, an increase in interior lighting demand, a decrease in the house's heat release at night, or a combination of all three factors.

After the report was published earlier this year, a number of utility companies have requested that the study be conducted in other cities and during other seasons. "It would be really interesting to look at how the effect varies across regions of the U.S. and of the world, and to see what happens in wintertime," says Butry.

NEW TECHNOLOGY FOR MOBILE DEVICES YIELDS FAST TREE IDENTIFICATION

Botanists and boy scouts alike may soon be able to make use of a handy electronic field guide for quick, on-the-go identification of trees based on photographs of leaves. This technology is still in the testing phase but a prototype application for the iPhone is in the works along with the development of similar options for other mobile devices. A version of the program may soon be available at educational kiosks in certain institutions, such as the Smithsonian, where people can bring in specimens for automatic identification.

The new field guide analyzes a snapshot of a leaf and locates it within a large digital database of specimens. The database is currently made up only of trees

PEOPLE and PLACES in the NEWS

Wildfire Wreaks Havoc at Santa Barbara Botanic Garden

A wildfire tore through Santa Barbara, California, in early May, leaving a number of charred exhibits and structures at the Santa Barbara Botanic Garden (SBBG) in its wake. Nearly 60 of the garden's 78 acres were either completely decimated or damaged, including parts of the Redwood and Desert exhibits, most of the riparian corridor, the historic Campbell Bridge, and the Director's Residence. The Gane House, a century-old structure that the park had hoped to refurbish as an historic landmark, was also destroyed.

Fortunately, several areas of the park went unscathed, including the Meadow and Teahouse exhibits. SBBG re-



The meadow at SBBG was not affected by the wildfire.

opened the Redwood exhibit to the public at the end of May. The garden is also welcoming a new exhibit by artist Herb Parker, who began installations just days after the fire. Nancy Johnson, SBBG's vice president of marketing & government relations, views the art opening as symbolic of the staff's resilience and determination, saying, "Gardens continue to grow, we'll survive this." SBBG has established the "Jesusita Fire Recovery Campaign" to help fund the immediate replacement of tools, vehicles, and safety equipment. Donations can be made online by visiting www.bit.ly/UwwxS or by sending a check to: Santa Barbara Botanic Garden, 1212 Mission Canyon Road, Santa Barbara, CA 93105.

Herb Expert Madalene Hill Dies

On March 5, well-known herb gardening expert Madalene Hill died in Brenham, Texas, at the age of 95. Largely selftaught, Hill spent most of her life growing herbs and writing and speaking about them. She co-authored Southern Herb Gardening (Shearer Publishing, 1987), a gardening



Madalene Hill

classic that is still in print today. Hill also introduced several herbs, including the hardy 'Arp' rosemary (Rosmarinus officinalis) and 'Madalene Hill' doublemint (Mentha xgracilis). Most recently, she was curator of the Susan Clayton McAshan Herb Gardens at the Festival-Institute in Round Top, Texas.

A past president of the Herb Society of America, Hill received the organization's Helen de Conway Medal of Honor in 1978 and its Nancy

Howard Award for Horticultural Excellence in 1997. The American Horticultural Society recognized her "extraordinary and dedicated efforts in the field of horticulture" with its Catherine H. Sweeney Award in 2006.

To read more about Hill, visit www.ahs.org to view an article about her published in the March/April 2006 issue of The American Gardener.

Yoder Brothers Name Change

As reported in the January/February 2009 issue of The American Gardener, agribusiness giant Syngenta acquired the Yoder Brothers brand and its chrysanthemum and aster product lines last fall. In order for the remaining Yoder entities to continue operation, the business was required to select a new name.

As of July 1, 2009, the company, known in the horticulture industry as a leading producer and marketer of annuals, perennials, and other specialty flowering plants, is operating under the name Aris, Inc. According to a company news release, the new moniker "is a Latin word associated with green." For more on the company formerly known as Yoder, visit www.arishort.com.

native to the northeast United States. In order to identify a tree from another region, a different database of tree species would need to be downloaded. The project is being funded by the National Science Foundation, and the contributing researchers hail from Columbia University and the Smithsonian Institution, among other organizations.

VEGGIE E-BAY

If you find yourself with too many tomatoes or zucchini this summer, rather than



making late night drop-offs at your neighbors' houses, you might consider using Veggie Trader. This recently developed website allows people to create listings to buy, sell, and trade homegrown produce.

The site launched in March 2009 and more than 5,000 people have already joined. The service is free of charge, and anyone can sign up. Users need only register online, post listings of the produce they are looking to sell or trade, and wait to be contacted by an interested buyer. Veggie Trader encourages community organizations to get involved, allowing them to easily find local produce and strengthen their local economy. The site has a few guidelines and tips for postings, and users should be aware of the license regulations in their area before making transactions. For more information or to start trading, visit www.veggietrader.com.

A GARDEN BY THE PEOPLE. FOR THE PEOPLE

In February of this year, Agriculture Secretary Tom Vilsack dedicated and broke ground on the People's Garden, a modest plot located at the United States Depart-



ment of Agriculture (USDA) headquarters in Washington, D.C. Today, the project has grown to twice its intended size, taking up the entire six-acre land area in front of the USDA building. As a

result of strong public interest in the project, Vilsack decided to increase the scope of the garden. The garden features miniature wetlands, green roofs, pollinator gardens, and a 1,300-square-foot vegetable garden, intended to promote environmentally-friendly growing practices. "We are going through the steps to make this a certified organic garden," says Livia Marques, director of the People's Garden. The vegetable garden is complete, but Marques anticipates that the entire project will take several years to finish.

Produce grown in the People's Garden is donated to a local organization, DC Central Kitchen. Employees of the USDA are being encouraged to volunteer in the garden, although an outside landscape contractor will supply regular maintenance. The idea for The People's Garden was hatched by Vilsack as a way to not only educate citizens on the benefits of homegrown, organic produce, but to honor the vision of President Abraham Lincoln, who founded the Department of Agriculture in 1862 and referred to it as "The People's Department." The USDA hopes to establish similar gardens at each of its facilities throughout the United States.

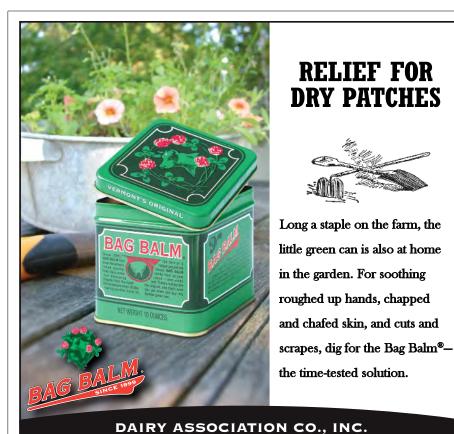
SWEET 16 FOR NATIONAL PUBLIC LANDS DAY

On September 26, volunteers from across the country will celebrate the 16th annual National Public Lands Day (NPLD), a program of the National Environmental Education Foundation (NEEF), an organization that promotes everyday solutions to environmental problems.

Last year, more than 120,000 people participated and planted more than one million trees in conjunction with the Tree Planting Initiative 2008. This year's event, which will take place at an estimated 2,000 sites, will focus on water. "Water fits in with NPLD because there are so many connections our public lands have with water," says Robb Hampton, NPLD director. Some of the service projects planned for the day include shoreline beautification, wildlife restoration, testing the water quality of streams and rivers, and maintaining park facilities.

For more information about this year's NLPD or to find an event site, visit www.publiclandsday.org.

News written by Editorial Intern Amanda Griesser and Associate Editor Viveka Neveln.



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GARDENER'S NOTEBOOK NEWS SPECIAL

American Community Gardening Association Turns 30

BY AMANDA GRIESSER

THIS YEAR marks the 30th anniversary of the American Community Gardening Association (ACGA). ACGA was first conceived by the City of Chicago Department of Human Services in 1979 when a surge in popularity in community gardens—coupled with a lack of Federal funding resulted in the need for a national organization.

Today, ACGA is a nonprofit organization headquartered in Columbus, Ohio, that seeks to encourage community gardening and greening across the United States and Canada. It is committed to all aspects of food and ornamental gardening, urban forestry, and the preservation of open space. Professionals, supporters of community greening in urban and rural areas, and volunteers make up the core of its membership.



Kids help out at Gifford Community Park Garden in Omaha, Nebraska.

Community gardens have proven useful in promoting healthy eating habits, curbing heat-sink effects in urban areas, and even reducing crime. "Starting a garden is the easy part; keeping it going is tricky," says ACGA treasurer Betsy Johnson. ACGA "keeps gardens going" by conducting educational programs, encouraging research, expanding its network of community gardeners, and developing resources in support of community gardening. One resource is the "Growing Communities" workshop that teaches the organizational and leadership skills necessary to spearhead a community garden project.

PUTTING DOWN ROOTS

From August 6 through 9, ACGA will hold its annual conference at the Franklin Park Conservatory in Columbus, Ohio. The theme of this year's conference is "Putting Down Roots," which is fitting because ACGA will soon be moving its headquarters to the Conservatory's new plot, the Community Garden Campus.

More than 40 workshops have been scheduled over the course of the three-day event, with topics ranging from maintaining a community garden to developing a garden policy for the Obama administration. Speakers from all reaches of the country will be in attendance. Tours interspersed throughout the conference provide opportunities to see some of the diverse gardens the Columbus area has to offer, including the Chadwick Arboretum and Learning Gardens at Ohio State University.

LOOKING AHEAD

Thirty years after its inception, ACGA faces many of the same problems it once did: a high national unemployment rate, rising food costs, reduced Federal funding, and a growing need for



ACGA holds educational workshops for community garden organizers.

community gardens. Still, Johnson believes that, for the most part, the focus of the organization remains the same, particularly in the vital areas of information exchange and networking. She adds that community gardens are "resilient," having evolved over generations and now experiencing a noticeable upswing in popularity. "There's such a breadth of people who garden across every spectrum," she says. "There really is nothing else like that to build communities and bring people together."

Membership in the organization is open to anyone interested in community gardening, and Johnson urges people to support the organization's goals on both a local and national level. Non-members can sign up for an e-mail listsery that functions as a forum for people interested in starting a community garden. For more information on ACGA's mission and programs—and to locate a community garden near you—visit www.communitygarden.org.

> —Amanda Griesser is an editorial intern for The American Gardener.

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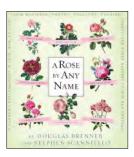


Recommendations for Your Gardening Library

A Rose by Any Name

Douglas Brenner and Stephen Scanniello. Algonquin Books, Chapel Hill, North Carolina, 2009. 320 pages. Publisher's price, hardcover: \$19.95.

IN THE introduction of A Rose by Any Name: The Little-Known Lore and Deep-Rooted History of Rose Names, Douglas Brenner



and Stephen Scanniello caution that if you're hoping to "learn how to prune a large-flowered hybrid tea rose like 'Dolly Parton' or quell an infestation of aphids on a miniature rose such as 'Santa Claus,'" you'll need to look elsewhere. Instead, this book explores the intriguing histories of dozens of roses, with the authors asserting that "once you know it by

name, a rose definitely isn't a rose isn't a rose."

The naming of a rose often carries with it cultural, social, economic, political, and emotional significance. For example, the book opens with the story of the 'American Beauty' rose, introduced in 1886, which became an emblem of national pride. Its popularity was such that in 1898 New York florists sold 'American Beauty' roses for \$3.75 a stem, about a dollar more than the typical daily wage of a carpenter. Thus it was also known as the "Million-Dollar Rose." People still ask florists for these antique roses today, though blooms sold as 'American Beauty' nowadays are probably imposters because these notoriously difficult-to-cultivate roses are not grown on a large scale anymore.

And as any rose breeder knows, the success of a new introduction rests not only on its flowering and growth habits, disease resistance, and other objective standards, but also on the emotional chord struck by the name. One currently ubiquitous rose originally was going to be called 'Razzleberry', until it was branded Knock Out®, a name with much more marketing power.

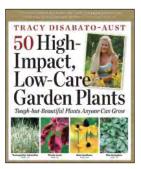
You can dip randomly into the book's concise chapters to discover these gems of information, but more likely you'll find yourself drawn in by the excellent writing and fascinating anecdotes and want to read it cover to cover. Even the glossary is worth a careful read. One interesting tidbit I picked up there was that roses don't technically have thorns, which are defined as a modified branch composed of the same material as the plant stem. Roses actually have prickles. Just as a rose by any name may smell as sweet, so a thorn by any name is just as sharp!

—Catriona Tudor Erler

50 High-Impact, Low-Care Garden Plants

Tracy DiSabato-Aust. Timber Press, Portland, Oregon, 2008. 168 pages. Publisher's price, softcover: \$16.95.

FOR THOSE GARDENERS who love plants but lack the time to spend hours in the garden, this is an excellent book. Both new



gardeners and those who have picked high-maintenance perennials but want to make changes can benefit from the author's emphasis on tough, low-maintenance plants that give them more time to enjoy their garden. Even those who are downsizing to smaller gardens or to containers will benefit from these plant recommendations.

The plants are listed in alphabet-

ical order by botanical name, which may make it difficult for beginners looking for a particular plant because there is no index. The author provides a brief description, notes important details such as hardiness zones and light requirements, and includes a concise maintenance checklist that gives all the pertinent information. Each entry comes with several color photographs, both of the plant in garden settings and in close-ups.

The plants in this book are a wonderful combination of the tried-and-true and the unusual that will satisfy more experienced gardeners. For example, shredded umbrella plant (Syneilesis aconitifolia) and woodland peony (Paeonia obovata) are good, unusual choices for a shade garden. For sun, rattlesnake master (Eryngium yuccifolium) and Rozanne hardy geranium are two of my favorite easy-care perennials. For those who are unfamiliar with a plant, there are companions listed to make colorful combinations. However, the suggested plants are not necessarily going to flower together in all parts of the country.

There are a few other minor glitches. An aster is listed by its old botanical name rather than its new name, Symphyotrichum. Regionally invasive plants that are mentioned, such as Rosa rugosa, are not flagged, and a few widely challenging-to-grow selections such as delphiniums are suggested.

Aside from these few drawbacks, the book is well written, has delightful photographs, and presents good, solid choices of plants. The author's narrative style, filled with personal experiences, makes this book an easy read.

—Stephanie Cohen

Catriona Tudor Erler is the author of nine gardening books, including Design Ideas for Home Landscaping (Creative Homeowner, 2007) and Poolscaping (Storey Publishing, 2003).

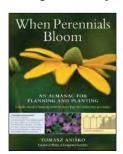
Stephanie Cohen, also known as the "perennial diva," is co-author of The Perennial Gardener's Design Primer (Storey Publishing, 2005) and Fallscaping (Storey Publishing, 2007).

When Perennials Bloom:

An Almanac for Planning and Planting

Tomasz Anisko. Timber Press, Portland, Oregon, 2008. 510 pages. Publisher's price, hardcover: \$59.95.

THIS IS just the type of book I wish had occupied my shelf during numerous plant identification classes I took in my land-



scape horticulture program. From *Acanthus* to *Yucca*, the pages are packed with season-specific bloom information and brightened by Tomasz Anisko's excellent horticultural photographs.

In this ambitious and comprehensive book, Anisko describes detailed flowering times for more than 450 herbaceous perennials. He relies on research conducted all over the world, much of it un-

dertaken by cohorts as curious as the author to discover the answer to the question faced over and over again by professional and home gardeners alike: When will this plant bloom?

For those whose initial reaction is "who cares?" I found in Anisko's writing an emotionally compelling response: "Before we had calendars and before we learned to read the stars, flowers were telling us the time of the year." Flowers tell us volumes about the seasons, the weather, the geography, and even our own yearnings to enjoy color and beauty in our surroundings. That's reason enough to care.

In the book's opening chapters, Anisko explains the seasonal development of various perennials and their response to weather conditions (temperature, light, and rainfall). He describes the basic concept of "phenology," the relationship between climate and seasonally recurring events. Phenology has its roots in the age-old agricultural ritual of keeping a calendar of flowering, fruiting, and other growing activities of one's crops. Apply these methods to perennial plant performance around the globe, in different zones and conditions, and you get the basis of *When Perennials Bloom*.

The "Encyclopedia of Perennials and Their Bloom Times" occupies the bulk of the book. For each plant entry, Anisko provides bar-graphlike bloom continuum charts. For example, *Phlox paniculata* 'David' produces its first flowers the second week of June; it peaks during the first three weeks of August; and continues blooming until the first week of October. At a glance, I can compare this cycle to other phlox cultivars, which helps me plan continuity of bloom in a border or bed.

At the back of the book, a chronologically organized graph sprawling over seven pages charts the bloom span of more than 450 different perennials, from April's first-to-flower perennial (*Petasites japonicus* 'Purpureus') to December's last-to-flower specimen (*Chrysanthemum pacificum*) and everything else in between. A year in flowers, indeed.

—Debra Prinzing

Debra Prinzing's most recent book is Stylish Sheds and Elegant Hideaways (Clarkson Potter/Publishers, 2008).



GARDENER'S BOOKS

Regional Gardening Books

ENERAL GARDENING books that can apply to a wide swath of climates and include a broad plant palette have their uses, but sometimes the best resource for gardening in your corner of the country is a regionally oriented book. Such a book often gets more in-depth on the particulars of your climate, soil, and pests, in addition to focusing on plants that are known to thrive in your area. Here are some recently published examples.

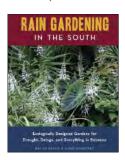
Anyone who gardens along the Eastern Seaboard from Maine to South Carolina will appreciate *Oh Garden of Fresh*



Possibilities! (David R. Godine, 2009, \$35). This book is filled with design ideas and plants that work well in this coastal region, as author and garden designer Kim Smith relates her experiences with her quarter-acre garden in Gloucester, Massachusetts. The first part of the book, "Creating the Framework," delves into trees, shrubs, and other elements for creating structure in the garden, while the second section

addresses how to fill out the framework to create a harmonious living tapestry in your garden.

While many of the concepts in *Rain Gardening in the South* (Eno Publishers, 2009, \$19.95) have universal applica-



tions, authors Helen Kraus and Anne Spafford wrote the book with the southeastern section of the United States from Virginia to Alabama in mind—hence, the regionally specific plant recommendations and soil preparation instructions. The authors define a rain garden as one that is "designed to capture rainfall flowing through your yard (known as runoff), store that

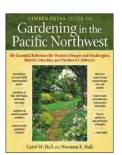
water to nurture its plants, and cleanse runoff, thus removing the pollutants it carries with it." Chapters cover the basics of designing, building, planting, and troubleshooting a rain garden, supplemented with color photographs, diagrams, and charts throughout the book.



Durable Plants for the Garden (Fulcrum Publishing, 2009, \$24.95) is a "documentary publication featuring the first seventy-four plants promoted by Plant Select" since the program began introducing plants in 1997. A collaborative effort between Denver Botanic Gardens, Colorado State Uni-

versity, and green industry partners, this program focuses on promoting exceptional plants for the High Plains and intermountain region. Anyone who gardens in this area of the country will appreciate having at their fingertips this list of tough but beautiful plants that will thrive despite low rainfall, alkaline soils, strong winds, little winter snow cover, and other challenges that often make short work of lesser plants. Each entry includes brief notes about why it makes the cut, its characteristics and landscape uses, preferred cultural conditions, native range, and a list of its best features—all accompanied by color photographs and illustrations.

For gardeners in western Oregon and Washington, British Columbia, and northern California, there's *Gardening in the*



Pacific Northwest (Timber Press, 2008, \$29.95) by Carol W. Hall and Norman E. Hall. This comprehensive volume begins with a detailed discussion of the region's climatic and geographic characteristics, which serves to familiarize gardeners with the conditions they will be facing. The next section is a month-by-month calendar of what to expect and do in the garden. Much of the re-

mainder of the book is dedicated to profiles of trees, shrubs, herbaceous perennials, bulbs, and other plants the authors are partial to. In addition to being "as beautiful to look at as they are beautifully adapted" to the region, most of these plants are well-behaved and not difficult to find or grow. The book's final chapters focus on how to handle common pests and other garden problems such as deer, drought, and weeds.

The Hot Garden (Rio Nuevo Publishers, 2009, \$40) by award-winning author Scott Calhoun, focuses on the "plants,



rocks, colors, and watering methods that bring the grandeur and intricacy of the wild Southwestern landscape into home gardens." Just to be clear about the territory addressed in the book, Calhoun notes that it is where the mulch of choice is gravel, which "happens to lie mostly within the boundaries of the three hottest American deserts: the Chihuahuan, the Mojave, and the Sono-

ran." Calhoun's vibrant photographs nearly steal the show, but his engaging text and willingness to share his horticultural experience help readers get their "desert eyes" on so they can better appreciate this region's unique beauty and learn to incorporate some of it in their gardens.

Viveka Neveln, Associate Editor

Growing the Best



Share the magic and joy of growing orchids with a gift of the AOS 2010 Calendar. The 12 superbly grown orchids pictured show the diversity in color, size, shape and fragrance found in the orchid family. Join author Ken Slump as he shares secrets for growing the best orchids and then offers advice for successfully cultivating and flowering a dozen choices suitable for the greenhouse, home and under lights.

In addition to month after month of beautiful photography, the gift giver can feel good about supporting the American Orchid Society's mission of promoting and supporting the passion for orchids through education, conservation and research.

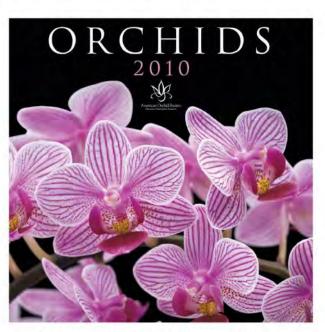
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REGIONAL HAPPENINGS

Horticultural Events from Around the Country

NORTHEAST

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

JULY 23-25. Nantucket Garden Festival. Seminars, tours, gala dinner. Nantucket Lighthouse School. Nantucket, Massachusetts. (508) 228-0427. www.nantucketgardenfestival.com.

JULY 25 & 26. Garden Walk Buffalo. Selfguided tour. Buffalo, New York. (716) 879-0123. www.GardenWalk Buffalo.com.

RAP JULY 29. Creating an Authentic Garden. Lecture. Polly Hill Arboretum. West Tisbury, Massachusetts. (508) 693-9426. www.pollyhillarboretum.org.

RAP AUG. 1 & 2. Flower Show. Berkshire Botanical Garden. Stockbridge, Massachusetts. (413) 298-3926. www.berkshirebotanical.org.

RAP AUG. 12. Harvesting Herbs. Lecture. Heritage Museums and Gardens. Sandwich, Massachusetts. (508) 888-3300. www.heritagemuseumand gardens.org.

AUG. 22. Creating Home Outside: Landscape Design Workshop. Julie Moir Messervy Design Studio. Saxtons River, Vermont. (802) 869-1470. www.jmmds.com.

AUG. 23. Central New York Gladiolus Show. Central New York Gladiolus Society. Syracuse, New York. (315) 697-3507. E-mail: bslamb@dreamscape.com.

MID-ATLANTIC

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

JULY 22. Planting Design for Homeowners. Class. U.S. Botanic Garden. Washington, D.C. (202) 225-1116. www.usbg.gov.

RAP JULY 25. Gardening for a Lifetime. Class. Green Spring Gardens. Alexandria, Virginia. (703) 642-5173. www.greenspring.org.

JULY 28-30. Penn Atlantic Nursery Trade Show (PANTS). Greater Philadelphia Expo Center. Valley Forge, Pennsylvania. (717) 328-1673. www.pantshow.com.

AUG. 1. Native Plants for Dry Shade. Class. Mt. Cuba Center. Greenville, Delaware. (302) 239-4244. www.mtcubacenter.org.

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

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

AUG. 1 & 2. Cactus Show. Brookside Gardens. Wheaton, Maryland. (301) 962-1400. www.brooksidegardens.org.

AUG. 7. Hardy Cacti and Succulents. Seminar. Scott Arboretum of Swarthmore College. Swarthmore, Pennsylvania. (610) 328-8025. www.scottarboretum.org.

RAP AUG. 11 & 12. Invasive Plants Conference. Morris Arboretum at the University of Pennsylvania. University of Pittsburgh, Johnstown Campus Conference Center. Johnstown, Pennsylvania. (215) 247-5777 ext. 125. E-mail: jlm@upenn.edu.

AUG. 15. Summer Fruit Tasting. Monticello, the Thomas Jefferson Foundation. Charlottesville, Virginia. (434) 984-9822. www.monticello.org.

RAP AUG. 29 & 30. Begonia Show and Sale. Green Spring Gardens. Alexandria, Virginia. (703) 642-5173. www.greenspring.org.

Looking ahead

RAP SEPT. 18 & 19. Fall Plant Sale. Lewis Ginter Botanical Garden. Richmond, Virginia. (804) 262-9887. www.lewisginter.org.

SOUTHEAST

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

RAP JULY 23. The Changing Mountain Environment: Edible Landscape. Presentation. North Carolina Arboretum. Asheville. North Carolina. (828) 665-2492. www.ncarboretum.org.

JULY 25. Plumleaf Azalea Hike and Callaway

Home Tour. Ida Cason Callaway Foundation. Pine Mountain, Georgia. (800) 225-5292. www.callawaygardens.org.

RAP JULY 29. Plan Before You Plant. Lecture. Atlanta Botanical Garden. Atlanta, Georgia. (404) 876-5859. www.atlantabotanicalgarden.org.

RAP AUG. 9. Gardening with Japanese Myrtles. Class. Aldridge Botanical Gardens. Hoover, Alabama. (205) 682-8019. www.aldridgegardens.com.

RAP AUG. 20. **New Plant Workshop.** Yew Dell Gardens. Crestwood, Kentucky. (502) 241-4788. www.yewdellgardens.org.

RAP AUG. 21. Growing Figs at Home. Class. Boone County Arboretum. Union, Kentucky. (859) 586-6101. www.bcarboretum.org.

RAP AUG. 22. Edible Plants for the Home Landscape. Class. Daniel Stowe Botanical Garden. Belmont, North Carolina. (704) 825-4490. www.dsbg.org.

RAP AUG. 29. Green Gardening: National Wildlife Certification. Class. Central Florida Zoo and Botanical Garden. Lake Monroe, Florida. (407) 323-4450. www.centralfloridazoo.org.

Looking ahead

SEPT. 18 & 19. American Camellia Society Fall 2009 Convention. Charleston, South Carolina. (478) 967-2358. www.camellias-acs.org.

NORTH CENTRAL

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

RAP JULY 19. Ohio Daylily Society **Show and Sale.** Kingwood Center. Mansfield, Ohio. (419) 522-0211. www.kingwoodcenter.org.

AHS JULY 23–25. National Children & Youth Garden Symposium. American Horticultural Society. Cleveland Botanical Garden. Cleveland, Ohio. (703) 768-5700. www.ahs.org.

JULY 24-26. Midwest Native Plant Conference. Midwest Native Plant Society. Dayton, Ohio. (513) 941-6497. www.cincinnatibirds.com/mwnp.

AUG. 13. **Wisconsin Nursery Association Summer Field Day.** Outdoor trade show. Jackson, Wisconsin. (414) 529-4705. *www.wislf.org.*

RAP AUG. 14–16. **Mid-America Bonsai Show & Sale.** Chicago Botanic Garden. Glencoe, Illinois. (837) 845-5440. *www.chicagobotanic.org.*

AUG. 18–20. **The Independent Garden Center Show.** Trade show. Navy Pier. Chicago, Illinois. (866) 391-6220. www.igcshow.com.

RAP Aug. 22 & 23. **Dahlia Show.** Olbrich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. *www.olbrich.org*.

AUG. 28 & 29. **Black Hills Orchid Society Festival.** American Orchid Society. Rapid City, South Dakota. (605) 348-7165. *www.aos.org.*

Looking ahead

SEPT. 18–21. **Annual Meeting & Expo.**American Society of Landscape Architects.
Lakeside Center at McCormick Place.
Chicago, Illinois. (202) 898-2444.
www.asla.org/2009meeting.

SOUTH CENTRAL

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

JULY 19–24. **Perennial Plant Association Symposium.** St. Louis, Missouri. (614) 771-8431. *www.perennialplant.org*.

RAP JULY 21. **Reshaping and Correctional Pruning.** Class. Garvan Woodland Gardens. University of Arkansas. Hot Springs National Park, Arkansas. (501) 262-9300. www.garvangardens.org.

RAP JULY 25. **Tomato Day.** Festival. Sedgwick County Extension Center. Wichita, Kansas. (316) 660-0100. www.sedgwick.ksu.edu.

RAP JULY 25-AUG. 2. Henry Shaw Cactus Society Show and Sale. Missouri Botanical Garden. St. Louis, Missouri. (314) 577-5100. www.mobot.org.

RAP AUG. 8. **EARTH-KIND Environmental Stewardship Day.** Texas Discovery Gardens. Dallas, Texas. (214) 428-7476. www.texasdiscoverygardens.org.

AUG. 22. **Plant Sale.** New Orleans Botanical Garden, City Park. New Orleans, Louisiana. (504) 483-9464. *www.neworleanscitypark.com/nobg.html.*

RAP AUG. 22 & 23. **Texas Bamboo Society Bamboo Show and Sale.** Zilker Botanical Garden. Austin, Texas. (512) 477-8672. www.zilkergarden.org.

Denver Goes Prehistoric

INTERESTED IN A trip to the Mesozoic Era? Denver Botanic Gardens has created the city's own Jurassic Park with its "Jurassic Gardens" exhibit, running now through September 30. Visitors will get the chance to see not only life-sized dinosaurs and a 10-foot

sea scorpion (created by Guy Darrough of Lost World Studios), but prehistoric plants and their modernday descendants. Cycads, ferns, lycopods, and horsetails represent just some of the plant groups on display that continue to flourish today.

One focus of the exhibit is the relationship between plants and animals. Herbivore dinosaurs traveled in large herds and consumed an astounding quantity of plants, thereby altering the evolution of certain plant species by almost wiping them out. Although Denver Botanic Gardens is celebrating its 50th anniver-



Encounter dinosaurs at Denver Botanic Gardens.

sary this year, "Jurassic Gardens" more closely commemorates the 200th birthday anniversary of British naturalist Charles Darwin, with messages pertaining to evolution incorporated throughout the exhibit.

Denver Botanic Gardens participates in the AHS Reciprocal Admissions Program, so AHS members receive free admission. The "Jurassic Gardens" exhibit is included in the price of admission for non-members. Call (720) 865-3500 or visit *www.botanicgardens.org* for more information.

Washington Park Arboretum Ready to Celebrate

THE WASHINGTON Park Arboretum in Seattle, partnered with the University of Washington Botanic Gardens, Seattle Parks and Recreation, and the Arboretum Foundation, is celebrating its 75th anniversary this summer with a number of special events. Many of these upcoming events are family-oriented. For example, special nighttime educational tours for families, called "Park in the Dark," are scheduled for July 25 and August 22. These tours allow visitors the opportunity to experience the gardens under a different light while learning about the habits of nocturnal creatures through hands-on activities. A botanical-themed art exhibit and wine tasting event, "Art in the Park," will be held on August 6.

The Washington Park Arboretum will have cause for celebration in the coming years with the opening of an ambitious exhibit, the Pacific Connections Garden. The arboretum has dedicated 14 acres to plants indigenous to Australia, New Zealand, Chile, China, and Cascadia, a land region in the Pacific Northwest comprised of Oregon, Washington, and British Columbia. The first phase of construction was completed in September 2008, and the grand opening of the garden is projected for 2015. For more information on upcoming events, call the Arboretum Foundation at (206) 325-4510 or visit www.arboretumfoundation.org.

—Amanda Griesser, Editorial Intern

RAP AUG. 29. Fort Worth Orchid Society Sale. Fort Worth Botanic Garden. Fort Worth, Texas. (817) 871-7686. www.fwbg.org.

SOUTHWEST

AZ, NM, CO, UT

RAP JULY 25. Iris Sale. American Iris Soci-

ety. The Hudson Gardens & Event Center. Littleton, Colorado. (303) 797-8565. www.hudsongardens.org.

AUG. 7. **SHADE: Southwest Horticulture Annual Day of Education.** Green industry educational seminar. Arizona Nursery Association. Tempe, Arizona. (480) 966-1610. *www.azna.org.*

AHS AUG. 7 & 8. West Valley Maricopa County Home and Garden Show. Phoenix, Arizona. (602) 485-1691. www.Maricopa CountyHomeShows.com.

RAP AUG. 8. An Herb A-Fair. The Gardens on Spring Creek. Fort Collins, Colorado. (970) 416-2486. www.fcgov.com/horticulture.

RAP AUG. 8. Tasty Tomatoes. Lecture, tasting. Red Butte Garden and Arboretum. University of Utah. Salt Lake City, Utah. (801) 581-4747. www.redbuttegarden.org.

RAP AUG. 10. Backyard Composting 101. Class. High Country Conservation Center. Betty Ford Alpine Gardens. Vail, Colorado. (970) 476-0103. www.bettyfordalpinegardens.org.

RAP AUG. 20. Meadows By Design. Lecture. Denver Botanic Gardens. Denver, Colorado. (720) 865-3580. www.botanicgardens.org.

WEST COAST

CA, NV, HI

RAP JULY 24. **Ikebana Basics.** Class. Los Angeles County Arboretum and Botanic Garden. Arcadia, California. (626) 821-3222. www.arboretum.org.

RAP JULY 24-26. Summer Cactus and Succulent Show & Sale. Orange County Cactus and Succulent Society. Fullerton Arboretum. Fullerton, California. (657) 278-3407. www.fullertonarboretum.org.

RAP AUG. 1. Summer Gardening Fair. San Francisco Botanical Garden Society. San Francisco, California. (415) 661-1316. www.sfbotanicalgarden.org.

RAP AUG. 8. Rose Garden Care Using Sustainable Methods. Lecture. Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. www.descansogardens.org.

AUG. 13. Citrus Diseases in California: Past, Present and Future. Lecture. Southern California Horticultural Society. Los Angeles, California. (818) 567-1496. www.socalhort.org.

AUG. 22 & 23. Fall Plant Sale and Garden Tours. Occidental Arts & Ecology Center. Occidental, California. (707) 874-1557 ext. 201. www.oaec.org.

Looking ahead

RAP SEPT. 12 &13. Salvia Spectacular. Plant sale. Fullerton Arboretum. Fullerton, California. (657) 278-3407. www.fullertonarboretum.org.

SEPT. 14. Meadows, Grasslands, Prairies, and Turf: An Opportunity to Reconsider Your Lawn. Lecture. San Diego Horticultural Society. San Diego, California. (760) 295-7089. www.sdhortsoc.org.

New West Coast Show Features Garden Design Innovation and Imagination

TAKING PLACE from September 18 through 20, The Late Show Gardens exhibition is set to premiere in the heart of northern California's wine country on the grounds of Cornerstone Sonoma. A celebration of innovative garden design, this exciting new show takes as its theme the challenges of a changing environment. Robin Parer, president of The Late Show Gardens and one of the show's organizers, says the designers were asked

to brainstorm "new ways of thinking about drought and global warming, as it impacts our gardens and our way of life."

Some 17 outdoor spaces are slated to be created by a roster of inventive—often provocative artists and designers, musicians, and landscape architects. Cevan Forristt, John Greenlee, Kate Frey, and Stephen Glassman are among the garden creators.

The cognoscenti of the horticultural community emerge in the show's line-up of speakers, bringing together photographer Marion Brenner, nursery owners and authors Sean Hogan and Roger Gossler, land artist Topher De-



This garden, designed by Beth Mullins, is one of many to be featured in the show in September.

laney, garden expert Ken Druse, and Mark Hertsgaard, a correspondent for The Nation. Numerous lectures by these and other notable speakers will offer solutions to compelling environmental needs, thoughtful insights into the issue of sustainability, and fresh ways to define gardens.

Visitors can indulge the urge to shop with a host of Cornerstone Sonoma merchants and the show's vendors. On offer will be ornamental elements, garden art, home decor, books, and plants that Parer describes as "unjustly neglected in West Coast gardens." Information on tickets, directions, and more on The Late Show Gardens can be found at www.thelateshowgardens.org.

—Alice Joyce blogs on garden travel in the San Francisco Bay area.

NORTHWEST

AK, ID, MT, OR, WA, WY

RAP AUG. 1 & 2. Flower Show. Anchorage Garden Club. Alaska Botanical Garden. Anchorage, Alaska. (907) 770-3692. www.alaskabg.org.

AUG. 18-22. Farwest Show. Oregon Association of Nurseries. Portland, Oregon. (800) 342-6401. www.farwestshow.com.

RAP AUG. 22. Tour of the Botanic Gardens. Cheyenne Botanic Gardens. Cheyenne, Wyoming. (307) 637-6458. www.botanic.org.

RAP AUG. 22 & 23. Eastside Fuchsia Society Show and Sale. Northwest Fuchsia Society. Bellevue Botanical Garden. Bellevue, Washington. (425) 451-3755. www.bellevuebotanical.org.

Looking ahead

SEPT. 18-20. American Rhododendron Soci-

ety Western Regional Conference. Federal Way, Washington. (416) 424-1942. www.rhododendron.org.

CANADA

JULY 25 & 26. British Columbia Fuchsia & Begonia Society Annual Show & Competition. Van Dusen Botanical Garden. Vancouver, British Columbia. (604) 591-3262. www.vandusengarden.org.

RAP AUG. 15. **Preserving the Harvest.** Course. Glendale Gardens & Woodland. Victoria, British Columbia. (250) 479-6162. www.hcp.bc.ca.

INTERNATIONAL

JULY 30-AUG. 2. Mayaguez Orchid Society Show. American Orchid Society. Mayaguez, Puerto Rico. (787) 649-2656. www.aos.org.





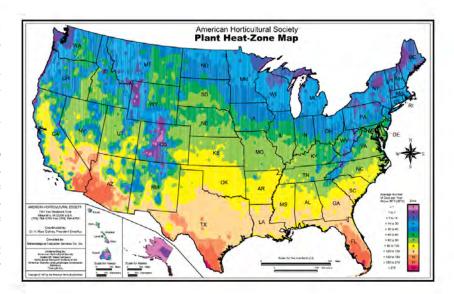
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PRONUNCIATIONS AND PLANTING ZONES

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.

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 codes 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.

To purchase a two-by-three-foot glossy AHS Plant Heat Zone Map for \$9.95, call (800) 777-7931 or visit www.ahs.org.



Abelmoschus esculentus ay-bel-MOS-kus es-kyew-LEN-tus (USDA Zones 11-11, AHS Zones 12-4)

Acalypha godseffiana ah-kuh-LEE-fuh god-sef-ee-AN-uh (11-11, 12-4)

A. hispida A. HISS-pih-duh (11–11, 12–6)

A. wilkesiana A. wil-kee-zee-AN-uh (10–11, 12–1)

Actinidia arguta ak-tih-NID-ee-uh ar-GOO-tuh (4-9, 9-4)

A. kolomikta A. ko-lo-MIK-tuh (3-7, 7-3)

Aesculus pavia ES-kyew-lus PAY-vee-uh (5–9, 9–5)

Alcea rosea AL-see-uh ro-ZAY-uh (2-9, 9-2)

Alternanthera dentata al-tur-NAN-thur-uh den-TAY-tuh (11-11, 12-1)

Andropogon scoparius an-dro-PO-gon sko-PAR-ee-us (3-9, 9-1) Anemone coronaria uh-NEM-o-nee kor-o-NAIR-ee-uh (7-9, 10-7)

Asclepias tuberosa as-KLEE-pee-us too-bur-O-suh (4-9, 9-2) Berberis thunbergii forma atropurpurea

BUR-bur-iss thun-BUR-jee-eye f. at-row-pur-PUR-ee-uh (5-8, 8-5)

Callicarpa americana kal-lih-KAR-puh uh-mair-ih-KAN-uh (5-9, 9-1)

Cissus discolor SISS-us DIS-kul-ur (10-11, 12-3) Crocus ancyrensis CRO-kus an-kih-REN-sis (3-8, 8-1) Duranta erecta dew-RAN-tuh eh-REK-tuh (11–11, 12–1) **Eupatorium maculatum** yew-puh-TOR-ee-um mak-yew-LAY-tum (5-11, 9-1)

Euphorbia rigida yew-FOR-bee-uh RIH-jih-duh (7–11, 12–7) Gelsemium sempervirens jel-SEE-me-um sem-pur-VY-renz

Hakonechloa macra ha-kon-ee-KLOH-uh MAK-ruh (5-9, 9-5)

Hibiscus acetosella hy-BISS-kus uh-set-o-SEL-luh (8-11, 12-1)

H. coccineus H. kok-SIN-ee-us (6-11, 12-6)

H. grandiflorus H. gran-dih-FLOR-us (9-11, 12-8)

H. laevis H. LEE-vis (4–9, 9–1)

H. lasiocarpus H. lay-zee-o-KAR-pus (6-9, 11-6)

H. moscheutos H. mos-KEW-tos (5–10, 12–1)

H. mutabilis H. mew-TAH-bih-liss (10-11, 12-5)

H. rosa-sinensis H. RO-zuh-sih-NEN-siss (10-11, 12-1)

H. syriacus H. sih-ree-AH-kus (5–9, 9–1)

Hydrangea quercifolia hy-DRAN-juh kwer-sih-FO-lee-uh (5-9.9-5)

Ipomoea batatas ih-po-ME-uh buh-TAH-tus (11-11, 12-1)

Iris histrioides EYE-riss hiss-tree-oh-EYE-deez (5-8, 8-4)

I. missouriensis I. mih-zur-ee-EN-sis (3–9, 9–1)

Manihot esculenta MAN-ih-hot es-kew-LEN-tuh (10-11, 12-7)

Muhlenbergia rigens mew-len-BUR-jee-uh RIH-jenz (6–9, 9–6)

Oenothera speciosa ee-no-THEE-ruh spee-see-O-suh (5–8, 8–1)

Picea pungens forma glauca PY-see-uh PUN-jenz f. GLAW-kuh (2-8, 8-1)

Sabal minor SAY-bul MY-nor (10-11, 12-10)

Sorghastrum nutans sor-GASS-trum NOO-tanz (4-9, 9-1)

Spiraea japonica spy-REE-uh jah-PON-ih-kuh (4-9, 9-1)

Sporobolus wrightii spor-OB-o-lus RITE-ee-eye (5-9, 9-5)

Tradescantia pallida trad-es-KAN-tee-uh PAL-lih-duh

(10-11, 12-1)

Veronica liwanensis ver-ON-ih-kuh lih-wuh-NEN-sis (4-9, 9-4) Zinnia marylandica ZIN-ee-uh mair-ee-LAN-dih-cuh (0-0, 12-1) **Z. violacea** Z. vy-o-LAY-see-uh (0-0, 12-1)



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PLANT IN THE SPOTLIGHT

Hakonechloa macra: Lighting Up the Shady Garden

by Gene Bush

REAT GRASSES for shade gardens are in limited supply in American horticulture. The primary exception is Hakone grass (Hakonechloa macra, USDA Zones 4-9, AHS Heat Zones 10-4). Both common name and genus name offer clues to the plant's origins. Its native habitat is moist rocky areas at fairly high altitudes on the Japanese main island of Honshu, including an area near Honshu's Mount Hakone.

Hakone grass, sometimes called Japanese shade grass, has long, jointed stems resembling skinny bamboo. Stems grow from one-and-a-half to three feet in length. At each joint along the stem there is a blade growing to a foot, sometimes more, on alternate sides. Usually each stem will arch near the top one-third of its length and stems will all be oriented in the same direction, giving the impression of flowing water. Inconspicuous flowers bloom in summer.

Hakone grass spreads by rhizomes underground stems—that slowly creep outward while maintaining a tight clump. It makes a very effective groundcover without being invasive.

The species remains among my favorites for overall performance and quiet beauty. It also blends well with other perennials. In the last decade, several noteworthy selections have been introduced to American gardens.

CULTIVAR OPTIONS

Among the cultivars, the most commonly grown is golden-green variegated 'Aureola', which grows to about a foot-anda-half tall, with graceful, gently arching



The arching leaves of Hakonechloa macra 'Aureola' create the impression of cascading water.

stems. I have planted several clumps on a rocky hillside in my garden. Over time, I expect those clumps to merge so that it appears there is a continuous stream running downhill between large rocks.

The white variegated cultivar, 'Albovariegata', (sometimes listed as 'Albostriata') stands out in that it seems to continually have a bad hair day, for the foliage does not consistently grow in the

Sources

Busse Gardens, Big Lake, MN. (800) 544-3192. www.bussegardens.com.

Earthly Pursuits, Inc., Windsor Mills, MD. (410) 496-2523. www.earthlypursuits.net.

Greer Gardens, Eugene, OR. (800) 548-0111. www.greergardens.com. same direction, as it does in other cultivars. 'Albovariegata', with its soft white and green stripes, is attractive combined with a variety of ferns.

'All Gold' is a low-growing knock-out that features chartreuse foliage. It makes a dramatic display combined with amber-colored heucheras such as 'Mahogany' or 'Southern Comfort'.

CHOOSING THE RIGHT SITE

Hakone grass thrives in soil high in organic matter. It is a warm season grower, but—as you might expect from its native habitat-wants to stay on the cool side. In cool, moist climates, it can be grown in full sun, but in warm or dry regions, part to full shade is best, with supplemental watering during droughts to keep it looking its best.

Gene Bush owns Munchkin Nursery & Gardens in Depauw, Indiana, which specializes in perennials for shade gardens.

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