

The Magazine of the American Horticultural Society

March / April 2012

Pleasing Purple Foliage

Deciduous Magnolias

Unusual Heath Family Natives

Tuning in to Garden Sounds



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Photograph by Rob Cardillo

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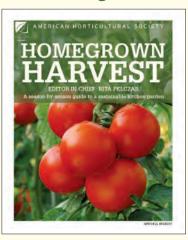
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- Advice on planning, setting up, and designing your garden
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NOTES FROM RIVER FARM

N FEBRUARY, it was our great honor to host Jane Taylor, one of the pioneers of the youth gardening movement in the United States, at our River Farm

headquarters to speak about one of her heroes, Liberty Hyde Bailey. Often described as the "father of American horticulture," Bailey was a horticulture professor, researcher, and prolific author of books on horticulture and many other topics. He, like Taylor, was passionately devoted to encouraging young people to experience the educational values of plants and gardening.

The American Horticultural Society shares this commitment. In July, we will sponsor the 20th annual National Children &



Jane Taylor with Harry Rissetto, left, and Tom Underwood, right, during a recent visit to River Farm

Youth Garden Symposium. The only national event of its kind, the symposium draws a diverse crowd of educators, youth leaders, and landscape designers who engage and inspire young gardeners. Since the symposium debuted in the Washington, D.C., area in 1993, we felt it only appropriate to celebrate the 20th annual event where it got its start. The symposium will be based at the University of Maryland in College Park, with field trips to prominent local children's gardens and schools (for more about the symposium, turn to page 8).

Another important way that we encourage and support youth gardening is through the Jane L. Taylor Award, one of our AHS Great American Gardeners Awards given annually. This award recognizes an individual, organization, or program that has inspired and nurtured future horticulturists through efforts in children's and youth gardening. We applaud this year's recipient, the Brooklyn Botanic Garden's Children's Garden, for its work connecting young people with plants. All of the 2012 award recipients, including the winner of the AHS's highest honor, the Liberty Hyde Bailey award, are announced on pages 12 to 14 of this issue. The awards will be presented on June 7 at the AHS's River Farm headquarters.

As spring arrives, many of us are excited to get back out in the garden. At River Farm, we have been busy cleaning up the beds, planning new garden displays, and sowing seeds. We hope this issue of *The American Gardener* will provide you with plenty of inspiration for trying out a wide range of ornamental and edible plants in your garden, from intriguing American native shrubs in the heath family to timetested deciduous magnolias, perennials with purple foliage, and heirloom snap beans. Other articles include a profile of Tony Avent, the free-spirited owner of Plant Delights Nursery in North Carolina, an introduction to the long-awaited update of the USDA Plant Hardiness Zone Map, and an insightful look at how sound can add another layer of enrichment to gardens.

Happy gardening! Harry Rissetto, Chair, AHS Board of Directors Tom Underwood, Executive Director



CONTACTS FOR AHS PROGRAMS, MEMBERSHIP BENEFITS & DEPARTMENTS

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

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

DEVELOPMENT To make a gift to the American Horticultural Society, or for information about a donation you have already made, call (800) 777-7931 ext. 132 or send an e-mail to development@ahs.org.

E-NEWSLETTER To sign up for our monthly e-newsletter, visit *www.ahs.org*.

INTERNSHIP PROGRAM The AHS offers internships in communications, horticulture, and youth programs. For information, send an e-mail to education@ahs.org. Information and application forms can also be found in the River Farm area of *www.ahs.org*.

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

RECIPROCAL ADMISSIONS PROGRAM The AHS Reciprocal Admissions Program offers members free admission and other discounts to more than 250 botanical gardens and other horticultural destinations throughout North America. A list of participating gardens can be found in the Membership area of *www.ahs.org.* For more information, call (800) 777-7931 ext. 119.

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

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

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

MEMBERS' FORUM

PRUNING ADVICE

I wanted to comment on two articles published in the January/February issue.

First, in the article about Magnolia grandiflora 'Little Gem' ("Plant in the Spotlight"), the author mentions that the plant gets to 20 feet tall and eight to 10 feet wide. One valuable piece of information not included was the growth rate for the tree. In my experience, the growth rate is more important for gardeners to know than the expected mature size. After all, woody plants don't just reach a certain size and just stop. I often refer gardeners to the growth rate chart offered by the American Conifer Society and ask them to calculate how long they wish to have a plant at any location before they have to deal with it overgrowing the site.

Second, in Scott Aker's discussion on lilac pruning ("Garden Solutions"), an-

other reason to thin lilacs is to reduce borer infestations. It seems borers are attracted to older, broader stems, so in winter, I prune at ground level any stems over an inch in diameter. The result is a shrub that is healthier due to this yearly rejuvenation. Note, this only works on lilacs that are not grafted.

> Chris Daeger, arboretum manager, Stanley M. Rowe Arboretum Indian Hill. Ohio

SOIL ORGANISMS OLD NEWS

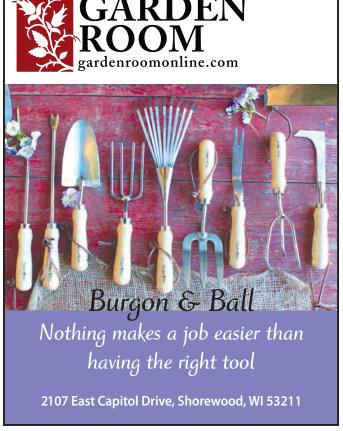
After reading the news item "Wheeling and Dealing Soil Denizens" ("Gardener's Notebook," January/February 2012), I am puzzled why researchers are spending precious money on a subject that has been clear to composters for a long time. Those of us who compost know that bacteria and fungi are the critters that create an atmos-

phere in the soil so that enzymes and nutrients are made available to plant roots. This process is also fundamental in companion planting and alellopathy. Anyone interested in learning more on this topic can consult any of the following references: An Agricultural Testament by Sir Albert Howard; Bio-Dynamic Farming and Gardening by Ehrenfried Pfeiffer; The Complete Book of Composting by the Rodale Staff; Mycelium Running by Paul Stamets; Secrets of the Soil by Peter Tompkins and Christopher Bird; Teaming with Microbes by Jeff Lowenfels.

Jennifer Ewing Port Orford, Oregon

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 n subject line). Letters we print may be edited for length and clarity.





THE AMERICAN HORTICULTURAL SOCIETY'S 20TH ANNUAL

NATIONAL CHILDREN & YOUTH GARDEN SYMPOSIUM

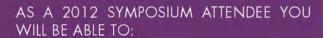


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- Share your own ideas, success stories, and dreams with teachers, public garden administrators, garden designers, youth program leaders, and children's gardening advocates from across the nation
- Visit River Farm, the American Horticultural Society's national headquarters in Virginia, and experience the pioneering children's garden that provided inspiration for the first symposium in 1993
- Be immersed in the rich history, diverse culture, and wonderful beauty of our Nation's Capital



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For its 20th anniversary, the American Horticultural Society's National Children & Youth Garden Symposium returns to the Greater Washington, D.C. area to celebrate two decades of promoting teaching and learning in the garden.

The University of Maryland, located just outside of Washington, D.C., will serve as our home base for three dynamic days of workshops, lectures, poster sessions, and field trips. Founded in 1856 as a private agricultural college and now flagship of the state's

higher education system, the University of Maryland with its tree-lined central mall and Colonial Revival architecture is a fitting location for us to reflect on where we've been, share our accomplishments, and propose for the future.

In 2012 we're coming back to where it all started – the perfect way to celebrate the Symposium's 20th anniversary and rededicate ourselves to the vital role of gardens in the lives of today's youth.



For more information:

Visit www.ahs.org/ncygs, e-mail youthprograms@ahs.org, or call (703) 768-5700 ext. 137

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News from the AHS

March / April 2012

PROGRAMS • EVENTS • ANNOUNCEMENTS

AHS SYMPOSIUM FOCUSED ON GARDENING WITH CHILDREN CELEBRATES 20 YEARS

THE ONLY NATIONAL event of its kind, the AHS's annual National Children & Youth Garden Symposium (NCYGS) has been inspiring thousands of teachers, land-scape designers, and others involved in youth gardening for two decades. An impor-



Holly Shimizu, executive director of the U.S. Botanic Garden, will be a keynote speaker.

tant element of the AHS's core mission, the symposium reinforces the organization's belief that cultivating a passion for plants and the natural world during young people's formative years will encourage them to make healthy lifestyle and environmental choices in the future. The NCYGS serves this purpose by supporting, inspiring, and celebrating America's youth gardening advocates while helping them to effectively engage today's youngest Americans in gardening.

The 20th annual symposium will return to where it all began, in the greater

Washington, D.C., area from July 19 to 21. The event will be headquartered at the University of Maryland's College Park campus and will include field trips to the National Mall, Hollin Meadows Elementary School in Alexandria, Virginia, and the Society's River Farm headquarters in Alexandria.

In addition to providing a chance to visit some of the area's most exemplary gardens created for and by children, the event will feature inspiring speakers such as **Holly Shimizu**, executive director of the U.S. Botanic Garden, who will give the opening keynote address. Other featured speakers will be **Wendy Blackwell**, director of education with the National Children's Museum, and garden communicator **Kirk Brown** who has garnered widespread recognition for his charismatic portrayal—in period costume—of 18th century American botanist and plant hunter John Bartram.

Symposium participants will also gain insight into connecting kids with plants and gardens through a variety of educational sessions, poster displays, and hands-on workshops. "Tapping into the tremendous resources of the Washington, D.C., area, we have an exciting program lined up for the symposium's 20th anniversary," says AHS Executive Director **Tom Underwood**. For more information, visit www.ahs.org/ncygs.

SPRING GARDEN MARKET AT RIVER FARM

THE AHS IS gearing up for its annual Spring Garden Market, a plant sale and marketplace of garden-inspired items. Members are invited to the preview sale on Thursday April 12 from 4 p.m. to 8 p.m., before the event opens to everyone on Friday, April 13 from 9 a.m. to 6 p.m. and Saturday, April 14 from 9 a.m. to 3 p.m.

Vendors from across the mid-Atlantic region will be offering a wide selection of plants including vegetables, herbs, annuals, perennials, shrubs, vines, and hard-to-find natives. In addition to the plants, garden art, tools, apparel, books, and more will be available from vendors and in the AHS Garden Shop.

For the event, parking is \$5 but free for AHS members who have a current membership card or present this issue of *The American Gardener*. All proceeds from the event support the stewardship of River Farm. For more information and directions to River Farm, visit *www.ahs.org/river_farm* or call (703) 768-5700.

AHS 2012 NATIONAL EVENTS CALENDAR



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

MAR. 21–25. **Bold Colors and Exuberant Flowers: San Diego County.** AHS Travel Study Program. California.

APR. 12–14. **Spring Garden Market.** (12th is AHS members-only preview sale.) River Farm, Alexandria, Virginia.

APR. 13 & 14. Great Gardens and Landscaping Symposium. Manchester, Vermont.

APR. 15 & 16. Colonial Williamsburg Garden Symposium. Williamsburg, Virginia.

APR. 18–22. **AHS President's Council Trip.** Crystal Bridges and Gardens of Northwest Arkansas.

APR. 21-28. Historic Garden Week in Virginia.

MAY 11. **Smithsonian Garden Fest/National Public Gardens Day.** Washington, D.C.

MAY 25 & 26. Relevance: National Plant Societies in the 21st Century. Gardens of the American Rose Center. Shreveport, Louisiana.

JUNE 7. **Great American Gardeners Awards Ceremony and Banquet.** River Farm, Alexandria, Virginia.

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

JULY 19–21. **National Children & Youth Garden Symposium.** Washington, D.C.

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

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

SEPT. 22. **AHS Annual Gala.** River Farm, Alexandria, Virginia. OCT. 26–NOV. 5. **Heritage and Gardens of Andalusia.** AHS Travel Study Program. Spain.

AHS HOSTING SPRING GARDEN CLUB EVENTS

SPRING FESTIVITIES at River Farm will include hosting the "Girls Just Want 2 Have Fun" standard flower show held by District II of the National Capital Area Garden Clubs. Taking place April 18 and 19 in the estate house, the show will feature floral designs, arts & crafts, and educational displays created by the club members. Admission is free. For more information, visit www.ncagardenclubs.org.

Another rite of spring for River Farm is participating in the Garden Club of Virginia's Historic Garden Week, billed as "America's largest open house." Once again, River Farm will be among the more than 250 gardens and private homes open to visitors from April 21 to 28. This event offers the chance to view the area's most picturesque properties at the peak of spring bloom, while supporting the Garden Club of Virginia's preservation and restoration of the "Commonwealth's most cherished historic landmarks." For more details about tours and ticket prices, visit www.vagardenweek.org.



ENVIRONMENTAL AWARD HONORS OUTSTANDING EXHIBITS

EACH YEAR, the AHS presents its Environmental Award at select flower and garden shows nationwide to exhibits that "best demonstrate the bond between horticulture and the environment, and inspire the viewer to beautify home and community through skillful design and appropriate plant material." Among this year's award winners to date were the Washington Park Arboretum's display at the Northwest Flower & Garden Show in Seattle, Wash-



"The Earth Gardener" display at the Virginia Flower & Garden Expo

ington, and "The Earth Gardener" by Beach Groundworks at the Virginia Flower & Garden Expo in Virginia Beach.

In addition to offering its Environmental Award, the AHS has arrangements with select flower and garden shows to offer members free or discounted admission. For a list of program participants, visit www.ahs.org/events/flower_home_garden_shows.htm.

AHS COLLABORATES IN NATIONAL PLANT SOCIETY MEETING

ON MAY 25 and 26, the AHS will join with representatives of various American plant societies in a summit at the Gardens of the American Rose Center in Shreveport, Louisiana. The meeting, titled "Relevance: National Plant Societies in the 21st Century," will address issues such as making plant society membership and volunteerism relevant for today's gardeners and using technology to encourage greater interactivity.

The summit is being coordinated and hosted by the American Rose Society. The AHS will sponsor a welcome reception May 25. During the full program the following day, Harry Rissetto, chair of the AHS Board of Directors and an officer with the American Dahlia Society, will deliver the keynote address.

Plant society leaders and others interested in participating in the meeting should contact **Jeff Ware**, executive director of the American Rose Society at execdirector@ars-hq.org.

News written by AHS Staff.

Gifts of Note

In addition to vital support through membership dues, the American Horticultural Society relies on grants, bequests, and other gifts to support its programs. We would like to thank the following donors for gifts received between December 1, 2011 and January 31, 2012.

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AHS MEMBERS MAKING A DIFFERENCE: Pat Leuchtman

by Helen Thompson

A N AHS MEMBER since 2007, Pat Leuchtman began gardening in the early 1970s, after she moved



Pat Leuchtman

to suburban Greenfield, Massachusetts. Today, she gardens on several acres in the small town of Heath, Massachusetts, and has been inspiring others to garden through her writing and community involvement.

A PASSION FOR ROSES AND WORDS

After moving to Heath in 1979, Leuchtman planned an ambitious, 90-foot perennial border for her new property. But a section in Katherine White's *Onward and Upward in the Garden* inspired her to instead try her hand at growing roses. The first rose she planted, 'Passionate Nymph's Thigh'—picked for its name—still blooms in her garden today, along with nearly 80 other selections. To share her passion for roses, each June Leuchtman holds her Annual Rose Viewing, an event that attracts guests from miles around to enjoy her colorful collection.

In 1980, she began writing a gardening column for her local paper, the Greenfield Recorder. "The area is full of wonderful gardeners," she says, so a good story was often close by. She has written a weekly column, "Between the Rows," for the paper ever since, but she's also published articles in the New York Times, Boston Globe, Hartford Courant, Organic Gardening, and Horticulture. In 1989 and again in 1995, she relocated to Beijing to edit Women of China magazine. During her stints overseas, she also covered major events such as the Tiananmen Square riots and the United Nations Women's Conference for the Greenfield Recorder.

In 2011, Leuchtman published her first book, *Roses at the End of the Road* (Fiftyshift.com Publishing). "If you write

a column for long enough, people will start saying you must collect this into a book," says Leuchtman of the book, which also features whimsical illustrations by her husband, Henry. In conjunction with the book, Leuchtman started a blog called Common Weeder (www.commonweeder.com), where she re-

garden. "The bridge is a really wonderful example of a mixed garden—it has roses, vines, perennials, annuals, and even a couple of trees," says Leuchtman. "It's become an icon for this whole region of Massachusetts."

For all of these endeavors, Leuchtman draws inspiration from her AHS member-



The Shelburne Area Women's Club, of which Leuchtman is a member, replaced trolley tracks with a variety of plants to create this remarkable bridge garden.

views gardening books, posts photos of her roses and backyard wildlife, and dishes about her gardening projects.

COMMUNITY BEAUTIFICATION

Leuchtman is also involved in several community beautification projects, but the Bridge of Flowers—a garden on an old trolley bridge in nearby Shelburne Falls, Massachusetts—has been one of the most rewarding. "Trolleys used to connect all of the towns around here," says Leuchtman. "Then at the turn of the century, the railroad came, and the bridge in Shelburne Falls was left to the weeds." In 1929, the town women's club took over maintenance, with the intent to create a garden.

Today, Leuchtman is among the volunteers who maintain the unique bridge ship. "It's a wonderful source of information for me as a gardener and as a garden writer," she says. It is also important to her to support organizations that promote both "the pleasures of gardening, and the pleasures of teaching others about plants and healthy environments," two central ideals of her own work.

This spring, Leuchtman will be adding yet another role: judge for the Massachusetts Horticultural Society's BLOOMS! flower show. Meanwhile, she'll continue to write her column, blog about her gardening adventures, welcome visitors to her garden, and stop and smell the roses once in a while, too.

Helen Thompson is an editorial assistant for The American Gardener.

AHS NEWS SPECIAL

AHS 2012 Great American Gardeners National Award Winners

THE AMERICAN HORTI-CULTURAL SOCIETY is proud to announce the distinguished recipients of the Society's 2012 Great American Gardeners Awards. Individuals, organizations, and businesses who receive these national awards represent the best in American gardening. Each has contributed significantly to fields such as plant research, garden communication, landscape design, youth gardening, teaching, and floral design. We applaud their passionate commitment to American gardening and their outstanding achievements within their areas of expertise.

The 2012 awards will be presented on the evening of June 7 during the Great American Gardeners Awards Ceremony and Banquet at River Farm, the AHS's headquarters in Alexandria, Virginia. For more information, or to register to attend the ceremony, visit www.ahs.org/awards or call (703) 768-5700.

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.



EADILY RECOGNIZED by his trademark

Rwide-brimmed hat, Allan M. Armitage has made substantial contributions to all eight fields recognized by this award over the course of his three-decade career, influencing academia, the horticultural industry, and home gardening in lasting and

meaningful ways.



As a University of Georgia (UGA) horticulture professor, Armitage has taught and mentored countless students, many of whom have gone on to become accomplished horticulturists. His teaching abilities alone have earned him numerous awards, including the AHS Teaching Award in 1994. He is also a sought-after speaker outside the classroom, imparting his infectious enthusiasm for plants to audiences all over the world.

At UGA, Armitage also helped establish a trial garden for new plant varieties in 1982. Today, this garden is not

only a destination for growers and plant lovers, it also provides valuable performance data for hundreds of new varieties. Each year, Armitage spotlights the most outstanding heat- and humidity-tolerant plants through the Athens Select program. He is credited with introducing several new plant varieties discovered through the trial gardens.

The 13 books Armitage has written to date are a testament to the diverse plant palette his passion and knowledge encompass, including annuals, herbaceous perennials, cut flowers, natives, woody plants, vines, and greenhouse crops. Armitage's titles have become trusted resources for professional horticulturists and home gardeners alike. Additionally, he has written hundreds of articles for horticulture journals, gardening magazines, and trade publications. His photo library of thousands of plants serves as a source for websites, plant labels, and publications.

Armitage's work in the field of commercial cut flower production inspired the formation of the Association of Specialty Cut Flower Growers, a professional organization that now consists of more than 800 members, and his work in bedding plant production has resulted in many advancements in floriculture. He also has held leadership roles in various horticultural organizations, including serving on the AHS Board of Directors for several years.

Among Armitage's many awards are the Medal of Honor from the Garden Club of America; the Award of Excellence given by the National Garden Clubs, Inc.; and the Award of Merit from the Perennial Plant Association. In 2007, he was the recipient of the Scott Medal and Award given by the Scott Foundation in Swarthmore, Pennsylvania.

DR. H. MARC CATHEY AWARD

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

Frank A. Blazich is alumni distinguished graduate professor of horticultural science



at North Carolina State University in Raleigh, where he has taught plant propagation for more than 30 years. After receiving his bachelor's and master's degrees in plant and soil science

from the University of Vermont, he earned his doctorate in horticulture from Pennsylvania State University. His research on herbaceous and woody landscape plants has benefited the nursery, Christmas tree, and forestry industries. Since 1985, he has served as a member of the editorial board of the *Journal of Environmental Horticulture*. He was named a Fellow of the American Society for Horticultural Science, the organization's highest honor, in 1998.

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.

J. Frank Schmidt III is president and CEO of J. Frank Schmidt & Son Co., one of the country's largest wholesale tree and shrub nurseries in Boring, Oregon.



Building on the family business's legacy of innovation, he has contributed numerous improvements to nursery production techniques and positioned the company as a leader in developing, evaluating, and introducing superior new cultivars of ornamental trees. The most recent of the six introductions he is personally credited with to date are Metro Gold® hedge maple (Acer campestre 'Panacek') and Pacific Purple® vine maple (Acer circinatum 'JFS-Purple'). He is a past president of the Wholesale Nursery Growers of America and has served on the board of directors for the American Nursery & Landscape Association.

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.

Richard W. Shaw has been a principal and partner with Design Workshop in



Aspen, Colorado for more than 35 years. Shaw has devoted his career to tourism development, resort design, transportation planning, residential design, and developing communities

throughout the world. His designs incorporate a deep respect for the regional setting and rely on native plants to enhance the sustainability of the constructed landscape. A Fellow of the American Society of Landscape Architects, he has received numerous awards, including the Award of Excellence from the Urban Land Institute and the Design Medal from the American Society of Landscape Architects recognizing his lifetime contributions to designed landscapes.

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.



Don E. Riddle, Jr. served on the AHS Board of Directors from 2003 until his death in 2011. As the founder and owner of Homestead Gardens, one of the nation's premier independent

garden centers with locations in Davidsonville and Severna Park, Maryland, Riddle was an enthusiastic proponent of the Society's River Farm headquarters, having generously supplied thousands of Homestead plants for the AHS gardens over the years. An energetic supporter of horticulture's role in community beautification, he was instrumental in forging connections between the AHS and the horticultural industry as well as beautification organizations such as America in Bloom.

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.

As curator of plants at Longwood Gardens in Kennett Square, Pennsylvania, as



well as an adjunct professor of horticulture at the University of Delaware in Newark, **Tomasz Anisko** communicates his horticultural knowledge and passion through his teach-

ing, writing, speaking, and media appearances. Aniśko is the author of two books, *Plant Exploration for Longwood Gardens* (Timber Press, 2006) and *When Perennials Bloom: An Almanac for Planning and Planting* (Timber Press, 2008); his third book will be published this year. In addition, he has written more than 100 articles for both professional and home gardening publications. He also has lectured to audiences worldwide and made numerous radio and television appearances.

Nominations for 2013

Help us give recognition to deserving "horticultural heroes" by nominating someone you know for one of the 2013 Great American Gardeners Awards. To do so, visit www.ahs.org and click on "Awards" for more information, including a list of recipients from past years.

FRANCES JONES POETKER AWARD

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

Laura Dowling has served as chief floral designer at the White House in



Washington, D.C., since 2009. In this role, she manages décor and flowers for a broad range of official White House functions as well as creating arrangements displayed in various

areas of the White House. Her signature style balances the formality of a garden with the exuberance of nature. For the past 12 years, she has studied French floral art under the direction of leading Parisian designers, refining her strong artistic vision that integrates both classical and modern elements. Her trend-setting floral designs have been featured in numerous publications and television broadcasts.

PROFESSIONAL AWARD

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

Shane Smith is the director and founder of Wyoming's only public botanic garden,



the Cheyenne Botanic Gardens, which he founded in 1986 with the aim of educating visitors about horticulture, community gardening, solar energy, and sustainability. The award-winning,

nine-acre garden serves as a successful model for a "socially-oriented, community-based" enterprise in which 90 percent of labor needs are fulfilled by volunteers. Smith is the author of three books about greenhouse production and has been a frequent contributor of gardening information for newspapers, radio, and television. Most recently, Smith has been spearheading the development of a newly acquired, 62-acre property into the High Plains Arboretum in Cheyenne.

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.

For nearly a century, the **Brooklyn Botanic Garden's Children's Garden** in



New York has educated children through direct, handson experience with soil, sun, crops, flowers, and the seasons of the

garden. The Children's Garden, one of the nation's first, encourages children to work in pairs to plant and harvest their own vegetables, herbs, and flowers, and to learn through crafts, play, and side-byside work in the garden. Offering classes in botany, science, ecology, sustainability, and urban gardening, the Children's Garden instructs more than 800 program participants each year. It received the American Public Garden Association's Award for Program Excellence in 1989.

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.

A horticulture instructor for more than 25 years at the Metropolitan Communi-



ty College (MCC) in Omaha, Nebraska, **Addie Kinghorn** has taught and mentored countless students. Her ability to not only impart her own deep knowledge of her subject, but to

also ignite a lifelong passion for horticulture in her students has earned her numerous awards and honors from regional and national organizations. Kinghorn also has developed coursework for and lectured at several other midwestern educational institutions and organizations. She is the editor of *Nature's Companion*, a

quarterly horticultural publication that is distributed at horticultural businesses, and has served as a Midwest contributor for *Fine Gardening*.

URBAN BEAUTIFICATION AWARD

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

Established in 1972 to maintain the Smithsonian museum grounds in Washington, D.C., **Smithsonian Gardens** (SG) extends the museum experience in a public garden setting, inspiring visitors



Smithsonian Gardens

with innovative displays and teaching them about plants, horticulture, the natural environment, and artistic design. Overall, the SG staff manage 180 acres of gardens on the National Mall, 64,000 square feet of greenhouse production space, and the Archives of American Gardens, a largely photographic archive covering American landscape history from 1870 to the present. SG sponsors the Enid A. Haupt Fellowship in Horticulture, which aims to advance the knowledge and understanding of the varied roles and broad significance of horticulture in the United States.



The courtyard at the Freer Gallery of Art in Washington, D.C., is among the public spaces managed by Smithsonian Gardens.

2012 AHS Book Award Winners

Each year, the American Horticultural Society recognizes outstanding gardening books published in North America with its annual Book Award. Nominated books are judged by the AHS Book Award Committee on qualities such as writing style, authority, accuracy, and physical quality. This year's five recipients, selected from books published in 2011, are listed below.

The 2012 Book Award Committee was chaired by **Susan Appleget Hurst**, a garden communicator in Winterset, Iowa. Other committee members were **Fiona Gilsenan**, freelance garden writer and book editor based in the Pacific Northwest; **Brandy Kuhl**, head librarian at the Helen Crocker Russell Library of Horticulture in San Francisco, California; **Kathy LaLiberte**, Vermont-based marketing consultant and garden writer previously with Gardener's Supply; **Rand B. Lee**, a freelance writer and editor specializing in Southwest gardening, plant history, and cottage garden design; **W. Gary Smith**, an award-winning garden designer and author in Toronto, Canada; and **Greg Williams**, producer of *HortIdeas* newsletter in Gravel Switch, Kentucky.

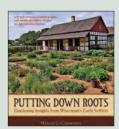
The Holistic Orchard by Michael Phillips. Chelsea Green Publishing, White River Junction, Vermont.



This richly illustrated, comprehensive guide is "like spending a weekend with the guru of organic orcharding. He helps his readers truly understand fruit trees and berry bushes by putting them in context as part of the larger ecosystem," notes Kathy LaLiberte. "No other author covers the subject so completely, understands it so well, and still manages to

make it accessible," says Susan Appleget Hurst. "This book offers a fresh perspective on growing food in harmony with the natural world," says W. Gary Smith, adding that "the depth and breadth of information is huge but not a bit intimidating."

Putting Down Roots by Marcia C. Carmichael. Wisconsin Historical Society Press, Madison, Wisconsin.

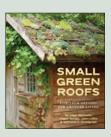


"Not only does this book provide an outstanding template for what other regionally oriented, historical gardening books should aspire to," remarks Rand Lee, "but it also has immense emotional, intellectual, practical, and gustatory appeal for a wide audience." Greg Williams says "it is both fun to

read and authoritative, with interesting illustrations, terrific recipes, and informative notes." Hurst agrees, calling it a "fascinating window into the courage, resourcefulness, and adaptability of our immigrant past."

Small Green Roofs by Nigel Dunnett, Dusty Gedge, John Little, & Edmund C. Snodgrass. Timber Press, Portland, Oregon.

Written by world-class experts on green roofs, "this book is a real trailblazer because it is the only in-depth guide to do-it-yourself green roofs, with plenty of case studies to build confidence and provide ideas for homeowners," says Williams. One



factor that makes the book feel so accessible is its "consistent, simple, easy-to-follow layout," notes LaLiberte, who also appreciates the book's "balance of functional how-to with inspirational ideas and solid horticultural information." Fiona Gilsenen was impressed with the authors' "approach, ethos and emphasis on using

green roofs to encourage biodiversity, plus making it doable in a wide range of places."

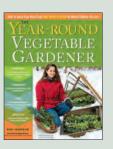
Writing the Garden by Elizabeth Barlow Rogers. David R. Godine, Boston, Massachusetts.



Sampling from the last two centuries of Western garden writing, this "delicious historical survey of writing gardeners and garden writers is rich with anecdote, writing excerpts, and illustrations," says Lee. Smith appreciates the "unique voice and engaging perspective" the author provides as she weaves together her analysis with excerpts

from each featured writer, both famous and unknown. The resulting scholarly work is "so well done, interesting, and readable that I couldn't put it down," says Brandy Kuhl.

The Year-Round Vegetable Gardener by Niki Jabbour. Storey Publishing, North Adams, Massachusetts.



Among the many books on growing edibles flooding the market lately, this book stood out in all ways. The author's "infectious enthusiasm fills every page," notes LaLiberte, who also found the "fun, colorful layout" irresistible. Gilsenan agrees, saying "the design deserves special commendation because it is so user-friendly yet so packed with

information." Hurst sums up: "It's so much information, so clearly presented, and so very inspiring!"

Purple-Leaved Perennials

pack a punch

BY GRAHAM RICE
PHOTOGRAPHS BY JUDYWHITE

If you're looking for a quick way to add drama to a pedestrian landscape, including a variety of plants with dark foliage will do the trick.

Purple IS NOT the first color we associate with foliage, so when we see it in the garden, it always makes an impression. Alone and in company with other plants, purple foliage lends a silky sumptuousness, enticing depth, and rich opulence to beds and borders in all styles of landscapes.

First, it must be noted that few perennials—and in this I am including tender perennials generally grown as annuals have foliage that is as genuinely purple as that of flowers. In the context of leaves, "purple" is a rather loose term used to describe a huge range of colors from the smoky brown of Crocosmia 'Solfatare' to the pure black of *Ophiopogon planiscapus* 'Nigrescens'. Deciding where to draw the line between bronze, burgundy, crimson, and purple is subjective. But why be too particular? The perennials and annuals that feature purple and close-to-purple foliage are invaluable for adding flair to planting combinations. Some are so bold yet elegant in their habit and exquisite in their coloring that they can stand as specimens in their own right, while many others are smaller and better integrated with other plants to make intriguing, seasonspanning displays.

PURPLE-LEAVED SPECIMEN PLANTS

For sheer sparkle, the aptly named Lysimachia ciliata 'Firecracker' (USDA

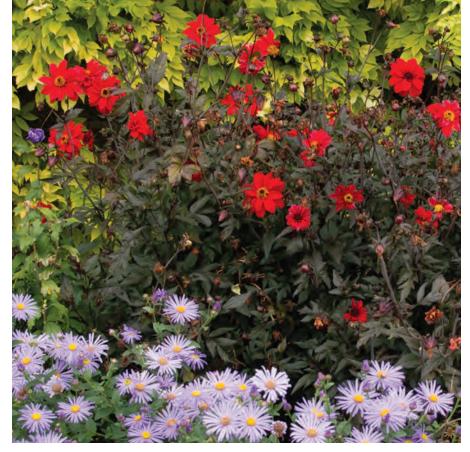


The purple leaves of 'Firecracker', a cultivar of loosestrife (*Lysimachia ciliata*), are attractive on their own and as a backdrop for the plant's yellow flowers in summer.

Zones 5–8, AHS Zones 9–3) stands head and shoulders above the rest in this taller group. The foliage is a deep and solid purple from the moment the new shoots peep through in spring. In summer, five-petaled, yellow flowers open dramatically against the dusky foliage—like big sunny buttercups. Growing two to four feet tall, this American native is a gentle spreader in the heavy soil of my Penn-

sylvania garden, but it has a reputation for being more aggressive under other conditions, so it may be prudent to grow it in a container.

The much lauded cultivar of white snakeroot (*Eupatorium rugosum*, Zones 4–8, 8–2) called 'Chocolate' is a three- to five-foot-tall plant that produces somewhat muddy white flowers that I do not find very attractive. To allow the toothed





Above, left: Dark-leaved and red-flowered 'Bishop of Llandaff' dahlia pairs well in this bed with the softer colors of *Aster* × *frikartii*. Above, right: In this purple-themed garden, 'King Humbert' canna rises from a bed of beefsteak plant (*Perilla frutescens*) and cleome.

purple foliage to shine, I cut the plant back by half as the flower buds start to form to allow a new flush of leaf growth.

A mature specimen of 'Black Negligee' bugbane (Actaea simplex, Zones 4–8, 8–1), with its bold, dark, finely divided foliage is a picture in itself even before its purpletinted creamy plumes of fragrant flowers appear in early fall. Its upright habit—to about four feet tall—and the pattern of its dark foliage stands out when it is set against a background of silvery shrubs. Other purple-leaved bugbane cultivars of merit include 'Brunette', which grows to about three feet tall (Zones 4–8, 8–1), and the newer 'James Compton', which grows to three-and-a-half feet tall and has lighter bronze-purple foliage (Zones 3–9, 8–1). These named cultivars must be vegetatively propagated to retain their purple coloring. Beware the more widely available purple-leaved bugbanes labeled 'Atropurpurea' or Atropurpurea Group: These are raised from seed, and their coloring varies, some even becoming green.

Growing three to four feet tall and four to five feet wide, *Persicaria microcephala* 'Red Dragon' (Zones 5–8, 8–1) makes a bold feature for borders and large containers with its chevron-patterned, purple,

green, and gray foliage. It is also a great intermingler that works well with white-flowering fall anemones. Plants develop the best color in cooler areas.

Even more imposing are cannas (*Canna* spp., Zones 7–11, 12–1), which are usually treated as annuals in cooler parts of the country but are perennial where winters are mild. 'King Humbert' (sometimes listed as 'Roi Humbert'), with orange flowers and deep purplishbronze leaves, is an old favorite. It works well in a bed underplanted with the more vividly purple beefsteak plant (*Perilla frutescens*) and accented with bright

Sources

Glasshouse Works, Stewart, OH. (800) 837-2142. www.glasshouseworks.com.
Heronswood Nursery, Warminster, PA. (866) 578-7948. www.heronswood.com.
Kartuz Greenhouses, Vista, CA. (760) 941-3613. www.kartuz.com.
Plant Delights Nursery, Raleigh, NC. (919) 772-4794. www.plantdelights.com.

sparks provided by the lighter purple flowers of *Cleome hassleriana* 'Violet Queen'. The more recent 'Australia' ('Feuerzauber') is an even more spectacular canna. Its foliage is a rich, dark and sultry color, with a sleek shimmer to the surface—and it lasts right through the summer without fading to green. Above the five-foot-long foliage the big, bright scarlet flowers fire up the garden.

Dark-leaved cultivars of dahlias (Dahlia spp., Zones 9-11, 9-3) have recently enjoyed a revival. Among the best is venerable 'Bishop of Llandaff', which received the Royal Horticultural Society's Award of Garden Merit in 1928. Plants grow two to four feet tall with toothed, deep mahogany foliage that sets off vivid red, semi-double summer blooms. It stands out brightly next to the soft purple flowers of Aster ×frikartii. It's also superb with Crocosmia 'Lucifer' and with Lobelia 'Dark Crusader', all in front of yellow foliage or purpleleaved smoke bush (Cotinus coggygria) such as 'Royal Purple'. As with cannas, dahlias are often grown as annuals but are reliable perennials in warmer zones.

Fast-growing castor oil or castor bean plant (*Ricinus communis*) 'Carmencita' is large, reaching six to 10 feet tall, and has

brown-purple leaves. 'Impala' (brown-purple) and 'New Zealand Purple' (maroon-purple) are smaller, growing three to five feet tall. Their palmate leaves add a tropical feel to gardens. They are perennial in USDA Zones 9 to 11 and superb seed-raised annuals in cooler regions that have hot summers. Because these plants bear beautiful but deadly poisonous seeds, they are not for gardens with young children.

Several hardy hibiscuses (*Hibiscus* spp., Zones 4–9, 9–1) are available that not only feature dark leaves but large, striking summer flowers. 'Kopper King' grows three to four feet tall and has bronze foliage and 12-inch, white to pinkish flowers with a red eye; 'Midnight Marvel' has darker leaves than 'Kopper King', grows about four feet tall, and bears bright red, eight- to nineinch flowers; and 'Summer Storm' grows four to five feet tall and has wine-purple foliage and eight- to 10-inch pink flowers with a dark pink eye.

With huge, arrow-shaped leaves, elephant ears (*Colocasia* spp., Zones 9–11, 12–3) can't be missed in a garden. This tropical perennial grows from tubers and must be brought indoors in winter in cold regions. 'Black Magic', one of the early dark-leaved introductions, has mid-sized leaves about two feet long. 'Diamond Head' is a more recent introduction with slightly ruffled, one-and-a-half-foot long, glossy, brown-purple leaves.

PURPLE LEAVES FOR BEDS AND BORDERS

Coming down in scale, smaller plants are better used to form a tapestry of colors and shapes at the front of the border and also in smaller containers. First in line here must be cultivars of coral bells or heuchera (Heuchera spp.). In fact, heuchera selections like 'Plum Pudding' (Zones 4-8, 8-1) work both as mini-specimens to mark a corner floating above a carpet of yellow-leaved Lysimachia nummularia 'Aurea' or as partners in pretty plant associations with brunneras, like the brightly contrasting silver-leaved Brunnera macrophylla 'Jack Frost'. The foliage of the old favorites 'Palace Purple' and 'Chocolate Ruffles' are more or less bronze, but recently some new closer-topurple-leaved heucheras have arrived, including 'Frosted Violet', 'Plum Royale', and 'Shanghai' for the cooler north and 'Beaujolais', 'Magnum', and 'Midnight



The richly patterned silver-and-green leaves of *Brunnera macrophylla* 'Jack Frost' provide a refreshing contrast with the vivid red-purple leaves of 'Plum Pudding' heuchera.

Bayou' for the hot and humid south.

Many good new varieties of dark-leaved sedums (*Hylotelephium* spp., formerly *Sedum* spp.) are now available, including the stellar 'Purple Emperor' (Zones 3–9, 9–1), which only grows about 15 inches tall. Its purple stems and foliage make striking upright clumps in the run up to autumn's pinkish flowers. Other burgundy to purple-foliaged sedums are 'Xenox' and 'Plum Perfection'.

Coleus (Solenostemon spp., Zones 9–II, 12–I), are superb annual foliage plants and feature purples aplenty. 'Chocolate Mint' has broad purple leaves edged in lime that are lovely with white petunias. It grows 12 to 20 inches tall and has an upright habit. Others in various shades and combinations of brownish red to chocolate-purple include 'Merlot' (12 to 14 inches tall), 'Black Dragon' (12 to 18 inches tall), and 'Dark Star' (12 to 24 inches tall).

GROWING PURPLE IN WARM REGIONS

Gardeners in the warmer zones, generally from USDA Zones 9 to 11, can grow many of the purple-leaved plants in the article, including elephant ears (Colocasia spp.), cannas, Echeveria 'Afterglow', castor bean plant (Ricinis communis), and coleus (Solenostemon spp.) with the added advantage of being able to leave them outdoors year round. Here are more plants that are well suited to these regions.

Acalypha wilkesiana cultivars (copperleaf, Joseph's coat, Zones 9–11, 11–9). An evergreen shrub that can grow to 10 feet tall; copper color of foliage is best in full sun. 'Ceylon' has red-copper leaves with pink edges. 'Haleakala' has bronze-maroon leaves. 'Raggedy Ann' from Australia has narrow maroon leaves with finely cut edges.

Dyckia 'Burgundy Ice' (Zones 9–11, 11–8). This hybrid bromeliad has rosettes of narrow red-purple leaves edged with white spines. It grows just six inches tall by 12 inches wide and is drought tolerant.

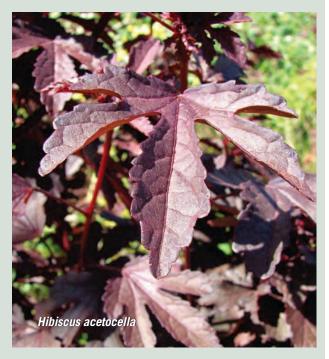
Hibiscus acetocella (Zones 8-11, 11-8). Unlike many hibiscus, this is a species of subshrub or woody perennial that is grown not for its flowers—which are red and bloom infrequently—but for its burgundy foliage that resembles that of maple. North of Zone 9, it is grown as an annual. 'Maple Sugar' is a cultivar that grows to five feet tall. 'Panama Red', from the University of Georgia's Athens Select program, is bred to retain the deep burgundy-red of its foliage even in summer heat and humidity. Plants grow about four feet tall.

Opuntia santa-rita (Santa Rita prickly pear, Zones 8-11, 12-7). This cactus is a color-changer: New pads are purplish, maturing to green, then turn purple again in fall. It grows three to five feet tall and produces yellow spring flowers.

Perilla frutescens var. crispa and P. frutescens 'Magellanica' (beefsteak plant or shiso, Zones 0-0, 12-1). A member of the mint family, beefsteak plant needs bright sun for the best leaf color. Beefsteak plant has purple-bronze, deeply toothed leaves and grows under three feet tall. The cultivar 'Magellanica' has brown-and-green coleuslike leaves splashed in the center with reddish-purple and grows 18 inches tall. To maintain a vigorous leaf display, and reduce its tendency to selfsow, remove flowers as soon as they form.

Strobilanthes dyerianus (Persian shield, Zones 9-11, 11-9). Brilliant red-purple leaves with dark green veining have an attractive silvery sheen. It grows to three feet tall, tolerates heat (but not drought), and is good for containers and in shade, where its colors are brightest.

⊸G.R.





Plants with dense but penetrable tangles of billowing growth are always valuable because bolder companions can be planted to surge up through them. The foliage of *Clematis recta* 'Purpurea' (Zones 4-11, 9-1) makes a tall—to six feet—thundercloud topped, in late summer, with a fluffier cumulus of starry, white, fragrant flowers; it needs a substantial companion—silver-leaved globe artichokes, perhaps.

Another plant known for its airy form is the four- to five-foot-tall purple fennel (Foeniculum vulgare 'Purpureum', Zones 4-9, 9-1). Clouds of smoky purple threads form a mound in early spring among which yellow, white, or black tulips such as 'Queen of the Night' make striking combinations. Purple fennel also works well with sultry purple irises and deep red peonies, both of which feature stronger versions of the tones in the fennel foliage. Chop the fennel back after flowering-or even before-to keep it compact and prevent the garden being smothered by seedlings.

PURPLE-LEAVED GROUNDCOVERS

There are a number of worthy darkleaved groundcover plants. 'Dark Reiter' is a superb cranesbill (Geranium pratense) that looks most purple in its new growth. It is delightful early in the season part-

nered with yellow-flowered Anemone ranunculoides and later with the white-variegated fountains of Molinia caerulea 'Variegata'. For a well-drained situation, 'Dusky Rose', with its lobed, mainly purplish-red foliage, makes an appealing contrast to the slender silver leaves of Artemisia schmidtiana 'Nana'.

Trifolium repens 'Purpurascens Quadrifolium' (Zones 4–8, 8–1), a winepurple, four-leaved clover with green margins, makes a ground-hugging partner for neat grasses like blue fescues or with variegated sweet flags (Acorus spp.) or sedges (Carex spp.). 'Burgundy' and 'Zinfandel' are cultivars of wood sorrel (Oxalis vulcanicola, Zones 9-11, 10-8), with starry yellow flowers sparkling against its purple cloverlike leaves.

Dark forms of ornamental sweet potato vine (Ipomoea batatas, Zones 10–11, и–и) are popular for groundcovers and as trailers in container plantings. The leaves range from the deep black-purple of 'Blackie' to the violet-burgundy of 'Black Heart' and can be gently or deeply lobed, depending on the cultivar. These are tender plants that are usually grown as annuals in temperate regions but are perennial in Zones 10 and above.



The fine foliage of purple fennel forms a mist in this bed of red peonies and deep purple irises.

Hens-and-chicks or houseleeks (Sempervivum spp., Zones 4–10, 10–3) are evergreen succulents with the twin benefits of being hardy and unusually drought tolerant. The cultivar 'Jungle Shadows' has especially appealing rosettes of purple

foliage. Like all hens-and-chicks, it spreads slowly, so interplanting it with a fast-growing groundcover such as yellow variegated Lysimachia congestiflora 'Outback Sunset' fills the space attractively in new beds.

Other purple succulents include Aeonium arboreum 'Schwarzkopf' (Zones 9-11, 12-8), with its shining flat rosettes atop woody stems. It can be grown in containers and protected in a sheltered location where winters are cold. The low smoky rosettes of Echeveria 'Afterglow' (Zones 9-11, 12-8), with their blue tints, stand out boldly against gravel on well-drained soil or in a gravel-topped container with California poppies (Eschscholtzia spp.).

PURPLE BY ANY OTHER NAME

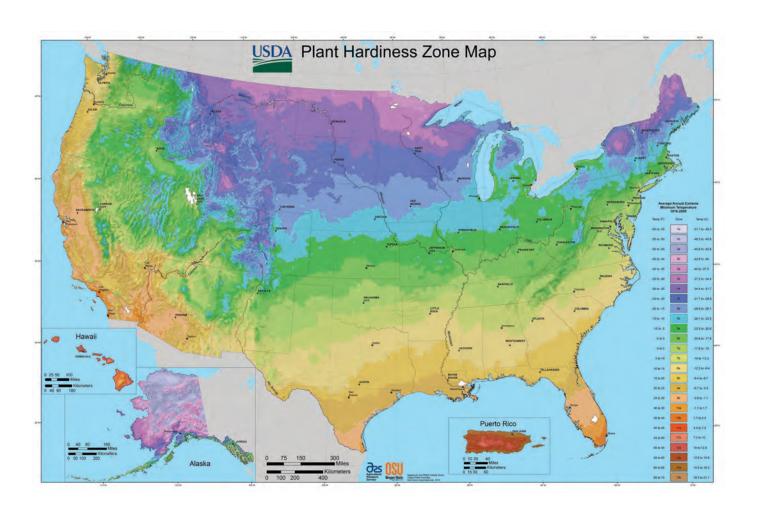
So...are the leaves of all the plants I've described truly purple? Well, some are a little more bronze, some a little more ruby, and a few-such as some of those new heucheras—come close to being the real thing. One thing is certain: They are not green. And because of this, including any of them in your borders and containers will bring a special richness to your garden. ~

Graham Rice is the author of Planting the Dry Shade Garden (Timber Press, 2011). This is a revised and updated version of an article that previously appeared in The Gardener magazine.



Slow-growing 'Jungle Shadows' hens-and-chicks and quick-growing, yellow-flowered Lysimachia congestiflora pair up to make an attractive multi-textured groundcover.





understanding the new BY HELEN THOMPSON USDA Hardiness Zone Map

Almost 10 years in the making, the latest edition of the USDA Plant Hardiness Zone Map is unveiled.

AKE IT FROM any ground-hog—predicting the weather can be a tricky business, especially when plant survival is on the line. That's why the United States Department of Agriculture (USDA) first developed its Plant Hardiness Zone Map 52 years ago, to help gardeners and growers determine a particular plant's survival odds in their region. But until recently, gardeners had been relying on the 1990 version of the map, widely considered outdated.

Thanks to a nearly 10-year, half-a-million-dollar effort by the USDA, a new version of the map released in January

aims to bring hardiness zones into the 21st century. "The increases in accuracy and detail that this map represents will be extremely useful for gardeners and researchers," says Catherine Woteki, USDA Under-Secretary for Research, Education, and Economics.

Developed by Oregon State University's (OSU) PRISM Climate Group along with the USDA's Agricultural Research Service, the new map is a little less Rand McNally and a little more Google Maps in that it is designed for interactive internet use. And compared to the earlier map, most of the United States now ap-

pears at least half a zone warmer. There are also two new zones at the warmer end of the spectrum.

BELLS AND WHISTLES

The map divides the United States and its territories into thirteen 10-degree zones based on average extreme minimum temperature—basically estimating the coldest temperature of the year averaged out over time. Each zone is divided into five degree increments "A" and "B." These averages are extrapolated from 30 years of data collected from winters of 1976 through 2005 recorded at nearly 8,000 weather stations

across the country and along the borders in Mexico and Canada. New Zones 12 (50 to 60 degrees Fahrenheit) and 13 (60 to 70 F) appear for the most part in tropical regions such as Hawaii and Puerto Rico.

The new map boasts some helpful features, including a zip-code-finder that makes figuring out your zone easy, and the ability to zoom in and out on the interactive version. The map's scale is unprecedented: each pixel equates to a square half mile. Along with the interactive version, there are national, state, and regional static versions available at www.planthardiness.ars.usda.gov.

"While most gardeners have changed zones, if you see a zone change it may be a 5 to 10 degree change in temperature, or it can be as little as half a degree," observes USDA spokeswoman Kim Kaplan. This small difference reflects the warming trend that most gardeners have already noticed in their backyards. For instance, garden writer Marty Wingate wasn't terribly surprised when the new map placed her previously Zone 8A garden "ever so slightly into 8B," where she says her region has been for several years now.

Wingate's sentiments are echoed on the East Coast. "The map reinforces things that we already know as gardeners," says Tony Aiello, curator and director of horticulture at the University of Pennsylvania's Morris Arboretum and a member of the map's technical review team. For example, "20 years ago, we couldn't grow southern magnolias, Camellia japonica, and crape myrtle in Philadelphia," says Aiello. "Today, they don't grow perfectly in our region, but we can grow them pretty successfully."

THE ART AND SCIENCE OF MAP MAKING

This latest incarnation of the USDA map has faced its share of hiccups. In 2002, the USDA contracted the American Horticultural Society (AHS) to oversee an update of the 1990 map. The late Dr. H. Marc Cathey, who at the time was the AHS's president emeritus, coordinated the project with meteorologist Mark Kramer, whose Amityville, New York, firm constructed the 1990 version of the map. But the USDA rejected a draft version of the map produced in 2003, citing the need for an interactive, web-friendly format.

Going back to the drawing board, in



Once considered too tender to grow in Pennsylvania, a Japanese camellia (Camellia japonica) thrives in this sheltered location at the Morris Arboretum in Philadelphia.

2004 the USDA convened a 23-member review committee made up of nursery owners, crop researchers, foresters, climatologists, and other experts to figure out the best method of updating the map. Finally, in 2007, the USDA turned to climatologist Chris Daly and his OSU colleagues to use their PRISM (short for Parameter-Elevation Regressions on Independent Slopes Model) computer system to create a new map. It combines several mathematical algorithms designed to take into account topographical factors that influence weather, such as elevation, slope, and proximity to large bodies of water. "It mimics the process that an expert climatologist would use if they were to draw it by hand," says Daly. "As the system analyzes the data, there are lots of decision points—a lot of ifs, elses, wherefores, and maybes—which made the map a real challenge to create."

The result is a map with highly detailed zone borders. The computer program is very sensitive to microclimates—such as a

heat island created by the concrete and asphalt environment of a city or a cool pocket in the lowest point of a mountain valley—because it was designed to take elevation into account. In some areas, one pixel sticks out as a half zone warmer or colder than its surroundings.

Once PRISM had created a draft, experts around the country scrutinized their respective regions, pointing out spots that looked too cold or warm, or a bit funky, and the OSU team went back to double check for biases in the local data. Daly recalls an example in which experts expected to see a zone decrease in the area where the midwestern Plains states border Canada, but American weather stations were few and far between. Assimilating data from Canadian stations in that region helped produce more accurate zoning in the final product.

CLIMATE OR WEATHER?

From the very first hardiness zone map by Arnold Arboretum taxonomist Alfred Rehder in 1927 to the USDA's first official map in 1960, a variety of American horticultural organizations have produced hardiness maps, often using completely different zoning systems (for a map timeline, click on the web special linked to this article on the AHS website). The goal of these various maps was to render temperature data into a useful tool for farmers, gardeners, and others, and each iteration over the years tracked changing weather patterns. The USDA's new map reflects such changes, but given today's politically charged climate change debate, it is also receiving scrutiny for what it reveals about this issue.

There's no argument that the map shows a distinct warming trend, especially in the Northeast, but Kaplan is quick to put a little distance between the map and the climate change controversy. Kaplan says that warmer temperatures depicted in the map could be attributed to three reasons: the map's scale shows a higher degree of detail; the algorithm that PRISM used allows for more accurate interpolation between weather stations; and finally, as part of a natural cycle or due to human influence, the earth's climate might actually be changing, as scientists worldwide believe.

Plants experience the short

term temperature changes of weather, not long term shifts in climate, and climatologists typically use 50 to 100 years of data to measure climate, compared to 15 to 30 years of data to measure weather. "The map simply isn't the right tool to use to measure climate change," says Kaplan.

Another hotly debated topic has been the decision to base the map on 30 years of data rather than the 13 to 20 years used with previous maps. "The period needed to be long enough to include all of the peaks and troughs of temperature fluctuation to get the whole picture," explains Daly. "We wanted a feel for what's happening and what might happen." But, some experts feel that the longer period reduces the effects of the more recent warming trend and makes it more difficult to

compare with the colder 1990 map, since the spans overlap and the map doesn't include the most recent six years. "Personally, I would have preferred a 15 year map because we could use it to evaluate how things have changed," says David Wolfe, a plant scientist at Cornell University in Ithaca, New York. "We're in a period of rapid climate change, and in a longer data set, recent temperature peaks carry less weight in the overall picture."

The USDA/OSU team did do a trial with 3,400 weather stations to see if shifting the data set up to span 1981 to 2010 changed the overall picture. The result was warmer, but only by an average 0.6 degrees



At the New York Botanical Garden, plants hardy to warmer areas such as Virginia and North Carolina have fared well in the cooler environment of the Bronx.

F. "Such small changes could not justify the significant additional delays that would have arisen from having to re-create the map," explains Mark Widrlechner, a recently retired USDA research horticulturist who led the map-making project.

ERRING ON THE SIDE OF CAUTION

Hardiness maps have traditionally been viewed as a conservative guide by adventurous horticulturists and gardeners, so it's not surprising some are taking the new map with a grain of salt. For example, Wingate has been successfully growing

plants that are marginally hardy in her now Zone 8B Seattle garden—including several Pittosporum tenuifolium plants, which were supposedly hardy to Zone 9 on the earlier map-for years. And on the East Coast, the New York Botanical Garden (NYBG) in the Bronx has been testing ornamentals hardy to one or two zones warmer than the garden's 7A locale since 2002. Its 260-foot test garden includes Japanese camellias, paperbush, crape myrtles, and red yuccas, among others, and "despite year to year temperature variability, they're doing fine," says Wolfe, who advises the garden on climate change issues.

"It's important to many of us in the

'plant geek' business that as much good information is out there as possible," says Sean Hogan, owner of Cistus Nursery on Sauvie Island outside Portland, Oregon and a member of the map's technical review team. However, he advises gardeners to remember that a plant's survival depends on a lot more than minimum average temperature: light exposure, wind, soil moisture, humidity, nutrient availability, the timing of a cold snap, and many other factors influence whether or a plant will live or die. Hogan points out that Scandinavia, Northern Florida, and many areas along the West Coast would all be in Zone 8, "but they all differ

drastically in frequencies of freezes, length of freezes, and ripening periods."

As a gardener, you have to weigh your options when it comes to growing a plant that is marginally hardy in your region because a single untimely frost could easily kill it. "Use the map judiciously," advises Aiello. "It's always fun to push the limits of what you can grow, but keep in mind there are limits." Whether you play it safe or live on the horticultural wild side, the USDA's new Plant Hardiness Zone Map can be a valuable guide for hedging your bets while negotiating the vagaries of weather. After all, even Punxsutawney Phil only gets it right 39 percent of the time.

Helen Thompson is an editorial assistant with The American Gardener.

Deciduous Magnolias for American Gardens

With exciting new selections and tried-and-true species available, deciduous magnolias offer a versatile array of ornamental options for North American landscapes. BY ANDREW BUNTING

among the most diverse and widely distributed of all flowering trees, valued throughout the world as ornamental plants. In the wild, magnolias can be found in North America, south through Central America, and into northern South America. There are magnolias throughout most Asian countries, with fantastic diversity in China and Thailand. The southern magnolia (Magnolia grandiflora) towers to more than 100 feet tall in its native habitat in the southeastern United States, while several other species are shrublike. Most magnolias in the tropical and subtropical parts of their ranges tend to be evergreen, while most temperate species are deciduous.

Exploration in China, Japan, the Himalayas, and the United States has resulted in the discovery of many outstanding deciduous magnolia species such as the Yulan magnolia (M. denudata), the star magnolia (M. stellata),

Campbell's magnolia (M. campbellii), and Sprenger's magnolia (M. sprengeri), which make wonderful specimens in gardens across the globe.

Given this rich diversity of naturally occurring species, there has been a proliferation of magnolia cultivars over the last 150 years; the choices now represent well over 1,000 selections. Cultivars vary in size and habit, as well as in flowering characteristics such as size, color, fragrance, and flowering season (for a quick comparison



The blossoming of saucer magnolia is a rite of spring in many gardens.

of several of the selections discussed in this article, see chart on page 29).

MAGNIFICENT MAGNOLIAS TO CONSIDER

Saucer magnolia Over the last few decades, the saucer magnolia (M. ×soulangeana, USDA Hardiness Zone 5–9, AHS Heat Zone 9–5) and its cultivars have been perhaps the most readily available deciduous magnolias for American gardeners. French plantsman Etienne Soulange-Bodin crossed Yulan magnolia with lily magnolia (M. liliiflora) in 1820. This hybrid and its resulting progeny gave birth to this quintessential early springflowering tree. I work at the Scott Arboretum of Swarthmore College in Pennsylvania, and nearly every pre-1920 house in Swarthmore has a magnificent cultivar of saucer magnolia gracing the front yard. When the trees burst into bloom in early April, they are covered in a profusion of pink, purple, or white petallike tepals.

In most years they offer a stunning spring display. But because of the precociousness of many magnolia species—some tend to bloom before the last frost-free date for a region—there is always the possibility of a late frost turning flowers black overnight. But the risk is well worth taking; in those years when blooms are unscathed, the floral display is truly awe-inspiring. At maturity, saucer magnolias reach up to 35 feet tall with an equal

spread. These very hardy trees can be cultivated in most parts of the United States. One grew in the front yard of my childhood home in Manhattan, Illinois, where, one winter, temperatures plunged to 37 degrees below zero Fahrenheit-minus 87 degrees if you factor in windchill.

Many of the cultivars have sweetly scented flowers. 'Brozzoni' produces flowers that are 10 inches across; the white tepals have a slight rose-pink blush at the base.

Plant breeders have also used the saucer magnolia as a parent for more complex hybrids. 'Paul Cook' is a favorite of magnoliaphile Richard Figlar, who grows this hybrid at the Magnolian Grove Arboretum in Pickens, South Carolina, a garden devoted to growing and studying magnolia species and cultivars. 'Paul Cook' resulted from crossing a seedling of M. ×soulangeana 'Lennei' with M. sprengeri 'Diva'. It produces dinner-plate size, soft pink to nearly white flowers on an upright, medium-size tree. "When seen in full bloom, this is easily the most impressive deciduous magnolia here at Magnolian Grove Arboretum," says Figlar.

A 1976 cross between M. xsoulangeana 'Lennei' and M. liliiflora 'Darkest Purple' resulted in 'Purple Prince', a selection with large, almost black-purple flowers. A new hybrid, 'Genie', combines M. liliiflora 'Nigra', used in many hybrids to bring deep purple to the flowers, with saucer magnolia. In addition to having striking, deep red flowers, this cultivar is a great choice for the small property or courtyard, since at maturity it has a tight pyramidal habit and only reaches about 10 feet tall. 'Frank's Masterpiece', the result of a cross between 'Deep Purple Dream' and 'Paul Cook', boasts large flowers that are soft pink on the inside and deep purple outside.



The lush purple flowers of Magnolia liliiflora 'Nigra' make it an eye-catching specimen.

Lily magnolia The lily magnolia (M. liliiflora, Zones 4–9, 9–1) is an Asian species that reaches only 12 feet tall at maturity. Although the species has a tendency to develop an awkward, open habit, it has given rise to several notable cultivars.

In Boulder, Colorado, M. liliiflora 'Nigra' is a reliable performer in an area where tumultuous weather is common. The flowers are only five inches across and are deep purple outside with a lighter flush on the inside. Because of its diminutive stature, M. liliiflora 'Nigra' became one of the parents for a famous hybrid group called "The Little Girls" that was developed in 1955 and 1956 at the United States National Arboretum (USNA) in Washington, D.C. The other parent was M. stellata 'Rosea', and the resulting hybrids are shrublike in proportion, reaching up to 12 feet tall with a comparable spread. In all, eight selections were made. 'Ann', with its deep purple flowers, is one of the most popular. In the Philadelphia area, "The Little Girls" rarely have issues with frost damage because they flower several weeks later than the earliest magnolias.

The late August Kehr, a famed magnolia hybridizer with the USDA-Agricultural Research Service, combined lily magnolia with M. cylindrica and then crossed the resulting seedlings with a hybrid named 'Ruby'. The result is 'March Til Frost', which produces purplish pink flowers sporadically from spring to fall. Gary Knox, an Extension specialist and environmental horticulture professor at the University of Florida, reports that 'March Til Frost' flowers "occur in 18 to 34 weeks out of any given year in our magnolia garden in Quincy, Florida, just outside Tallahassee."

Star magnolia Another harbinger of spring is the star magnolia (M. stellata, Zones 4-9, 9-5), a Japanese species that typically grows 10 to 15 feet tall with an equal spread. As with the saucer magno-



A cultivar of star magnolia, 'Centennial' is prized for its spectacular, fragrant flowers.

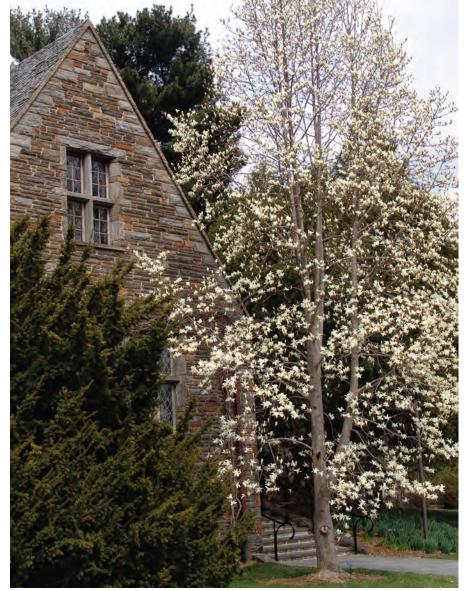
lia, it can be argued that the star magnolia is commonplace in the early spring landscape, but there is good reason for its popularity. The abundance of small tepals gives the flowers a look more akin to a chrysanthemum than a magnolia. And most star magnolias are fragrant. Well regarded cultivars include 'Centennial', which was selected for its ornamental merit by the Pennsylvania Horticultural Society's Gold Medal program in 1997. Each flower can have as many as 40 tepals. Another, 'Rosea', has pink buds that open to white flowers.

Crossing star magnolia with kobus magnolia (M. kobus), another early bloomer that is more treelike in proportion, resulted in the Loebner magnolia (Magnolia ×loebneri, Zones 4–9, 9–5). This interspecific hybrid has a graceful habit and grows 20 to 30 feet tall and wide. All selections are fragrant. 'Leonard Messel' and 'Ballerina' bear pink flowers; 'Merrill' is a fine white-flowered cultivar.

Yulan magnolia In the Philadelphia area, my favorite of the early spring-flowering magnolias is the Yulan magnolia (*M. denudata*, Zones 6–9, 9–6), a tall, widespreading species from China. For us, this tree can reach 40 feet tall and blooms at the end of March. The upward-pointing tepals are fragrant and more cream-colored than pure white. Jamie Blackburn, curator of the Woodland Garden at the Atlanta Botanical Garden in Georgia, notes that the durable flowers "hold up well to possible late spring freezes compared to other magnolias blooming around the same time."

In 1993, the Scott Arboretum received a Yulan magnolia seedling from famed plantsman J. C. Raulston at North Carolina State University in Raleigh. As the tree matured, it took on a distinctly upright form that drew the attention of visiting members of the Magnolia Society International. To recognize its fastigiate habit, we eventually named it 'Swarthmore Sentinel'.

Oyama magnolia For late spring, the Oyama magnolia (*M. sieboldii*, Zones 6–9, 9–7) is a curious species with pendant flowers. Native to China, Korea, and Japan, it grows 10 to 15 feet tall with an equal spread and can be treated as a





Top: The original selection of 'Swarthmore Sentinel', a cultivar of Yulan magnolia, growing at the Scott Arboretum. Above: Oyama magnolia should be given a garden site where its elegant, downward-facing flowers can easily be viewed from below.

small tree or a large shrub. The three- to five-inch-wide flower buds are eggshaped; once open, the ivory-white tepals surround striking pinkish red anthers. "The nodding effect of the flowers is great," says Blackburn, "especially when the plant can be sited above a wall along a walkway or patio, where you can admire the intricate flowers from below."

New Jersey nurseryman Richard Hesselein is a big fan of M. ×wiesneri (Zones 5-9, 9-5), a cross between Oyama magnolia and whiteleaf magnolia (M. obovata), another Japanese native. According to HesFrancisco to Vancouver, British Columbia, are able to grow the dazzling Campbell's magnolia (M. campbellii, Zones 7–9, 9-7) and its hybrids. These tall, widespreading trees produce an abundance of large, open-faced flowers.

'Lanarth' has deep red-purple flowers that measure almost 12 inches across. 'Athene' is a hybrid developed by New Zealand magnolia breeder Felix Jury, who combined Campbell's magnolia with saucer magnolia. The flowers, resembling those of M. campbellii, are white with pink-and-purple undertones.



For gardeners in mild-winter regions, 'Vulcan' offers bright pinkish red flowers on a small tree.

selein, most of its floral characteristics come from Oyama magnolia, including the attractive crimson stamens. But instead of facing downwards, the flowers open skywards and are larger and showier than those of their parent.

MORE ASIAN SPECIES AND HYBRIDS

Magnolia ×kewensis 'Wada's Memory' is similar to star magnolias in floral display, but develops into a large upright tree. Its parents are the kobus magnolia and the anise magnolia (M. salicifolia), a Japanese native that has slender elegant tepals and is very early to flower.

Gardeners on the West Coast from San

Another Jury introduction, 'Vulcan', was derived from crossing M. campbellii 'Lanarth' with M. liliiflora. Reaching 25 to 30 feet tall, this relatively small tree is covered with red-pink flowers in spring.

Like M. campbellii, Sargent's magnolia (M. sargentiana, Zones 7-9, 9-7) is for milder regions of the United States. This broadly conical tree can grow 70 feet tall but generally tops out at 35 to 40 feet with an equal spread. The drooping, soft pink flowers make the tree look like it has been draped in bubble-gum-pink confetti.

The Sprenger magnolia (M. sprengeri, Zones 7-9, 9-7) is a large magnolia with good fragrance. It thrives as far north as

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New York and New Jersey. Selections include 'Eric Savill', which has large reddish-pink flowers, and purple-flowered 'Lanhydrock'.

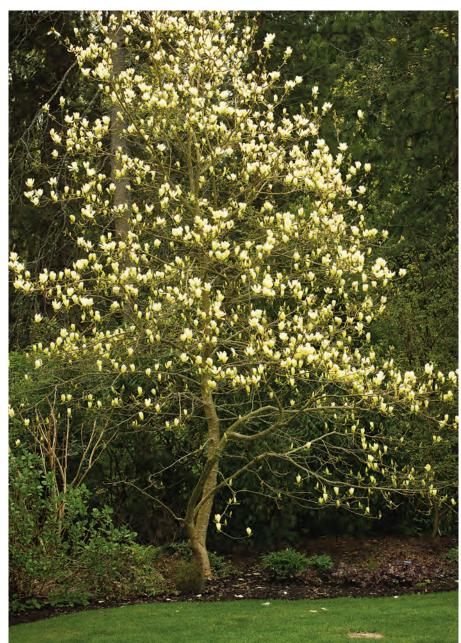
In 1963, William Kosar, a horticulturist at the USNA, crossed M. sprengeri 'Diva' with M. liliiflora 'Nigra'. From the resulting seedlings he selected 'Galaxy', an upright tree with a strong central leader. Its tepals are reddish-purple on the outside and lighter purple inside; the flowers bloom a little later than some other deciduous magnolias, offering a better chance of avoiding a late frost. It remains a very popular magnolia selection and is often used in street tree installations because of its uniform, upright habit.

AMERICAN INFLUENCE

Several magnolias native to the eastern parts of the United States are of interest more for their very large, almost tropicallooking leaves than for their flowers. Growing to 40 to 60 feet, the Fraser magnolia (M. fraseri, Zones 6-9, 9-6) produces leaves that are 10 to 15 inches long. The umbrella magnolia (M. tripetala, Zones 5–9, 9–5) reaches 15 to 20 feet, with leaves up to 24 inches long. And the aptly named bigleaf magnolia (M. macrophylla, Zones 6–9, 9–6) boasts leaves 32 to 36 inches long.

A favorite of many magnolia collectors is Ashe's magnolia (M. ashei, Zones 6–9, 9–6). The native range of this diminutive tree, formerly listed as a variety of bigleaf magnolia, consists of just a handful of





Above, left: Growing as either a small tree or large shrub, Ashe's magnolia is prized for its large, tropical-looking foliage and highly fragrant white flowers. Above, right: Yellow-flowered magnolias such as 'Elizabeth' are sought-after specimen trees.

counties in the Florida Panhandle, but it has proven broadly adaptable in cultivation. A 15-year-old specimen at the Scott Arboretum is only 12 feet tall with an equal spread. While the leaves are not as large as those of bigleaf magnolia, they still give the tree a very tropical effect, and their undersides are an eye-catching silver. The large white flowers bloom after the foliage emerges. "The super fragrant, foot-wide flowers can appear at a very young age, sometimes when the tree is only two or three feet tall," says Ron Rabideau of Rare Find Nursery in New Jersey.

QUEST FOR YELLOW FLOWERS

For decades, the holy grail of the magnolia world was to find or breed a yellow-flowering magnolia. In 1956, the Brooklyn Botanic Garden (BBG) in New York began a breeding program predominantly using the cucumber magnolia (M. acuminata, Zones 3-8, 8-1) native to eastern North America and the Yulan magnolia from China. Both species have faintly yellow or creamy tones in their flowers, so the hope was that these traits could be enhanced through breeding to eventually

produce a yellow-flowered magnolia. In 1978, the hope became reality when a magnolia with sulfur-yellow flowers was introduced. It was named 'Elizabeth' in honor of Elizabeth Scholtz, who was the BBG's director at the time.

In the wake of 'Elizabeth', dozens of "yellow magnolias," as they are called, have been introduced. "'Butterflies' is one of the oldest of the yellow-flowered cultivars and still one of the best," says University of Florida's Gary Knox. Hybridized by the late Phil Savage, it is a fast-growing tree that reaches 30 feet at

A DOZEN NOTABLE DECIDUOUS MAGNOLIAS AT A GLANCE

Botanical Name (Parentage or Common name)	Height/Spread (feet)	Flower Description/Bloom Season		SDA Hardiness/ NHS Heat Zones
Magnolia 'Ann' (M. liliiflora 'Nigra' X M. stellata 'Rosea')	8–10/10	2–4 inches across, deep purple fragrant/mid-spring	hybrid	4–8/8–1
M. 'Butterflies' (M. acuminata X M. denudata 'Sawada's Cream')	25–30/15–20	3–4 inches across, deep yellow/mid-spring	hybrid	4-9/9-1
<i>M. denudata</i> (Yulan magnolia)	30–40/30–40	5–6 inches across, ivory, fragrant/early spring	China	6–9/9–6
M. 'Galaxy' (M. liliiflora 'Nigra' × M. sprengeri 'Diva')	30–40/20	5–10 inches across, purple-pink/ mid- to late spring	hybrid	5–9/9–6
M. 'Genie' (M. liliiflora 'Nigra' XM. ×soulangeana	10–13/6–8	6 inches across, deep red/early spring and again in midsummer	hybrid	6–9/9–6
M. ×kewensis 'Wada's Memory' (M. kobus X M. salicifolia)	25/22	7 inches across, white, fragrant/ mid-spring	hybrid	6–9/9–6
M. ×loebneri (M. stellata × M. kobus)	20–30/20–30	4–6 inches across, white sometimes with pink or purple blush/mid-spring	hybrid	4–9/9–5
M. macrophylla (Bigleaf magnolia)	30–40/30	12–18 inches across, creamy white, fragrant/early summer	southeaster United State	
M. 'March Til Frost' (M. liliiflora × M. cylindrica) × M. 'Ruby'	10–20/10–15	purple-pink flowers appear sporadically from spring to fall	hybrid	5–7/7–5
M. sieboldii (Oyama magnolia)	10–15/10–15	4 inches across, nodding, white with crimson stamens/late spring to summer	China, Kore Japan	a, 6–9/9–7
M. ×soulangeana (M. denudata × M. liliiflora)	35/35	5–10 inches across, white, pink, or purple/early to late spring, depending on region	hybrid	5–9/9–5
M. stellata (Star magnolia)	10–15/10–15	3–5 inches across, 12–18 (many cultivars have even more) white or pale pink, strap-shaped tepals, fragrant/early to mid-spring	Japan	4–9/9–5

maturity. "It produces rich yellow flowers even here in the lower South, where the flower color of other yellow hybrids often appears faded compared with the same cultivar in northern latitudes," adds Knox.

Also from the BBG program came 'Lois' and 'Yellow Bird'. 'Lois' flowers are a creamy yellow color lighter than 'Elizabeth'. 'Yellow Bird' has a pyramidal form and the tuliplike flowers are held upright on the branches. By crossing 'Yellow Bird' with soft-pink 'Caerhays Belle', Wisconsin plant breeder Dennis Ledvina produced an open-faced, largeflowering pink selection he named 'Blushing Belle'. The flower's "deep pink exterior and lighter pink interior shows no traces of yellow," says Ledvina. 'Blushing Belle' is hardier than 'Caerhays Belle' and it blooms later, thus avoiding damage from frost.

For many years, a wonderful, nearly columnar magnolia saddled with the unfortunate name 'BBGRCI164' was part of the collections at the Scott Arboretum. This complex hybrid from the BBG program combines the yellow of cucumber magnolia with the pinkish-purple of lily magnolia and the fragrance of star magnolia. The result is a magnolia with upright orange-yellow flowers that bear a soft pink blush at the base of the tepals and a delightfully fruity fragrance. To memorialize the late BBG president Judith Zuk, in 2005, it was renamed 'Judy Zuk'.

LOOKING AHEAD

It is a very exciting time in the magnolia world. More and more species are becoming available through ongoing plant explorations in southeast Asian countries such as China, Vietnam, and Thailand. Many of the more unusual species are

being used in breeding work and there are promising hybridization efforts in progress that include both deciduous and evergreen magnolias.

One way gardeners and interested collectors can stay abreast of new trends in breeding and the latest introductions is through the Magnolia Society International (see "Resources," page 27). If you're considering a magnolia to add to your garden, one of the best ways to compare selections is to visit public gardens that have large collections on display in spring; a list of sites with notable magnolia collections can be viewed on a web special linked to this article on the AHS website (www.ahs.org).

Andrew Bunting is curator of the Scott Arboretum of Swarthmore College near Philadelphia and current president of the Magnolia Society International.

Sound in the Garden

Welcoming and becoming attuned to sound in a garden adds another dimension of enjoyment.

ARTICLE AND PHOTOGRAPHS BY KAREN BUSSOLINI



This simple water feature adds soothing sound in the Cape Cod garden of Judy and Dave Rogers.

OMETIMES YOU can hear spring before you see it. In my Connecticut garden, cardinals whistling from my side-yard thicket in early February are a signal that winter's end is in sight.

Gardens engage all the senses, but the realm of sound is often overlooked. Planting right outside windows and passageways, rather than way across an expanse of lawn, provides opportunities to intimately experience "surround sound." At my home, all I have to do is open the windows to be in the garden, which I do as soon as the peepers start up in spring.

Sounds vary from one garden to the next, especially those in different climates. It was great fun to be surrounded by creaking, groaning, knocking-together giant timber bamboo canes on my first trip to Florida. Another lingering sound-memory comes from Mississippi. To my Yankee ears, attuned to fine-textured grass, walking across winter-brown St. Augustine grass sounded like treading on a lawnful of Rice Krispies cereal. Paying attention to sounds while visiting gardens around the country has made me appreciate the symphony at home and given me ideas for bringing even more sound into the garden.

INVITING BIRDS

Provide birds with what they need, and they will fill your garden with song yearround. They need to drink, so add a birdbath—scrubbed frequently to prevent the spread of disease—small water feature, or even a plastic jug with a hole poked in the bottom hung to drip over a saucer—the sound of water attracts birds. A carefully selected blend of different kinds of plants will provide food, cover, and nesting sites. Planting a variety of native plants that support insect life and a long season's harvest of seeds,

berries, nuts, and nectar ensures that birds are well fed throughout the year.

Although I love the flickering play of sound, light, and shadow of bamboo leaves outside one window at my house, birds rarely alight in bamboo because it offers no sustenance. Native eastern juniper (*Juniperus virginiana*), red chokeberry (*Aronia arbutifolia*), brown-eyed Susans (*Rudbeckia triloba*), and ground-covering *Phlox stolonifera* and foamflower (*Tiarella cordifolia*) outside other windows are al-

ways humming—audibly—with bird and insect life. My attention is often called to a Carolina wren's scolding chatter, a bluebird's sweet song, or the cry of a pileated woodpecker; sounds that I invited by placing a red chokeberry shrub in a pot on my office doorstep, hanging a bottle gourd for nesting from the eaves, and leaving rotting logs for woodpeckers to forage on.

Providing diverse habitats and plants shrub thickets, open space, bare ground, evergreen and deciduous trees, grasses, seed producers, nectar producers, flowers with different bloom times and shapes—will attract and sustain a diversity of songsters. Gardening organically and keeping cats indoors protects birds from poisoning and reduces predation. Unconventional foundation plantings composed of broad garden beds filled with mostly native shrubs, trees, and herbaceous plants not only sustain life, they turn the house and patio into the equivalent of a "blind," where birds can be appreciated up close.

THE SOUND OF SILENCE

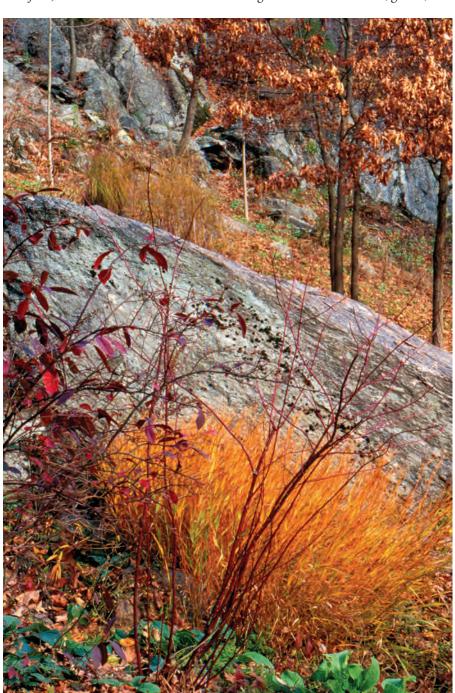
I'm a member of a classical vocal ensemble, and once, during a recording session, we were instructed to remain utterly still after the last note of each song so the silence unique to that particular space could be recorded. There's a characteristic silence in gardens and natural places, too. I know it's really winter when I go outside to look at the stars and it's almost dead silent. But if I listen carefully for a time, I'll hear a faint rustling sound from my oak grove and be thankful for the dried leaves that hang on all winter and give voice to the garden when all is cold and bare.

It's a completely different kind of silence from that of a snowy night or the deep dark piney woods I roamed as a child, where all sound was muffled by a thick layer of pine needles. Christine Cook, owner of Mossaics garden design firm in Connecticut, loves listening to the "whoo" of wind in pine trees and the rattle of beech and pin oak leaves in winter. She theorizes that space changes our perceptions, that in a tight and leafy space you slow down and listen harder. The quietest garden she ever designed was inside the foundation ruins of an old Colonial house, where she says "the silence reverberated."

My garden's sonic reality—a steady chorus of chirps, chips, and cheeps, the liquid song of orioles floating over the air, drumming woodpeckers, bees in the apple tree, peepers in spring that modulate to the key of summer's cicadas, quietly falling maple leaves in autumn, great-horned owls and groaning ice on the pond on subzero nights—anchors me in place and season. I can tune it in or out, but it's always there informing me about the world around me.

SOUND VERSUS NOISE

Of course the difference between an en-



In the author's garden, rustling oak leaves create a soundtrack for quiet winter nights.



A stone bench along the sidewalk encourages passersby to stop and savor the plantings in Lucy Hardiman's Portland, Oregon, garden.

joyable sound and an irritating noise is exceedingly subjective. For instance, personally I am annoyed to be awakened by a dog barking at 4 a.m., but I don't mind the geese honking on the nearby pond at the same hour.

"Sound becomes noise when someone perceives the sound as a problem," says Seattle resident Marty Wingate, author of the newly published book *Landscaping* for Privacy: Innovative Ways to Turn Your Outdoor Space into a Peaceful Retreat (Timber Press, 2011). In her book, Wingate offers solutions for creating sound buffers that reduce or mask bothersome noises such as city traffic, playgrounds, or loud neighbors. A hedge, she writes, won't eliminate traffic noise, but offers a psychological barrier—out of sight, out of mind. An evergreen planting dense enough to substantially reduce traffic noise would have to be 16 feet broad to make a difference, which is not an option in space-challenged city lots and small suburban yards.

Sound bounces off hard surfaces such as solid fences, stone or concrete terraces and blank walls, so siting hardscapes away from bedroom windows, covering bare walls with vines, and planting shrubs and trees between you and the source of the bothersome sound helps. Wingate recom-

MARTY WINGATE'S WATER FEATURE TIPS

- The more points of contact the water makes, the more sound it produces.
- Water falling onto a metal surface makes more sound than water falling on wood, concrete, or ceramic surfaces.
- Water falling into a deep basin or chamber that is only partially full makes more sound than water falling in sheets down the side of a container into rocks below.
- A sheet of water pouring into a basin makes more sound than water falling into a single spot.
- Water that falls another level into more water creates even more sound.

—К.В.

mends masking unwanted sounds with more pleasant ones to divert attention. Creating a distraction allows natural garden sounds to reach you first. Nearby trees with rustling leaves—a large maple in summer, or oaks, beeches, or hornbeams whose leaves rattle throughout winter—or bamboo, perhaps in containers, create a relaxing, pleasant sound, as does even a small water feature. (For Wingate's water feature tips, see sidebar, left).

Sounds that are a noisy intrusion to one person might be celebrated by another; it's a matter of perception and personality. Garden designer and writer Lucy Hardiman, who is gregarious and keenly attuned to the richness of language, welcomes sound from neighbors and the street into her garden in Portland, Oregon. Her family lives on the top floor of a big Victorian house on a corner lot, sharing a large enclosed garden with neighbors. "There's a murmur of fellowship and camaraderie that is part and parcel of what the garden was designed to do," Hardiman says. "Cats and dogs visit too. I love the neighborhood cats. They hang out in

the garden and I hear their territorial spats. It's nature in the city."

The Hardimans keep street-side double doors open all summer and often lean on the railing listening to sounds rising from below. Hardiman's riotously colorful hellstrip plantings and bench built into the corner's stone retaining wall invite people to linger. Just as I invite woodpeckers and other birds, Lucy invites people to participate in her garden by providing a perch and some enticing habitat. "I love how people express their relationship to the garden," she says. "You never know what you're going to hear. It might be a mother walking with a child talking about the flowers. Once I heard skateboards come clickety clickety down the street; then that flip and splat as riders stopped and got off and the voice of a teenager, "Hey dude, look at that plant!" And another voice, "Man, that looks like Sputnik." (It was Allium schubertii.)

PLEASURE AND PLAYFULNESS

Not all climates or neighborhoods favor open doors and windows. The garden might be a place to go to rather than live in. Gardens are restorative places, conducive to stilling internal chatter. The sound of running water is enormously relaxing, a beautifully tuned wind chime a focus for meditation. Tall grasses such as *Miscanthus* varieties swishing and the flickering sound of leaves in a birch or aspen grove or a weeping Katsura tree (*Cercidiphyllum japonicum* forma *pendulum*) provide pleasure far beyond their ability to buffer the sonic assault of nearby lawn mowers, leaf blowers, and air conditioners.

Many of the gardeners I spoke with emphasized participation and playfulness. Hardiman savors the crunch of quarterminus gravel (crushed stone with particles a quarter-inch and smaller) underfoot and can't resist wiggling bare toes in it. She includes it when designing clients' gardens to integrate sound in a subtle way.

Garden photographer Susan Roth recalls the rustle of dry leaves when she walked through the woodland garden in autumn and when she raked them up from her former Long Island, New York garden. She says, "I would kick up the leaves just for the pure pleasure of the sound and the smell of them." In her much noisier Washington, D.C., garden, she takes pleasure in

Gardens Worth Listening to

Lan Su Yuan Chinese Garden. Portland, OR. www.portlandchinesegarden.org.
Marie Selby Botanical Gardens. Sarasota, FL. www.selby.org. (Bamboo collection)
Portland Japanese Garden. Portland, OR. www.japanesegarden.com.
Robert Irwin's Stream Garden. The J. Paul Getty Museum. Los Angeles, CA. www.getty.edu.

Resources

The Audubon Society Guide to Attracting Birds: Creating Natural Habitats for Properties Large and Small by Stephen Kress. Cornell University Press, Ithaca, New York, 2006.

Landscaping for Privacy: Innovative Ways to Turn Your Outdoor Space into a Peaceful Retreat by Marty Wingate. Timber Press, Portland, Oregon, 2011. National Audubon Society's Audubon at Home Program,

www.audubon.org/bird/at_home/index.html.

National Wildlife Federation's Backyard Wildlife Habitat Program, http://nwf.org/backyardwildlifehabitat.

the steady splashing of a small fountain and a set of hefty bamboo wind chimes beside the steps to her hillside garden. "Once they get going, the deep resonating gongs of the chimes combined with the swishing leaves of the tall chestnut oaks above plays music to my ears."

Clucking chickens are part of the auditory experience in *Tulsa World* garden columinist Russell Studebaker's Oklahoma garden, while dry-climate garden expert Nan Sterman gets a kick out of the



Modernist designer Russel Wright so enjoyed the sensation of walking through fallen sycamore leaves that he ordered them to be left unraked in his New York garden.

pop-pop-popping of *Euphorbia rigida* seeds explosively launched from their dried pods on warm sunny days where she lives in Encinitas, California.

Garden designer Christine Cooke recalled hearing that Russel Wright, the 20th-century modernist home furnishings designer, left instructions to not rake a certain woodland path to preserve an experience—the sound of walking through a particular type of fallen leaves on a dry autumn day. I wasn't able to find any reference for this, so I drove to Manitoga, Wright's former mountaintop home, now the Russel Wright Design Center, overlooking the Hudson River in Garrison, New York. Stepping stones along the top of a merrily sloshing waterfall led to a stone path and steps to the clifftop house. And there, gigantic crispy brown sycamore leaves scraped, wind-driven, along the stones and made a most satisfying crackling crunch underfoot—an exuberant sound well worth preserving.

THE SOUNDS OF WATER

Water has many voices: Force of flow, the height from which it falls, wind, surfaces, and obstructions alter the sound. Tinkering with these variables allows tuning to a sound that pleases the ear—rather than imitating a dripping faucet or overflowing bathtub. Plug-in, tabletop water features and constructed waterfalls and streams have vastly different siting considerations, costs, and purposes. Consider the intention—is the desired effect a

soft murmuring hiss, splish-splash, gentle trickle, or torrent?

Judy and Dave Rogers of Cape Cod, Massachusetts, nestled a ceramic jar with a bamboo spout into the border outside their open-all-summer bedroom window. The soothing sound helps Judy sleep, and she enjoys lingering in bed in the morning to listen to it and the hummingbirds it draws.

Paul Miskovsky, a landscape designer in

Falmouth, Massachusetts, had a more elaborate vision—and earth-moving equipment to fulfill it. Inspired by a waterfall in Vermont, he built a multi-level "pondless" waterfall that runs 90 feet in length with a drop of 30 feet on the steep embankment behind his house. "It's a Zen thing," he says, "and it's directional. I was thinking about how this will bring energy to my life, how it will get energy flowing toward the house." With many configurations of rocks and runs as it drops and disappears into a bed of stone—actually a six-footdeep gravel-filled chamber that acts as a biofilter—the stream is steady but ever-changing, just like a natural stream. Submersible pumps are virtually inaudible. Although Miskovsky can adjust the flow to create a soft cascading sound, he typically prefers the full-force lively look and sound of a rushing torrent.

ASIAN INFLUENCES

A trip to Portland, Oregon, a few years ago introduced me to two Asian-inspired gardens where sound is a profound part of the experience. The Portland Japanese Garden struck me as the most serene garden I'd ever experienced. Up-and-down terrain concealed and revealed views and sounds of people, falling water, wind, birds, and fluttering leaves. I watched workers removing leaves from a subtle moss and rock garden, not by blasting through with leaf blowers but by rhythmically and carefully sweeping with handmade bamboo twig brooms. The soft, swishing sounds and dancelike movements were entrancing, akin to those made by raking gravel gardens into

symbolic patterns. A metallic snip-snipsnip of shears among cloud-pruned evergreens added to the pleasant sound of quiet mindful work that seemed more like meditation than chore, a lovely reminder that the tools we use and the care we take also shape our garden experience.

Next, I visited downtown Portland's Lan Su Yuan Chinese Garden, which is like entering a world apart. A waterfall and layer after layer of rooms, windows, and



The swishing of handmade brooms entranced the author at the Portland Japanese Garden.

doors opening to planted courtyards progressively muffle city noise. A sheet of water ringed and crossed by covered promenades, pavilions, and bridges lies at the quiet center of the garden. Even the title of a visitor book explaining the garden's many engraved literary inscriptions—"Listen to the Fragrance" suggests the importance of sound.

Usually I am disappointed when I visit gardens on a rainy day, but in this case, I welcomed the downpour that ensued on my arrival. In advance of my visit, I had been told that bananas, fatsias, and other broad-leafed plants were strategically placed to enhance the sound of water dripping onto them from roof tiles and that drains were tuned to make different sounds as water spilled into chambers below. Sometimes, the gardeners told me, beads of water dripping from thousands of pointed roof tiles form a "pearl curtain" between viewer and garden.

The pearl curtain never materialized while I was there, but hours spent just listening brought on an inner stillness

> and enhanced appreciation for sound. Patterns of water dripping into water could be both heard and seen, and each space sounded different. Rain beating on stone courtyard floors sounded softer on the mossy parts, changing with the intensity of the rainfall. Big-leafed bananas in protected corners sounded different than bamboo planted to rustle by windy openings in exterior walls.

LISTEN TO THE GARDEN

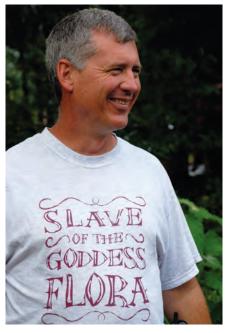
In The Mind's Eye, Oliver Sacks writes about a profoundly blind man becoming a "whole body seer." When he shifted his attention to other senses, "they assumed a new richness and power...the sound of rain, never before accorded much attention, could delineate a whole landscape for him, for its sound on the garden path was different from its sound as it

drummed on the lawn, or on the bushes in his garden, or on the fence dividing the garden from the road."

Of course, you don't have to be blind to enhance your sense of hearing. Every garden has its own sounds, and if you listen to your garden you will notice how its voice varies through the day and through the seasons. Whether it is the splash of raindrops on a pond, the crunch of gravel underfoot, the rustling of leaves in a breeze, or the chirping of birds at a feeder, cultivating sound and listening to our gardens intensifies an already rewarding experience.

Karen Bussolini is a garden photographer, speaker, and eco-friendly garden coach living in Connecticut..





Tony Avent, above, is owner of Plant Delights Nursery in Raleigh, North Carolina. The nursery's six-acre Juniper Level Botanic Gardens is a wonderland of intriguing plants, including weeping rostrinucula (Rostrinucula dependens), top, a deciduous shrub native to China, top.

Tony Avent maverick plantsman

Plant Delights Nursery owner Tony Avent has become one of America's leading—and most outspoken—horticulturists.

▼HERE'S A SIGN next to the back gate at Plant Delights Nursery in Raleigh, North Carolina, that reads, "Trespassers Will Be Violated." It put a stop to all the people who used to unhook the chain on weekends and just mosey on in.

"They start to take the chain down and then they think, 'These people are crazy," says the nursery's owner Tony Avent, who has a broad, sometimes corny, and definitely not politically correct sense of humor. "It's all about getting into people's heads." Not that visitors aren't welcome—by appointment or at an open house.

The founder of what has become one of America's favorite meccas for plant nuts loves to bump into visitors wandering the paths of the Juniper Level Botanic Gardens, a six-acre display garden he has created at the nursery, where some 17,000 plants grow for both research and display. "They'll say, 'Do you work here?' and I'll say, 'Yeah'," says the 54-year-old Avent, who will tell them no more, but instead quiz them about their garden, or what they do.

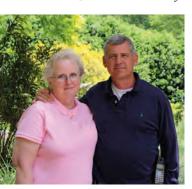
So if you're visiting Plant Delights and a middle-aged guy with an old red-and-blue checked shirt and a neon-orange wool cap walks up and asks you if you want to see some

weird ginger blooming in the garden, don't worry—it's just the owner.

"If you've got a business and people are taking time out of their day and spending gas money to come visit, the least you can do is to welcome them," says Avent. He and his wife, Michelle, whom he began dating in high school, started Plant Delights in 1988, on twoand-a-half acres of worn-out soil south of Raleigh. At the time their primary assets were \$5,000 and a mail-order list of 3,000 plant lovers who had signed the guest register at their former quarter-acre garden in town.

From the beginning, Michelle handled the day-to-day intricacies of the nursery, from its growing plant inventory to orders, shipping, and finances; he pushed the limits of the plant world, wrote the newsletters, and played the raconteur on the gardening lecture circuit. Now, 30 greenhouses and growing fields and gardens ramble across 22 acres, all fed by mountains of compost. The business, which peaked at more than \$2 million in 2007, has dropped by 20 percent with the rocky economy, but Avent, whose energy seems boundless, vows to bring it back up this year.

[Editor's note: Sadly, in mid-February,



Michelle and Tony Avent

just before this issue went to press, Michelle, 55, died after battling cancer for years. In a statement sent to friends of the nursery, Tony wrote: "It was her big smile, way with people and mind for organiza-

tion and computers that kept the place humming." The nursery staff, Tony wrote, "will continue Michelle's dream, building on the great foundation she left for us."]

PRECOCIOUS GARDENER

Plant Delights, so aptly named, fuels what has been Avent's lifelong passion. He sold his first homemade terrarium when he was five. His father helped him build a greenhouse, just to get the houseplants out of the house.



Avent has taken a particular interest in agaves, displaying hundreds of selections in beds and containers around a courtyard in his Juniper Level Botanic Gardens at the nursery.

"When I was eight or nine, I told my father I wanted to see the best garden in the world," says Avent, who grew up in Raleigh. "I figured from all the catalogs that had to be Wayside Gardens. So we drove down to Greenwood, South Carolina, and there was this bed of begonias, and I'm like, 'Where are the gardens? This can't be it."

After Avent's father explained that Wayside operated more like a broker and the plants were grown elsewhere, Avent says he was so distraught he sat down on a giant floral clock in their display garden, promising himself that when he grew up, he would have a mail-order nursery with "gardens where nobody will ever be disappointed when they visit."

He worked his way through North Carolina State University—living at home and selling plants out of his greenhouse where he studied with J. C. Raulston, the beloved plantsman who was dedicated to getting a diversity of spectacular plants out to the public. Raulston reveled in the eccentricities of fellow plant geeks and loved to get them together.

"J.C., " who died in 1996 at 56, is often on Avent's lips as he shows off a blue holly Raulston created from a 'Nelly Stevens' graft, or the satiny-smooth, apricot-colored bark of a crape myrtle selected by Raulston, or the big 'Iseli Foxtail' blue spruce (Picea pungens), which outgrew everything else when J.C. planted every named cultivar.



On open weekends, visitors flock to the nursery to tour the display gardens and purchase plants.

"I've taken up his torch," says Avent, recalling Raulston's reaction after Avent left his job at the North Carolina State Fairgrounds, where he had worked for 16 years, running the grounds crew and planting perennials, trees, and shrubs grown from cuttings from Raulston's own collection.

"J.C. said, 'Please don't tell me you quit your day job. You can't make it in mailorder,'" recalls Avent, who told him not to worry, citing the example of Holbrook Farm and Nursery in Fletcher, North Carolina, a mail-order operation owned by another horticultural prodigy, Allen Bush, which at the time was selling unusual plants and thriving. "He's got to be doing something illegal," Raulston responded.

Avent's philosophy is that if you're selling plants, you've got to be like the late Apple CEO Steve Jobs and make people want what they didn't know they wanted.



The nursery's numerous greenhouses are filled with plants being propagated or ready for sale.

FOCUS ON THE PLANTS

I visited Raleigh in early January to talk with Avent about his latest ventures, from new variations of wild trilliums collected last spring in Alabama, to the evergreen ferns and colorful baptisias—he calls these "redneck lupines"—he is slowly introducing as they prove themselves in the nursery's research gardens.

Dozens of greenhouses were filled to the brim with plants being groomed for shipment in April. Among them were barrenworts (Epimedium spp.) with dancing flowers, like 'Sunny & Share', a spreading form with small evergreen leaves flecked with bronze, topped with sprays of little yellow bell-shaped flowers. I also marveled at the aspidistras, generally used as houseplants, whose hardy evergreen leaves actually look great in the woods. They also have two-inch, creamy yellow or brilliant magenta flowers—which few people but Avent would even notice—blooming in early March at the base of the plants. Only the insane would have 100 different selections of this stuff, says Avent, who does.

Outside in the trial fields, thousands of white markers flag every single hosta, Jackin-the-pulpit (*Arisaema* spp.), baptisia, elephant ear (*Colocasia* spp.) and the like being evaluated for possible stardom. The water gardens, where the cannas, elephant ears, and cardinal flowers come into their own in late summer, were a ghostland, but I promised myself I'd be back.

Not only does the Juniper Level Botanic Gardens surround the Avents' modest house, but paths meander through bogs full of pitcher plants and woodlands full of unusual trees like the tung oil tree (Aleurites fordii). This native of western China was planted throughout the South in what Avent calls a botched effort to produce wood finish from its oily toxic seeds.

"Some entrepreneur got all these dumb southerners to plant millions of tung oil trees on these multi-hundred-acre plantations along the Gulf Coast," says Avent. "Only to find out years later there was no market for tung oil."

The tree is graceful, though, with heart-shaped leaves, and fragrant, creamy-peach-colored flowers in early spring. Avent tried to grow the subtropical tree for years, but kept killing it—until a friend told him about one thriving in Wilmington, North Carolina. "I got seed and the

plant's completely hardy," says Avent. "We've been trying to give seeds away to get the hardy genetics out."

Pushing the supposed horticultural limits of plants is part of what drives Avent, who has collected plants all over the world, usually at the outer limits of their range.

"People think we can't grow lilacs in the South, because everybody tries the same passalong clone of Syringa vulgaris that's no good here," he says. But Asian species, like the Peking tree lilac (Syringa pekinesis) and their hybrids, can take the heat.

In the woodland, he pointed out some of the evergreen ferns in his 1,000-plus fern collection. Reverting to salesman mode again, he says, "We all need these in our gardens—along with arums, rohdeas, and hardy palms—for winter interest. And they're deer-resistant!" He pointed out one of his favorites, the chain fern (Woodwardia unigemmata), whose arching evergreen fronds make chains of little plantlets that root along the ground. "A friend collected this in China, at a high elevation, so we don't have a clue how hardy it is," he says.

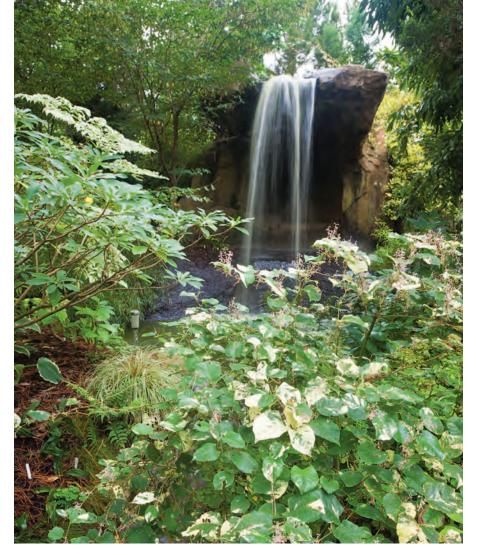
Hardy gingers (Asarum and Hexastylis) thrive here, but not the European species. "What's in the trade doesn't grow in the South, but [the genus] has a huge range in the wild," says Avent, crouching down by a path. "This is one I collected in Taiwan three years ago. See the blooms?" He pointed to some little brown crinkled things, reminiscent of bottle caps, nestled around the base of the leaves.

Growing so many plants in close proximity leads to natural crosses, a process Avent calls "redneck breeding." He describes a cross between a Japanese painted fern (Athyrium niponicum 'Pictum') and a southern lady fern (A. filix-femina var. asplenioides), "that's three feet tall and six and half feet across. We named it 'Godzilla'."

Quirky cultivar names are another Avent hallmark—'Bubba' and 'Elvis Lives' are among the names he has given hostas he has introduced. While reflective of his sense of humor, it's also part of his marketing psychology. "If everyone in a race is running in one direction, it's hard to get noticed," he says. "but if you run in the wrong direction, everyone notices you."

OF PLANT-HUNTING AND PROSELYTIZING

In the pursuit of new plants, Avent has





participated in expeditions to several continents over the years. Lately, however, he has stuck closer to home, plant hunting in Alabama, Georgia, and Florida.

"What's really neat is that almost every plant in the panhandle of Florida is hardy to Zone 6 or 5," says Avent, pointing out the mountains in the northwestern part of the state on one of the big maps on his office wall. "Years ago, the glaciers pushed this stuff down and it got trapped down in Florida."

Stuff like Ashe magnolia (Magnolia

Dubbed Mt. Michelle, this water feature in the Juniper Level Botanic Gardens, above, is surrounded by plants such as Polygonum cuspidatum 'Freckles', bottom center, a nonrunning form of Japanese knotweed introduced by Plant Delights. One of Avent's many hosta selections is 'Elvis Lives', left, so named because of its "blue suede" leaves.

ashei), a clumping shrub or small tree with large leaves and citrus-scented white flowers, which does just fine in Chicago, he says. Or the stinking cedar (Torreya taxifolia), which thrived in Florida's Panhandle in the cooler, wetter climate of the last ice age and might be happier farther north.

In Dalton, Georgia, he and his fellow horticulturists scrambled up a hillside surrounded by houses in all directions and cut into the woods. "Trillium luteum, as far as you could see," he says. "And they're telling us this all will be developed."

In that woodland, he found the kind of variations that make his heart sing: a trillium with narrow leaves, another with solid silver leaves, a red form of a yellow

species—"almost unheard of, a natural variation that would happen one in every million," he says—a bicolor, a yellow-leafed form, and others only a plant geek could love.

Avent writes about many of these adventures in articles and e-newsletters archived on the Plant Delights website. He also writes much of the copy in the nursery's annual glossy color catalogs. Characteristic of his sly sense of humor, these catalogs are collectible spoofs on a variety of political and social topics covers such as "Occupy Green Street," "Germinator 3" (a nod to Arnold), "Nationalized Plant Care" chart the years and his redneck humor. ("If you live in a state with gun bans, keep a leaf from this baby by the bed for protection," he writes of the "snaggle-tooth" spines of Agave xylonocantha 'Frostbite'.) Some covers, including one related to terrorism, have sparked controversy and led to hundreds of letters and e-mailed comments-Avent takes this in stride, making it a point to post all the comments, negative and positive, on his website. Another unconventional twist is that in lieu of charging customers to receive the catalog, he requests a box of chocolates.

Always alert to new marketing opportunities, Avent, who has a mathematical bent and likes to say his attention deficit disorder-fueled mind needs constant challenges, has gleefully figured out the complicated algorithms of key words and meta tags that he must plug into the Plant Delights website to shoot it toward the top of the list when gardeners search for "perennial plants."

"When you put in a plant name, what exactly decides who's going to come up on top?" he says. "That's a bigger secret with Google than the Colonel's chicken recipe."

Avent is also using social networking to his advantage, posting on Facebook some fascinating plant's moment in the garden, or the secret to growing a plant he's killed many times, and, like Raulston before him, encouraging "plant nerds to talk to each other," he says.

GOING AGAINST THE GRAIN

On the day I visited, a cold front had just blown in on the heels of a very long warm fall and early winter. From 60 degrees the week before it went down to 17 Plant Delights Nursery is located at 9241 Sauls Road, Raleigh, NC 27603. The nursery and its Juniper Level Botanic Gardens hosts eight open weekends a year. Appointments at other times must be made in advance by calling (919) 772-4794. Group tours are also available with advance scheduling. For more information on visiting or ordering plants, visit the nursery's website at www.plantdelights.com.

that night, zapping the chains of yellow flowers on *Mahonia nepalensis*, which had bloomed for the first time in the sunny section behind the house.

This led us into a discussion about the unpredictable weather conditions the United States has experienced over the last decade. We talked about the extreme heat and years of drought in Texas, the dead native trees, the farmers forced to



The covers of Avent's mail-order catalogs take a humorous slant on social or political issues.

sell their herds of cattle, the October 2011 storm that downed thousands of trees in New York City.

Avent agrees the earth is warming, acknowledging that the summer of 2010 broke every record. "We had 95 days over 90," says Avent. "This past year was more like 65 or 70 days, which is still way above normal." But he scoffs at the notion humans can do anything to control climate. "Are you kidding me?" he says. "Let's figure out how to cope with it."

"The climate goes in cycles," he says. "If you look at the global temperature since the Little Ice Age ended in 1835, it's on an upward trend, absolutely. Can we stop that trend? No. Do we know how long that upward trend is going to continue? No."

So, it's not all those humans belching carbon dioxide and other greenhouse gases into the air? "There has never been anybody that's shown that carbon in the air heats up the atmosphere," Avent says, despite the fact that 97 percent of climate scientists agree that it does, and that humans are causing global warming.

Avent, who stopped using pesticides and synthetic fertilizers years ago, when he realized his plants grew better with compost, describes himself as a "logical environmentalist."

"I would kill for solar, but it's not here yet," he says. When he looked into solar power for his nursery, he got an estimate for \$1.24 million. Even with government subsidies—which he philosophically opposes, because it's the taxpayer who pays—he figured the system would take 76 years to pay for itself. "So the economics aren't there yet," he says. "But I'll be the first one on that boat."

In person, Avent is irrepressible and honest to a fault, as generous with praise as he is with no-holds-barred criticism. He brags, he calls people stupid, he tells who's going bankrupt, who's still in the closet, who's a genius and who isn't. He inspires love and exasperation in equal parts.

Dan Hinkley, co-founder of the original Heronswood Nursery in Washington and now a consultant for Monrovia nurseries, whose passion for plants—and words—has run a parallel but decidedly different course, puts it this way: "Tony is a brilliant plantsman and a dedicated nurseryman for whom I have great affection and admiration. However, if he ever chose to run for political office, I would actually move from Washington State to his jurisdiction to vote against him."

Not to worry. Avent hates big government. What he really wants is for you to fall in love with some plant you didn't know you needed.

Anne Raver, who lives on a farm in Maryland, writes about gardening, organic farming, and the environment. She is the author of Deep in the Green (Knopf, 1995).

If you're looking for a change from the standard azaleas and rhododendrons, try some of these unusual North American natives in the heath family.

BY RUSSELL STAFFORD

NE OF THE delights of gardening with native North American plants is the wide range to choose from. One little known group of natives I have come to appreciate, both from growing them in my garden and by observing them on trips around the country, is composed of about two dozen-mostly evergreen—shrubs and trees in the heath family (Ericaceae) that at one time or another were assigned to the genus Andromeda. (For more on the heath family, see sidebar, page 43.)

Although no longer joined by name having for the most part been split into genera such as Agarista, Leucothoe, Lyonia, Pieris, and Zenobia, among others—these beguiling plants share numerous ornamental virtues, including lily-of-the-valleylike flower sprays in spring or summer, ornamental flower buds and fruits in fall and winter, and handsome evergreen or deciduous foliage. In addition, these denizens of mosquito-infested swamps, parched Piedmont sandplains, scrabblesloped Appalachian ridges, and other untamed places offer something less tangible but equally compelling: A touch of wildness that you won't get from your azaleas.

Don't let their appearance mislead you, however. Despite their untamed air, these ericaceous trees and shrubs take well to domestication, especially in sites that satisfy their heath-family predilection for acidic and reliably moist soil. With their wildling charm, amenability to cultiva-



tion, and their relative scarcity, they are just the stuff for revitalizing the formulaic plantings that dominate the domestic landscape. They not only add refreshing novelty to naturalistic gardens and informal edgings, but also provide a bracing change of pace in shrub borders and foundation plantings.

EXPLORING ANDROMEDAS

No plant more typifies the tribe than bog rosemary (Andromeda polifolia, USDA Hardiness Zones 2–6, ÂHŠ Heat Zones 6-1). Its narrow, one- to two-inch-long evergreen leaves with silvery undersides do indeed resemble those of true rosemary (Rosmarinus officinalis), but its native range

(all Canadian provinces, south to Washington, Idaho, Indiana, West Virginia, and New Jersey) and cultural preferences couldn't be more un-rosemarylike. No hot summers or limey soil for this little evergreen shrub. The terminal clusters of quarter-inch flowers—petite pink lanterns poised on drooping pedicels in late spring—are also all its own.

In cultivation, bog rosemary is not overly fussy, requiring neither a bog nor vinegarlike pH levels. Give it full to partial sun and humus-rich, reliably damp, cool soil and it will likely prosper, forming spreading, fine-textured hummocks. "Careful siting is the key to its performing well," says Bill Cullina, director of Coastal



Maine Botanical Gardens and author of *Native Trees, Shrubs, and Vines* (see "Resources," page 44).

One place bog rosemary does *not* belong—despite its common name—is in the culinary garden: Like many other members of the heath family, it contains andromedotoxins, which in large quantities can poison humans, cattle, and other mammals. Slowly growing one to two feet tall and up to three feet wide, its natural habit is more sparse than the lush examples often seen in garden centers. Of its several cultivars (including low-growing 'Compacta' and white-flowered 'Alba'), by far the most widely available is 'Blue Ice', whose new leaves are a frosty silver-blue.

One silvery-leaved, moisture-loving native that can take the heat (as well as the cold) is the sublime dusty zenobia or honeybells (Zenobia pulverulenta, formerly Andromeda pulverulenta, Zones 5–9, 9–5). In the showiest manifestations of this arching, three- to five-foot, semi-evergreen shrub, its one- to three-inch-long oval leaves are powdered above and coated beneath with a waxy silver-white bloom, which also coats the young stems. This symphony in white crescendos in late spring and early summer, when swarms of bell-shaped, spicy-scented, snowy blooms envelop the stems' upper reaches. The leaves assume orange and burgundy tones in fall, their undersides retaining their silvery patina.



Although less well known than its Japanese relative, mountain pieris, left, is an excellent compact evergreen shrub. Bog rosemary, above, thrives with cool summers and moist, acidic soil.

Native to pocosins and other swampy areas of the Southeast Coastal Plain, dusty zenobia prospers in full to part sun and humus-rich, acidic soil. In my central Massachusetts garden, it flourished in sandy, rocky, glacial outwash amended with a modicum of peat, shrugging off every vicissitude that winter threw at it—including wayward snowmobiles and minus-20-degree Fahrenheit lows. It pairs beautifully with *Andromeda polifolia* in regions where both are hardy, such as the Northeast and the Pacific Northwest.

LYONIAS

Several worthy andromedas can be found in the genus *Lyonia*, named for the Scottish plant explorer John Lyon, who collected many noteworthy plants during his peregrinations in the southeastern United States at the turn of the 19th century.

One of my favorites is maleberry (*Lyonia ligustrina*, Zones 4–9, 9–1), a quietly alluring, densely-branched shrub reaching 10 to 12 feet tall and wide that is native to moist woodlands and wetlands of the central and eastern United States. Maleberry's upright, gray-barked stems, urn-shaped white flowers, and luminescent fall foliage bring its ericaceous cousin highbush blue-



Fragrant white flowers, silvery leaves, and white-coated stems make dusty zenobia a conversation piece. In autumn, the tops of the leaves turn orange and burgundy.

berry (Vaccinium corymbosum) to mind.

What follows the late-spring to earlysummer, two- to six-inch-long bloom panicles is anything but blueberrylike, however. Although perhaps disappointing on the edible front, the sprays of woody, spherical, lime-green seed capsules offer considerable ornamental value, contrasting pleasingly with the glossy, oval, richgreen leaves. The fruits later assume an ash-gray, peppercornlike guise eventually splitting open into persistent, five-valved husks that last into the next growing season. It deserves far more use in North American gardens that can meet its modest needs for full to part sun and moist to wet soils.

Among other North American members of the Lyonia genus, staggerbush (L. mariana, Zones 5-9, 9-1) and fetterbush (L. lucida, Zones 7-9, 9-1) are closely allied, three- to six-foot shrubs with lustrous leathery leaves (evergreen in the case of fetterbush), and nodding, relatively large, white or pink bell-shaped flowers in late spring and early summer. Both occur primarily in coastal regions of the mid-Atlantic and Gulf States.

The "rusty staggerbushes" Lyonia ferruginea and Lyonia fruticosa (Zones 8–10, 10-1) comprise another closely allied pair. Native to forests and scrublands of Florida, southern Georgia, and coastal South Carolina, these evergreens are distinguished by the rust-brown, feltlike scales that cover their leaves and twigs. Although most of these lyonias "don't have a look that naturally lends itself to the cultivated landscape" says Cullina, they blend beautifully with less domesticated plantings.

LEUCOTHOES AND KIN

More familiar to gardeners is a group of shrubs that shows many close affinities with Lyonia—the leucothoes and their kin. Yet, aside from mountain dog-hobble (Leucothoe fontanesiana) and coastal

dog-hobble (Leucothoe axillaris)—which are common enough in cultivation as to need no introduction—the leucothoe clan has largely been overlooked.

A good case in point is Sierra laurel (Leucothoe davisiae, Zones 6-8, 7-1). An evergreen shrublet from mountain wetlands of southwestern Oregon and northern and central California, it forms low, thicketing, clumps of upright stems decked with glossy, dark-green, laurellike leaves. To literally top it off, spires of small pitcher-shaped white flowers arise from the branch tips in late spring. It's a rare, choice, small shrub for moist acidic garden niches in areas with relatively mild summers.

The East Coast has its own contingent of obscure and meritorious leucothoes. After being shuttled repeatedly among Leucothoe, Agarista, and Eubotrys in one of those nomenclatural dances that afflict some botanical taxa, they appear to have settled into the latter two genera.

In my eyes, Florida hobblebush (Agarista populifolia, Zones 6–9, 9–1) is about as leucothoean as it gets. Bearing lustrous, lance-shaped to elliptical, bright green leaves that alternate like ladder rungs along arching, five- to 20-foot stems, this evergreen could easily be taken for a stretch edition of Leucothoe axillaris or L. fontanesiana. The bronze-flushed new growth and the fragrant, dangling, axillary clusters of flask-shaped white flowers do nothing to



Native to moist habitats in the eastern half of North America, maleberry grows to 12 feet tall.

THE HEATH FAMILY

The heath family (Ericaceae) is found nearly worldwide, primarily in temperate zones but also in the Arctic and in tropical mountain regions. The more than 100 genera and 2,000-plus species in the family are primarily evergreen shrubs or small trees, although some are herbaceous perennials and a few are parasitic, including Indian pipe (Monotropa uniflora), whose small clusters of ghostly white stems can be found emerging from leaf litter in undisturbed forest areas in most of continental North America.

The family includes a wide variety of popular ornamental plants, including rhododendrons and azaleas, heathers (Calluna spp.), heaths (Erica spp.), madrone (Arbutus menziesii), and bearberries or manzanitas (Arctostaphylos spp.). Most family members thrive in neutral to acidic, moist, loamy or gravelly soils. Studies have revealed that many heath family members have developed specialized relationships with symbiotic fungi on their roots-known as mycorrhizae—which help them grow in wet, acidic sites where soil nutrients are not readily available.

While a few members of this family have commercially valuable edible fruits—notably blueberries and cranberries (Vaccinium spp.)—many others contain toxic compounds. The names of some plants—mountain laurels (Kalmia spp.), for instance, are also referred to as lambkill in some regions—reflect this trait. Other members such as Labrador tea



Madrone, a heath family member, is popular with Western gardeners because of its bark.

(Ledum groenlandicum) and wintergreen (Gaultheria procumbens) are utilized for their medicinal benefits. The glossy, bright green foliage of salal (Gaultheria shallon) is widely used in the florist industry. —R.S.

dispel the impression. Would that its hardiness followed suit, but that may be expecting too much of a native of wet coastal woodlands from southeast North Carolina to northeast Florida. Full to part shade, loamy acidic soil, and plenty of space to sprawl are its main cultural requisites. Gardeners who don't have room for a full-sized Florida hobblebush can opt for 'Taylor's Treasure' (trademarked as Leprechaun), which forms a three- to five-foot mound of relatively small, closely spaced leaves.

The two species of Eubotrys, on the other hand, are quite different animals from the dog-hobbles. Their deciduous, oval, glossy-green leaves are borne on upright, branching stems, and their strands of fragrant, nodding, barrel-shaped white flowers perch conspicuously at the stem tips rather than cowering half-hidden among the leaves. Their fall foliage is as fiery and exuberant as their spring flowers are elegant, assuming molten, glistening hues of crimson and scarlet. After the leaves fall, the large purple-red flower buds take center stage.

Mountain fetterbush (E. recurva, Zones 5-8, 8-1)—named for its characteristically arching (or recurved) flower sprays—resides in moist woods of the southern and central Appalachians. Swamp sweetbells (E. racemosa, Zones 5-9, 9-1) inhabits damp, mainly coastal woodlands from Massachusetts to extreme southeastern Texas and is "the one to choose for warmer areas of the Southeast," advises Bob McCartney, co-owner of Woodlanders Nursery in Aiken, South Carolina. In cultivation, these three- to six-foot-tall, slowly suckering shrubs occupy similar niches, thriving in light to part shade and moist, acidic, humus-rich soil, and combining harmoniously with other acid-loving woody plants.

Leatherleaf (Chamaedaphne calyculata, Zones 3-6, 6-1)—a close ally of Eubotrys-is one such harmonious companion. Native to wetlands throughout the upper Northern Hemisphere, this suckering evergreen shrub bears small, rich-green, tawny-backed leaves on willowy, branching, one- to five-foot stems. The foliage often develops coppery tints in winter. Rows of fragrant,



Florida hobblebush's leaves start out with a bronze cast before turning bright green.

pitcher-shaped white flowers dangle from leafy, lateral branchlets in spring, with gray seed capsules following. Of sometimes rangy habit, leatherleaf is at its ornamental best in the form of compact cultivars such as 'Verdant', which function effectively as informal groundcovers and fillers in full to part sun.

GAULTHERIAS

Ranking high on the list of evergreen groundcovers for Pacific Coast gardens is another shrub of the andromeda tribe, salal (Gaultheria shallon, Zones 6-9, 9-1). Salal forms lush, suckering colonies of upright stems with purple-flushed, zigzag branches and broad, shiny, leath-

Resources

Dirr's Encyclopedia of Trees & Shrubs by Michael A. Dirr. Timber Press, Portland, Oregon, 2011. Native Trees, Shrubs & Vines by William Cullina. Houghton Mifflin Co., Boston, Massachusetts, 2002.

Sources

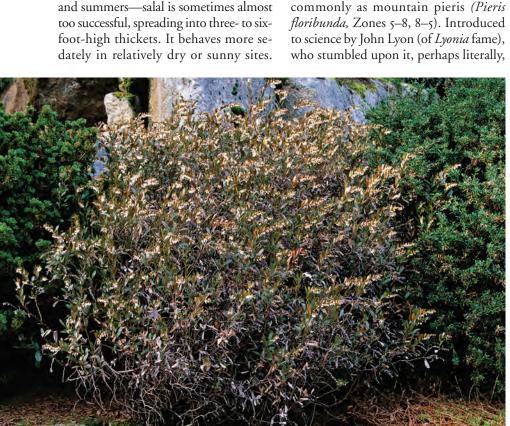
Fairweather Gardens, Greenwich, NJ. (856) 451-6261. www.fairweathergardens.com. Forestfarm, Williams, OR. (541) 846-7269. www.forestfarm.com. Meadowbrook Nursery, Marion, NC. (828) 738-8300. www.we-du.com. Woodlanders, Aiken, SC. (803) 648-7522. www.woodlanders.net.

ery leaves. Purple-stemmed sprays of tubby, pinkish-white blooms arch from the leaf axils in spring and early summer, the flowers giving way to round, blackpurple, wildlife-pleasing berries.

In favored conditions—part shade, moist non-alkaline soil, and mild winters and summers—salal is sometimes almost too successful, spreading into three- to sixfoot-high thickets. It behaves more seSometimes difficult to grow outside its native range (forests and moist hillsides from coastal central California north to the Alaskan panhandle), successful plantings do exist along the New England coast.

Salal's diminutive cousin, wintergreen (Gaultheria procumbens, Zones 3–8, 8–1), is one of the iconic plants of the eastern North American forest. Frequenting cool, acidic, partly shaded habitats from the southern Appalachians to Labrador, this creeping evergreen shrublet sends up low, well-spaced sprigs of leathery, rounded, dark-green leaves that take on a reddish hue in cold weather. From late spring to early fall, it bears urn-shaped, pinkishwhite, quarter-inch-long, nodding flowers. Fleshy, round, bright red fruits develop in summer and often persist through the following spring. The crushed leaves and fruits taste and smell of wintergreen oil. Its rather sparse constellations of foliage are delightful in a naturalistic planting, but unsuitable if what you are looking for is a weed-smothering groundcover.

No discussion of this plant tribe would be complete without an account of the aristocratic evergreen shrub known commonly as mountain pieris (Pieris



A suckering evergreen shrub with white flowers, leatherleaf is well suited to moist sites.



A glossy-leaved evergreen groundcover, salal produces edible berries that attract wildlife.

while exploring North Carolina's Pilot Mountain in 1807, it was initially assigned to Andromeda. Of greater interest to gardeners, though, are its compact, mounded, textured habit; its lustrous, laurellike foliage; and its tassels of arching flower panicles. The conspicuous flower buds develop in summer, mature in fall, swell in winter, and finally open into fragrant lily-of-the-valleylike blossoms in spring.

Two to six feet tall and wide, resistant to the lace bugs that are the scourge of its Asian relative Pieris japonica, tolerant of a relatively wide pH range, and prospering in well-drained soil and full to part sun, mountain pieris is a perfect fit for many American gardens. Slowly growing to 18 inches tall, the cultivar 'Millstream' is a lovely addition for rock gardens. And real pieris aficianados might want to try vinewicky (Pieris phillyreifolia, Zones 7-9, 9-5), a rare, scrambling evergreen native to swamps of the Deep South.

Though their names may sound foreign, these unusual and attractive American natives from the heath family require no passports to enter our garden beds and borders. So instead of planting another pedestrian azalea, fothergilla, or non-native enkianthus, take a walk on the wild. native side of the heath family and you may discover a few new stars worth planting in your garden.

The proprietor of Odyssey Bulbs, a mailorder nursery, Russell Stafford lives in South Lancaster, Massachusetts.

TRAVELER'S GUIDE TO GARDENS

Desert Botanical Garden

by Jo Ellen Meyers Sharp



NE TRIP TO Phoenix, Arizona, and it's easy to understand why snowbirds flock there in winter. The sun is intense, warm, and brilliant, unlike anything you'll find elsewhere in the United States.

The city is also home to the Desert Botanical Garden (DBG), which has something to offer gardeners, history buffs, and lovers of succulents. It presents a living guide to the region's natural history, illustrated by a one-of-a-kind collection of native plant species from the Southwest.

Personally, I'm not a big fan of thorny plants, but seeing saguaro, barrel cactus, and ocotillo in a natural setting expanded my appreciation for these cacti and their relatives. Four looped trails lead visitors through the life and times of human and animal inhabitants of the Sonoran desert. including edible and medicinal plants. The brick-paved Desert Discovery Loop Trail traverses the Sybil B. Harrington Cactus and Succulent Galleries, which feature plants from all over the world. And the Center for Desert Living Trail demonstrates sustainable garden practices for the desert environment. This trail includes the renovated Steele Herb Garden, a savory showplace of medicinal and edible plants.

This is a garden where you'll want to be sure to bring along sunscreen, comfortable shoes, a wide-brimmed hat, and sunglasses. Though water fountains and shade islands are strategically placed throughout the gardens, the best time to visit is from late fall through spring because there is little refuge from the 100-plus degree days in summer. Winter and spring also offer the greatest show of blooming cacti and other

Looped trails at the DBG offer visitors the chance to see cacti growing in naturalistic settings.

Additional Information

Desert Botanical Garden, 1201 N. Galvin Parkway, Phoenix, AZ 85008. (480) 941-1225. www.dbg.org.

- Founded in 1939, the garden comprises 145 acres, of which 65 are cultivated.
- As part of the Reciprocal Admissions Program (RAP), AHS members receive free admission and a discount in the garden shop. (RAP benefits may not cover special events.) Regular admission: adults, \$18; seniors (60+), \$15; students, \$10; children, \$8.
- The gardens are handicap accessible.

Other sites near Phoenix worth visiting: Arizona-Sonora Desert Museum, http://desertmuseum.org. Boyce Thompson Arboretum, http://arboretum.ag.arizona.edu. **Tucson Botanical Gardens,** www.tucsonbotanical.org.

succulents. And in December, during "Las Noches de las Luminarias," the garden puts on a fabulous evening light display.

In the heat of summer, visitors may enjoy the air-conditioned comfort of the DBG's garden shop or learn more about desert gardening by perusing the collection of the Schilling Library, housed in the Nina Mason Pulliam Desert Research and Horticulture Center.

The garden is located in Papago Park, a large municipal park that includes hiking and biking trails. The lush landscape of desert plants in the garden are in striking contrast with the scrubby look of the surrounding red sandstone buttes. When the gardens are not in bloom, the big takeaway for gardeners is the value of textures, forms, and shades of green.

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

GARDEN SOLUTIONS

Monitoring the Garden

by Scott Aker

ARDENING IS A very task-oriented hobby. Behind every per-I fect, ripe tomato and dazzling blossom are a host of jobs that must be completed at the right time. Among all the tasks demanding our attention, we often skip an important one: monitoring for pests and diseases.

It's easy to understand how this happens. There are always more weeds to be pulled, more mulch to be spread, and more plants to be planted. But the foundation of integrated pest management (IPM), an important way for gardeners to care for their gardens without resorting to frequent use of synthetic pesticides, is careful and frequent observation. If you don't know what is going on in your garden, the odds are against you in keeping pests, diseases, weeds, and wildlife from compromising it.

THE POWER OF OBSERVATION

I must confess that I didn't start monitoring my personal garden until I became a pest management specialist at a public garden. At first, the challenge of trying to locate and identify pests was daunting, but I took my time and just started looking and noting what I saw. As time passed, I learned about the intricate battles going on in every corner of the garden, and I gained a sense of when to intervene and when to let nature take its course. Ever since, I have taken the time to monitor all my gardens-both personal and professional—carefully.

I learned early on that, with the exception of deer, the most damaging organisms are often the tiniest. Mites, scale insects, and thrips can multiply so quickly that there is little time to react once you see damage. In my experience, the most trustworthy tool for catching them early is a simple white sheet of paper attached to a clipboard. Starting on the first warm days of spring, I tap foliage



Monitor plants regularly, including checking the undersides of leaves, to catch problems early.

over the paper to see what is lurking on the plants in my garden. Spruce spider mites first make their appearance on dwarf Alberta spruce as early as March, and the maroon oval crawlers of hemlock woolly adelgids appear in April. You can find something roaming around on your plants almost any time during the growing season.

I also had to learn to open my eyes to a broader spectrum of things. A hand lens helps me see the smallest organisms

Resources

Garden Insects of North America by Whitney Cranshaw. Princeton University Press, Princeton, New Jersey, 2004.

IPM for Gardeners by Raymond Cloyd, Philip Nixon, and Nancy Pataky. Timber Press, Portland, Oregon, 2004.

and brings to light the differences between the little creatures scurrying around on the paper. As I got more experienced, I learned to identify translucent phytoseid mites, which move much faster than the two-spotted spider mites and spruce spider mites that are their prey. Tiny black ladybird beetles are also hard to see at first because, unlike their flashy orange cousins, they are a little larger than the period at the end of this sentence, and they lack any orange coloration. These are very effective at controlling mites, scale crawlers, and aphids, but because they are so small, few gardeners even know when they are present. (Suggestions for insect identification guides are listed in "Resources," left.)

I've also honed my eyes to key in on the visual cues plants display when they are having a problem. I make it a habit to turn over some leaves to see what is happening on their undersides, and I look at some old leaves as well as the new ones

on the ends of branches. That first little bit of fluffy residue, indicating the fungal disease botrytis, on a nearly hidden leaf inside my peony and the telltale little yellow spot that heralds the arrival of early blight in the tomato patch no longer go unnoticed. Once I spot diseases just getting started, I try to remove the diseased portion, and, if necessary, treat the rest of the plant with the appropriate remedy to prevent new infections. With diseases in particular, preventive treatment—or at least very early treatment

duce the overwintering eggs of pests and mites. It turned out the opposite was true. The oil spray was much more effective in killing the overwintering beneficial insects and mites than it was in killing pests. Without the predatory mites and insects to control them, pest populations exploded. If you still spray your entire garden in late winter or early spring, I suggest monitoring your plants, spraying only when you see pest populations growing to damaging levels.

By combining the principles of IPM– regular monitoring and very targeted



To identify tiny organisms, such as these beneficial black ladybird beetles, a hand lens is helpful.

is the only way to keep plants healthy. Without careful examination, the early signs of disease can easily be missed, and it makes little sense to treat the plant when the damage has already been done.

This brings up another important element of IPM—keeping records. It's critical to keep notes about pest and disease problems you encounter, because they are likely to recur. By keeping records over the years, you can enhance your ability to catch pests and diseases early.

CHANGING PRACTICES

Finding out how effective predatory mites, lacewings, and minute ladybird beetles are at controlling pests led me to rethink some standard operating procedures. Not so many years ago it was common practice for gardeners to spray their entire gardens with horticultural oil in late winter. The conventional wisdom was that horticultural oil is a relatively "safe" pesticide, often accepted even in organic gardening, that would re-

treatment of pests and diseases—with those of organic gardening, you can greatly reduce, or even eliminate, the need for synthetic pesticides. With frequent monitoring, I have learned that I can tolerate five or 10 mites on that white sheet of paper, and that if I am willing to wait, I might see some predatory mites or insects the next time I monitor—a clear signal that I don't need to intervene.

This spring, take the time to look carefully at your garden. You'll be rewarded with an early warning of potential problems, and I think you'll also discover that keeping tabs on what is going on in the garden ecosystem you have created will give you a greater sense of confidence and satisfaction.

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

Gardening Q&A with Scott Aker

REVERSION OF VARIEGATED PIERIS

I planted a variegated Japanese pieris in my garden last fall. The plant is flourishing, but all the new growth is plain green.

-G.B., North Chesterfield, Virginia

Many cultivars of Japanese pieris (*Pieris japonica*) have new growth that starts out red and gradually turns green as it matures; sometimes this is mistaken for a type of variegation. But I assume your plant is the cultivar 'Variegata', which has white variegation along the edges of the leaves. Take a close look at the plant. If you can still see variegated growth, remove all the reverted green foliage back to the point where the variegation occurs. If you do a thorough job of this, the variegated growth may resume. If you can't find any variegation, you will have to replace it with another variegated pieris.

COMPOST SAFETY

I would like to amend my soil with the compost my municipality offers. Because many residents spray herbicides and fertilizers on their lawns, I wanted to find out if any harmful chemicals in these products might remain in the compost when it is mature.

—T.V., Springfield, Missouri

You don't need to be concerned about using the compost. Most municipal compost is derived from leaves, which are not likely to contain pesticide residue. Even if there is a significant amount of grass clippings in the compost—and that grass was treated with pesticides or herbicides—it is unlikely that significant amounts would remain in the finished product, because of the heat of the composting process breaks down or volatilizes any residues. Research on finished compost derived from plants treated with pesticides has shown this to be the case.

—S.A.

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

HOMEGROWN HARVEST

A Rainbow of Heirloom Snap Beans

by Samantha Johnson

ADMIT IT—I'm particular about the beans in my garden. My goal is to have a rainbow of colors, patterns, flavors, and types, and growing heirlooms has allowed me to bring this vision to life. So, you might ask, what distinguishes an heirloom bean from any other bean? Well, heirlooms are historic—they are usually at least 50 or 60 years old and often, much older. Thus, they are not only time tested, but most come with a rich heritage. Their popularity may be due to flavor, heavy production, ease of cultivation, or a combination of traits that keep them in demand.

My focus in this article is on heirloom snap beans (Phaseolus vulgaris). These beans are harvested when their pods are tender and seeds are immature, hence another common name: green beans. Even within this subset of beans, the range is delightfully broad: there are

bush and pole types; pods may be green, purple, yellow, or spotted; and there are variations in flavor, size, and yield. These heirlooms are open-pollinated, meaning that their mature seeds can be collected for the following season's crop, and plants will generally remain true to type.

GROWING GUIDELINES

Beans can be grown in a wide range of locations and soil types. Warm temperatures and lots of sunshine are the main ingredients for a successful harvest. They thrive in slightly acidic soil with a pH of 6.0 to 6.5, so test the soil prior to planting and amend it accordingly.

Bush beans are compact plants that grow one to two feet tall and do not require support. They tend to produce a concentrated harvest—an advantage if you like to freeze or can some of your bounty. To avoid a lapse in your bush bean harvest,



'Dragon's Tongue'

make successive sowings every two or three weeks throughout the summer.

Pole beans, with their twining stems and impressive growth, rely on the vertical support of a trellis, fence, or poles to grow and thrive, some reaching 10 feet or more. Pole beans can be harvested over a much

Sources

Baker Creek Heirloom Seeds, Mansfield, MO. (417) 924-8917. www.rareseeds.com. Seed Savers Exchange, Decorah, IA. (563) 382-5990.

www.seedsavers.org.

Sustainable Seed Company,

Petaluma, CA. (877) 620-SEED. www.sustainableseedco.com.

longer season than bush types, and are more productive overall.

When summer temperatures exceed 90 degrees Fahrenheit, beans will often cease to set pods and flowers may drop. Plants generally resume production once more moderate temperatures return.

PEST AND DISEASE PREVENTION

Although beans are susceptible to a few diseases such as root rot, most can be avoided by rotating beans with non-legumes on a three- or four-year rotation cycle, and by allowing plenty of space for air circulation. To reduce the spread of diseases, such as bacterial blight, avoid touching bean plants when they are wetwhen they are dew-covered in the early morning or immediately after watering or rain.

A few pests, such as the bean leaf beetle and the Mexican bean beetle, can cause damage to leaves

and significantly reduce yields. Control them with biological insecticides approved for use on food crops.

Deer and rabbits love beans, so keep them out of your garden with appropriate fencing.

RECOMMENDED VARIETIES

BUSH BEANS: 'Empress' Originally introduced by Gurney's Seed & Nursery Co. as Experimental Bean 121, 'Empress' is unmatched in my garden in terms of production, reliability, and flavor. If I could only plant one variety, it would be this one. Five- to six-inch pods are stringless and straight. 55 days.

'Royalty Purple Pod' A steady producer that yields large, vibrant purple, flavorful, five-inch pods. Pods turn green after cooking. Introduced in 1957. 55 days.

'Dragon's Tongue' Cream-and-purplemarbled pods are large and flattened, with superb flavor. Can be used as a snap bean or dried and shelled. A 19th-century Dutch heirloom. 55–60 days.

'Pencil Pod Golden Wax' This creamy yellow-podded bean offers quality, taste, and a bit of contrasting color. Introduced in 1900. 50-65 days.

POLE BEANS: 'Lazy Housewife' The name is said to have derived from it being one of the first stringless snap beans, thus reducing the work involved in preparation. Although slow to mature, it produces right up until frost. Brought to America by German immigrants before 1810. 75-80 days.

'Kentucky Wonder' Popular variety that dates back to the mid-1800s, known for its impressive productivity of flavorful seven- to nine-inch pods. 58-64 days.

ENJOYING THE HARVEST

Harvesting beans is simple—in fact, it's a snap! The key to having tender and flavorful snap beans is picking them regularly. During the peak season, every day or so I harvest any pods that have

Planting Basics

GETTING STARTED Beans thrive in full sun and perform best in well-drained soil.

Beans are warm-weather crops, so avoid planting them until all danger of frost is past and the soil has warmed to above 60 degrees F.

Prior to planting, seeds can be inoculated with nitrogen-fixing bacteria to enhance their ability to "fix" nitrogen from the soil into a form that is useful to plants. Inoculants are readily available from seed companies and garden supply stores.

An inch of water per week is usually sufficient for bean plants. Although regular weeding is important, avoid disturbing the plant's shallow roots.

SPACING Sow beans directly outdoors one inch deep. Bush types should be planted two to four inches apart in single or double rows spaced two to three feet apart. Plant pole types two to four inches apart along a fence or trellis, or around a teepeestyle support.

DAYS TO MATURITY 50 to 80+ days from seed, depending on the type.

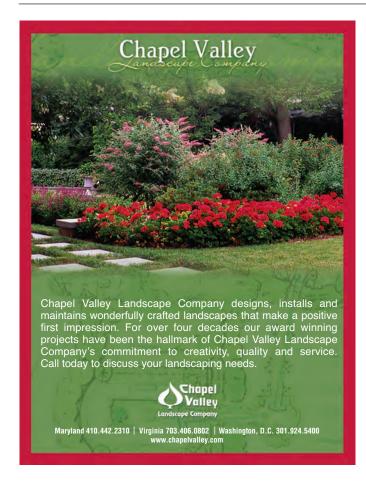
—S.J.

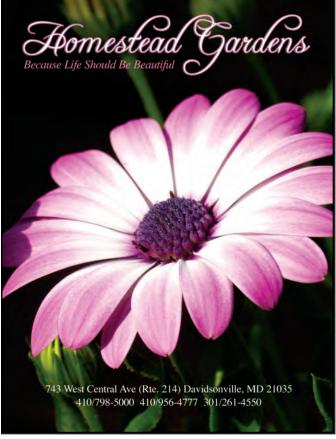
reached the appropriate size. By keeping them continually picked, I've found individual plants produce for longer periods of time.

I love to gather handfuls of fresh beans from many different plants. Snapped and cooked, I serve them all together with melted butter and sprinkled with freshly ground pepper. Combining different varieties into one dish makes it easy to experience the subtle nuances of each flavor.

Whether you enjoy your beans fresh, or prolong their goodness through canning or freezing, you'll find these heirlooms enhance your gustatory experience.

Samantha Johnson is the author of several books, including a forthcoming book on gardening for children. She gardens on a farm in northern Wisconsin.







Recommendations for Your Gardening Library

Free-Range Chicken Gardens

Jessi Bloom, with photographs by Kate Baldwin. Timber Press, Portland, Oregon, 2012. 222 pages. Publisher's price, softcover: \$19.95.

AS ANYONE who owns free-range chickens can tell you, the vigorous scratching and pecking of our beloved birds can make



having a beautiful garden seem out of reach. But Jessi Bloom, a landscape designer and longtime keeper of hens, believes you can have both, and she sets out to prove it in this cheerful and attractive book.

She starts from the ground up with ideas for coop designs, considerations for choosing pathway and mulching materials, and basic landscape design principles covered

from a chicken-friendly perspective. The plant lists are extensive, with inspiration for hedgerow plants to screen views and noise, flowering plants too tough for the chickens to bother, and shrubs with fragrances to mask any potential odors.

The biggest surprise for me in reading this book was her positive approach to adding elements that make your garden fun for the chickens. Mirrors, bug logs, water features, and dust bath areas keep both birds and people entertained. Most of the plant lists are also geared towards the enjoyment of the chickens, with the goal of providing fruit, seeds, and places to scratch and hide. I confess it hadn't occurred to me to plant things specifically for my chickens' enjoyment, so Bloom's idea that it's possible to have enough food and fun in the garden for everyone was a refreshing viewpoint.

There's only one topic that I wish had been covered more thoroughly, and that is solutions to chickens eating and digging up plants you'd rather they didn't. While Bloom devotes a few pages to innovative ideas for protecting plants, I would have liked a whole chapter on this, with photos of many solutions to what I find a vexing issue.

Overall, this is a useful and inspiring book for people who love both gardening and chickens. The full-color photographs on almost every page show the inventive design solutions in practice in real gardens. Bloom's obvious enthusiasm for creative design and for her birds will inspire both novice and experienced chicken owners to create a garden space that hens and humans can inhabit harmoniously.

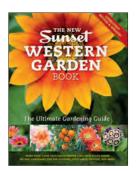
—Genevieve Schmidt

Genevieve Schmidt is a landscaper, garden writer, and keeper of hens in Arcata, California.

The New Sunset Western Garden Book

Sunset, Menlo Park, California, 2012. 768 pages. Publisher's price, softcover: \$34.95.

IF YOU GARDEN west of the 100th meridian, you likely own at least one worn and dog-eared copy of the Sunset Western Gar-



den Book. From its detailed proprietary climate zone maps to its inclusion of western natives, over its 80 years in existence it has become the lingua franca of gardeners from Tacoma to Tucson.

From early in its history, small botanical drawings have illustrated individual plant species in the Western Garden Book. One of the biggest breaks with tradition in the newly re-

leased ninth edition is the abandonment of botanical drawings in favor of more than 2,000 color photographs.

With both the eighth and new ninth edition opened sideby-side on my desk, I compared the new photos with the old botanical drawings for a dozen of my favorite plants. As a photographer (and I must disclose here that a handful of my own images appear in the ninth edition), I found that the truer colors, more detailed close ups, and general photo-realism of the new images trumped the more muted watercolor-like drawings. Damianita daisy, sundrops, and Baja fairy duster all fairly glowed on the page. And yet, there were cases where the old botanical drawings did a better job of illustrating the size and shape of the plants. I found myself wanting more than one photo of each species.

Some other highlights of the new edition are the inclusion of more plant species. For example, the number of agaves grew from 13 to 26. The last section of this edition also has brand new how-to guides covering everything from growing bulbs to wildflowers to veggies. Speaking of edibles, the coverage of these plants is noticeably bulked up.

In this digital age, I expect a complete and searchable electronic version of the book is the next step, but for now we will have to make do with Sunset's Plant Finder, a mobile application covering 2,000 plants, released in February to coincide with the publication of the new edition.

—Scott Calhoun

Scott Calhoun is an award-winning author of six books about gardening in the American West. He also runs Zona Gardens (www.zonagardens.com), a landscape design studio based in Tucson, Arizona.

GARDENER'S BOOKS

The Latest Crop of Edible Gardening Books

If THE proliferation of books focused on edible gardening is any indication, clearly one of the hottest topics *de jour*—if not THE hottest—in horticultural circles is growing your own food. You might be wondering how much there can possibly be to say on the subject. Judging from this sampling of the latest titles to arrive off the presses, the sky's the limit when it comes to the angles and niches to explore, as well as the particular expertise each of the authors has to offer.

Fans of the farm-to-table movement will find the concept translates easily to their gardens, thanks to *Grow Cook Eat* by Willi



Galloway (Sasquatch Books, \$29.95). Each herb, vegetable, and fruit profiled includes helpful growing information, luscious photographs, and mouth-watering recipes. For Galloway, the best part of growing your own is the ability to enjoy delicacies grocery stores don't carry, especially the ones most of us don't even realize are edible and tasty. Radishes, for example, can provide much more

than their piquant roots—the leaves can be used like spinach, and the flowers and seed pods are tasty, too.

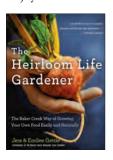
The One-Block Feast by Margo True and the staff of *Sunset* magazine (Ten Speed Press, \$24.99) chronicles the experiences of



a professional magazine staff—people who don't necessarily work directly with plants and animals on a daily basis—producing food at their offices in northern California. The project began with the idea of a "well-thought-out, well-planned meal" and grew from there. The well-illustrated book includes recipes, practical details about growing the edible plants involved, tips for tending bees and chickens,

and instructions for making wine, vinegar, beer, and other projects that contributed to the menu.

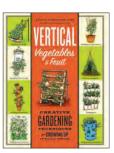
Anyone getting into or already into heirloom gardening will enjoy the *Heirloom Life Gardener* by Jere and Emilee Gettle



(Hyperion, \$29.99). Part memoir, part manifesto, part manual on cultivating heirloom varieties, this book begins with a compelling account of how and why the Gettles' business, Baker Creek Heirloom Seed Company, was born and gives a brief history of heirloom seeds in America. Then it dives into the colorful world of heirlooms, focusing on growing guidelines for the authors' favorite 50 from amaranths to

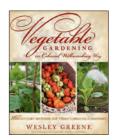
watermelons, all accompanied by large, lovely photographs.

Vertical Vegetables & Fruit (Storey Publishing, \$16.95) is packed with ideas for space-challenged gardeners to make the



most of what they do have. "A surprising variety of plants can be trained to grow up just about anywhere, anytime," writes Rhonda Massingham Hart in the introduction, then proceeds to explain the ins and outs—or rather the ups and downs—of tapping into all this upward potential. The book covers techniques and other practical details to consider, as well as the plants that do best in vertical situations.

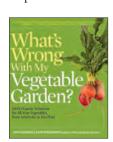
For history buffs, there's *Vegetable Gardening the Colonial Williamsburg Way* (Rodale, \$30). The book presents



the "best advice for the management of your kitchen garden from the most notable gardeners and botanists of the 18th century," according to historic gardener Wesley Greene, who has experimented with and applied this advice for many years in Colonial Williamsburg's vegetable gardens in Virginia. The book also serves up some fascinating insights

into Colonial life and tidbits on the origins of various edible plants, all supplemented by beautiful color photographs.

Chances are, if you grow edibles, you'll encounter some kind of problem—an onslaught of pests, yellowing or drooping



leaves, or poor production for one reason or another. What's Wrong With My Vegetable Garden? by David Deardorff & Kathryn Wadsworth (Timber Press, \$24.95) is a straightforward troubleshooting guide for all sorts of common conundrums you may face in the garden, which you can look up by individual vegetable or by symptoms particular to a plant fam-

ily. It's full of useful photographs, charts for diagnosing problems, numerous organic solutions, and hints for avoiding problems in the first place.

—Viveka Neveln, Associate Editor

GARDENER'S NOTEBOOK

Horticultural News and Research Important to American Gardeners

PLANT SELECT ANNOUNCES 2012 WINNERS

The Plant Select® program, jointly administered by Denver Botanic Gardens and Colorado State University, has recognized six plants for 2012. Every year, the program consults horticulturists and nurseries to recognize plants that thrive in the often harsh, dry environment of the high Rocky Mountain plains. Experts





Lacy filigree daisy, top, and 'Ruby Voodoo' rose, above, are among the 2012 winners.

evaluate varieties based on a wide range of criteria from performance in different garden situations to uniqueness.

Two of the 2012 winners are new to horticulture: the dramatically pink and orange Fire Spinner™ ice plant (Delosperma 'PooiS') and the 'Ruby Voodoo' rose. The remaining four recommended plants are: Cape forget-me-not (Anchusa capensis) with cobalt blue flowers, lacy filigree daisy (Anthemis marschalliana), weeping white spruce (Picea glauca 'Pendula'), and fernlike Dalmatian daisy (Tanacetum cinerariifolium). For more information on the Plant Select varieties and the selection process, visit www.plantselect.org.

Several other regional and national programs give outstanding plants special recognition each year. Click on the link with this article on www.ahs.org to see the list of other award winners for 2012.

UPDATED REQUIREMENTS FOR DESCRIBING **NEW PLANT SPECIES**

Latin may be a dead language, but to scientists it's been alive and well, thanks to Carl Linneaus's Latin-based system of scientific nomenclature. However, some recent changes to the way new plant species are named aim to bring the field of botany into the 21st century. Instead of requiring botanists to not only give every new species Latin-based names but also go through the painstaking process of writing a formal description of the plant in Latin as well, the International Botanical Congress has decreed that as of January 1, 2012, new species can now be described in English or Latin.

Another requirement that has been relaxed is that these descriptions had to be published in a printed journal—now they can be published exclusively in electronic form. "The rule originally was established so that you had to publish in an unalterable form," explains Joe Kirkbride, a taxonomist at the U.S. National Arboretum in Washington, D.C. "The art of printing has changed I don't know how many times-from the block letters of the Gutenberg press to electronic printers and photocopiers—and as printing has altered, the rules have been reinterpreted as well." The goal is to speed the publication process, and Kirkbride points out that avoiding the higher costs that go along with printed publications will open the door to more publications from botanists in less developed countries.

About 2,000 new species of plants, algae, and fungi are formally named every year, an important initial step in assessing and ultimately conserving biodiversity. While the rule changes are intended to simplify the process, some botanists are concerned that allowing English descriptions will actually muddy the waters. "You really had to know the rules and the process, so this acted as a filter," notes Kirkbride. "Someone who's not a botanist couldn't just a tack a name on something." He is also concerned that changing the linguistic requirement may alienate non-English speakers. "With Latin, everybody was at the same disadvantage," he says.

A summary of the new rules appeared in the January 2012 issue of the online journal PhytoKeys.

NEW SPECIES NAMED IN HONOR OF OVERLOOKED FEMALE BOTANIST

In 1766, when Jeanne Baret boarded French explorer Antoine de Bougainville's ship L'Etoile, she was breaking the law. Baret joined de Bougainville's expedition to circumnavigate the globe as French botanist Philibert Commerson's assistant. However, women were not allowed aboard





The fruit, above, and flower, left, of newly discovered Solanum baretiae, named in honor of Jeanne Baret. an 18th-century female botanist.

French naval vessels at the time, so she disguised herself as a man. Together, she and Commerson collected an estimated 6,000 specimens over the three-year expedition. While scores of plants were named for Commerson, Baret's contributions to the field went relatively unknown and unacknowledged. University of Utah biologist Eric Tepe aims to change that and has commemorated her efforts by naming a new plant he discovered, *Solanum baretiae*, in her honor.

Commerson frequently fell ill during the expedition, so most of the fieldwork was done by Baret. It was she who collected perhaps the most famous specimen of the expedition—the bougainvillea vine named in honor of the ship's captain.

Commerson's notes indicate that he intended to name a species from Madagascar for Baret, but he died before he could publish most of his work. That plant's highly variable leaves struck him as an appropriate representation of his "multifaceted" assistant. For similar reasons, Tepe's team felt that the *Solanum* species was a fitting tribute because its flowers are violet, yellow, or white, and its leaves vary significantly in shape. Tepe collected the species in a region of Ecuador known for its impressive biodiversity.

FIRST SITES CERTIFICATIONS

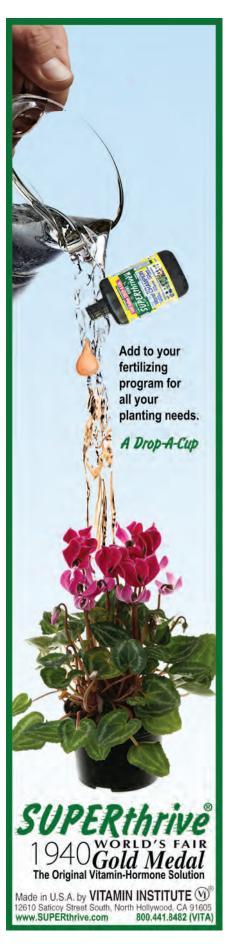
What do a playground made out of shoes, a college campus park with a sophisticated water detention system, and an industrial complex with a staff-maintained vegetable garden have in common? The Sustainable Sites Initiative (SITES) announced in January that the St. Charles, Missouri, campus of Novus International Inc., the Green at College Park of the University of Texas at Arlington, and the Woodland Discovery Playground at Shelby Farms Park in Memphis, Tennessee, are its first certified landscape projects. These three projects were selected out of more than 150 pilot sites under evaluation since 2010.

First created in 2005, SITES is the landscape architect's answer to the Leadership in Energy and Environmental Design (LEED) rating system for environmentally friendly and energy efficient buildings. The American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center in Austin, Texas, and the United States Botanic Garden in Washington, D. C., partnered to designate 15 requirements and 51 flexible credits (covering soil restoration, use of recycled materials, land maintenance approaches, and other aspects of design and construction). Landscapes are rated on a four star scale, and each of the newly certified locations received three stars.

The SITES certification system is still in the evaluation phase, collecting feedback from the pilot program landscapes and the public until June 2012. The goal is to release the ratings system and reference guide in 2013. For more information, visit www.sustainablesites.org.



The water detention system at The Green at College Park at the University of Texas at Arlington prevents stormwater runoff from flooding a nearby creek and cleanses it for reuse.



PEOPLE and PLACES in the NEWS

William Cullina Receives 2012 Scott Medal

The 2012 recipient of the Scott Arboretum at Swarthmore College's prestigious Scott Medal and Award is William Cullina, executive director of the Coastal Maine Botanical Gardens (CMBG) in Boothbay, Maine. Since its establishment in 1929, each year the Scott Medal and Award recognizes an individual, organization, or corporate body whose contributions to "the science and art of gardening" have inspired gardeners across the country to appreciate "beauty of the outdoors, develop a greater knowledge and love of plants and flowers, spread the gospel of better planting and designing, and arouse a wider interest in better planting and more beautiful gardens among all citizens."

Cullina previously served as CMBG's director of horticulture and plant curator. Prior to that, he held various roles at the New England Wild Flower Society in Massachusetts for 15 years. He is also a recognized expert on native plants, the author of five horticultural reference books, and a skilled native plant photographer.

Tom Carruth Named Curator of the Huntington's Rose Collection

The Huntington Library, Art Collections, and Botanical Gar-



Tom Carruth

dens in San Marino, California, has appointed Tom Carruth as the E. L. and Ruth B. Shannon Curator of its Rose Collection. An award-winning rose breeder, Carruth most recently served as director of research, marketing, and licensing at popular wholesaler Weeks Roses in Wasco and Pomona, California. He has introduced more than 100 rose hybrids—several of which are All-America Rose Selections win-

ners. His efforts have garnered him quite a few national and

international awards, including the American Horticultural Society's Luther Burbank Award for outstanding plant breeding in 2011. Carruth will succeed rosarian Clair Martin, who retired last July after 28 years in the position. Established in 1908, the Huntington's rose garden comprises three acres and more than 1,200 cultivars and 4,000 individual shrubs.

Botanical Garden For Sale

When the University of California at Los Angeles (UCLA) accepted the donation of a Japanese garden and adjacent house next door to their urban campus in 1965, it pledged to maintain the grounds in perpetuity. Unfortunately, the high cost of maintenance and the fact that the garden is not used by any academic programs have necessitated the property's sale. In February, the Hannah Carter Japanese Garden went on the market with a \$4 million price tag, much to the consternation of local gardeners and national conservation groups.

A gift from UCLA's Board of Regents member Edward Carter and his wife Hannah, the property represents an architectural and horticultural artifact. Los Angeles-based landscape architect A. E. Hanson first developed the hill-side site in 1923, and in the 1950s and 1960s, Japanese garden designers Nagao Sakurai and Kazuo Nakamura redesigned the landscape as a Japanese garden, incorporating a tea house and entry gate from Japan.

"It demonstrates how, soon after the war, California quickly turned to the inspiration, timeless beauty, and healing qualities of traditional gardens in Japan," says Bill Noble of the Garden Conservancy, one of the first organizations to rally for the property's preservation. "A spirit of authenticity as a private retreat also permeates the Hannah Carter garden; it's one of the very few private Japanese gardens open to the public." Learn more at www.hannahcarterjapanesegarden.com.

—Н.Т.

ONLINE INVASIVE PLANT ATLAS

Kudzu (Pueraria montana var. lobata) choking out native trees and shrubs on the East Coast and purple pampas grass (Cortaderia jubata) overruning landmarks such as Redwood National Park and Big Sur in California are just two examples of invasive plants that are causing enormous environmental damage in North America. To combat the spread of these and other invasives, the National Park Service, the University of Georgia Center for Invasive Species and Ecosystem Help, the Invasive Plant Atlas of New England, and the Lady Bird Johnson Wildflower Center in Texas have teamed up to launch an online invasive plant atlas of the United States.

The atlas focuses on non-native plant species that aggressively outcompete their native counterparts. It divides plants into six categories: aquatics, grasses, herbs and forbs, shrubs and subshrubs, trees, and vines; and each entry includes species in-



A house overgrown with invasive kudzu.

formation, images, distribution maps, and links to where the plants have been reported as invasive.

The site draws from data collected by government agencies at local to federal levels, exotic pest/invasive plant councils, invasive species councils, academic institutions, and other expert organizations. However, its primary purpose is to educate and inform the general public, especially since many of the problematic species are popular garden plants that have escaped into natural areas. View the online atlas at www.invasiveplantatlas.org to learn about invasives in your region.

News written by Editorial Assistant Helen Thompson.

In Memoriam: Wolfgang Oehme

by Jane Berger

One of the giants of 20th-century landscape architecture, Wolfgang Oehme, died in mid-December 2011, at age 81. His loss is deeply felt by countless designers, architects, horticulturists, and others across the country.

Wolfgang's formidable knowledge of plants and love of nature set him apart from most others in his field. It was the dri-



Wolfgang Oehme

ving force in his long partnership with James van Sweden, who wrote that he never forgot the moment he first saw one of Wolfgang's gardens: "There was no lawn, just a profusion of color and texture, the fluid movement of foliage and ornamental grasses....Instantly, I was a believer."

Through their firm, Oehme van Sweden & Associates, the two invented the New American Garden style, an aesthetic that reveled in dramatic, bold plant combinations, embraced

the winter landscape as well as the rest of the seasons, and changed the face of gardens throughout the United States.

I first met Wolfgang in the mid-1990s at the U.S. National Arboretum. I was studying the plants in the Friendship Garden with two colleagues—all of us recent graduates in landscape design—when a small man with a big smile appeared and engaged us in conversation. He'd just had his car inspected nearby and decided to come over and see how his plants were doing. He shyly revealed that he'd designed the garden. "Are you really Wolfgang Oehme?" we chorused, totally star-struck and completely amazed that the famous land-scape architect would take the time to talk to us.

But that was Wolfgang. He never stood on ceremony. When David Lilly, a member of the Federal Reserve Board of Governors, approached Oehme van Sweden to design new



Oehme helped design the Federal Reserve headquarters garden.

gardens for the Fed's headquarters in Washington, D.C., van Sweden informed Wolfgang he'd have to wear a tie to lunch at the Fed. He did as instructed, but David Lilly later told van Sweden he knew he had the right team when he noticed

that Wolfgang was wearing Earth shoes.

Wolfgang's passion for plants was evident to everyone. He shared his vast knowledge freely, and his joy and enthusiasm were infectious. One moment that sticks in my memory is of the scrum around Wolfgang one year at MANTS—the annual January show of the Mid-Atlantic Nurservmen's Trade Association in Baltimore, Maryland. As Wolfgang sauntered along from booth to booth, admiring the new and the



Oehme designed many residential landscapes like this one in Maryland.

not-so-new plants on display, 15 or 20 people encircled him, hanging on his every word.

Wolfgang was also a man of many firsts: He persuaded Maryland nursery owner Kurt Bluemel and other notable plantsmen to start importing the ornamental grasses he needed for his work. He was the first person in the United States to grow swamp spurge (Euphorbia palustris); he persuaded a local nursery to propagate mountain mint (Pycnanthemum muticum), a plant he stumbled across at a Baltimore herb festival.

In his own garden, in Towson, Maryland, he lined the front drive with his favorite plant, giant fleeceflower (*Persicaria polymorpha*), planted native hackberry trees to provide food for migrating birds, and left an old, hollow apple tree in place as a shelter for animals.

His planting designs remain on display at the Federal Reserve, atop the roof gardens at Reagan National Airport, at the National World War II Memorial, the Chicago Botanic Garden, and in many other public gardens, commercial sites, and private gardens across the country and overseas. In his life, Wolfgang profoundly changed the way millions think about gardens. Thankfully, his legacy will endure both in his gardens and in the work of the people he influenced.

A garden designer and blogger, Jane Berger lives in Woods Hole, Massachusetts.

GREEN GARAGE® by Rita Pelczar

Contributing editor Rita Pelczar reports on products she has found useful or innovative in her garden, with an emphasis on earth-friendly products and supplies.

It's time to gear up for another growing season. Early spring is a great time to look over your tools, see if any need sharpening, mending, or replacing, and to line up your supplies so that you're ready to go as soon as the ground thaws and temperatures start to climb.

Protecting Hands

If you're hard on gloves, like I am, some new gardening gloves are probably in order. The MadGrip Pro Palm Knuckler Garden-



ing Glove fom Gordini is a good choice for jobs where protection from blisters and scrapes is important. These machine washable gloves have a seamless construction and a thermoplastic rubber injected palm that is particularly effective for reducing vibration stress from various kinds of power equipment. Those rubber palms also provide an excellent non-slip grip, and the breathable knit back helps keep hands cool. Available at Ace Hardware and Northern Tool & Equipment.

Woman's Work continues to provide a fine selection of gloves designed with women in mind. What I like most about their machine-washable Garden Gloves with Arm Saver is the coverage they offer my forearms, considering the poison ivy that somehow finds its way into my gardens. With elbow-length cuffs that are secured by a pull cord cinch, and a UPF rating of 50+, they also protect from sun, insect bites, and scratches. The back of the hands and cuffs are made of cotton sateen with a touch of lycra for flexibility. The palms are durable synthetic leather. Available from www.womanswork.com.

Knee Comfort

When it's time to get down on the ground to plant, thin, or weed, kneepads may be your best friend. I've discovered they help re-



duce wear and tear on aging joints, and unlike foam cushions, the pads move with you as you progress down a row or through a bed. On Your Kneeze Pleez kneepads use something called mini-cell bun foam, supplied by a manufacturer of kayak seats, to provide more durable and substantial padding than many kneepads. They are eas-

ily held in place with a pair of Velcro straps, and quickly dispelled my initial concern that they might feel cumbersome or awkward. Available from www.joy-us.com.

Un-kinkable Hose

Hoses can get heavy when you have to drag them from bed to bed, and kinks in the line reduce the flow of water and take

time to straighten out. JGB Enterprises offers a solution to these problems with the Tuff Guard "Perfect Garden Hose." First of all. it's woven fiber core is very lightweight— 35 to 50 percent lighter than conven-



tional garden hoses. And the outside is wrapped with a flexible helix coil that prevents kinking, and provides protection from crushing. Visit www.tuffguardhose.com to locate a dealer near you.

Plugger-Planter

Last fall I planted a lot of bulbs using a tool from ProPlugger called the 5-IN-1 Landscape Plugger. It significantly reduced my



planting time and effort, particularly where I naturalized the bulbs in the lawn. This tool is made of steel, so it's heavy duty, and it has several advantages over hand-held bulb planters: it allows you to stand up while you dig your planting holes, and use your foot to press the cylinder into the soil. And you can dig several holes before you need to empty the cylinder of soil, so your digging goes fast. Adapter plates can be placed on the business end of the cylinder to adjust the planting

depth to two, four, or six inches.

The plugger can also be used for plugging lawns, removing weeds (it's particularly good for wild onion), and even planting beds and border edgings, although several cylinders-worth of soil may need to be removed for this last task, depending on the size of your bedding plants. ProPlugger offers Coco-Peat Disks, made of coconut fiber, that expand to five times their size to fill the holes created by removing the plugs taken from turf or in weed removal. Available from www.ProPlugger.com.

A contributing editor for The American Gardener, Rita Pelczar lives in North Carolina. She is the editor-in-chief of the AHS's Homegrown Harvest (Mitchell Beazley/Octopus USA, 2010).

REGIONAL HAPPENINGS

Horticultural Events from Around the Country

NORTHEAST

CT. MA. ME. NH. NY. RI. VT

RAP MAR. 24–APR. 15. **Spring Flower Show.** Buffalo & Erie County Botanical Gardens. Buffalo, New York. (716) 827-1584. www.buffalogardens.com.

RAP MAR. 27. **Designing a Night Garden.** Class. Brooklyn Botanic Garden. Brooklyn, New York. (718) 623-7200. www.bbg.org.

MAR. 29. **Hands-on Pruning.** Workshop. Garden Education Center of Greenwich. Cos Cob, Connecticut. (203) 869-9242. www.gecgreenwich.org.

RAP APR. 11. **Spring Bulbs.** Guided tour. Stonecrop Gardens. Cold Spring, New York. (845) 265-2000. *www.stonecrop.org*.

RAP APR. 12 & 19. **Introduction to Backyard Vegetable Gardening.** Class. The Fells. Newbury, New Hampshire. (603) 763-4789 x3. *www.thefells.org.*

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

Flower and garden shows that offer free or discounted admission to AHS members or present AHS awards are designated by a symbol. For details on the specific benefits offered, visit www.ahs.org/events/index.htm and click on "Flower and Home and Garden Shows."

APR. 14. **Northern Gardening Symposium.** Lecture series, activities. New England Wild Flower Society. Vermont Technical College. Randolph Center, Vermont. (508) 877-7630. *www.newfs.org.*

APR. 19. **The Intimate Garden.** Lecture. Bedford Garden Club. Bedford, New Hampshire. (603) 488-5001. www.bedfordnhgardenclub.org.

APR. 25. **Spring Ephemerals.** Lecture. Connecticut Chapter of the Hardy Plant Society. The Solomon Welles House. Wethersfield, Connecticut. *www.cthardyplantsociety.org.*

APR. 27 & 28. **Spring Plant Sale.** Middlesex Conservation District. Westford, Massachusetts. (978) 692-9395. E-mail: frances.gillespie@ma.usda.gov.

Looking ahead

RAP MAY 18 & 19. Merryspring Plant Sale. Merryspring Nature Center. Camden, Maine. (207) 236-2239. www.merryspring.org.

MID-ATLANTIC

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

THROUGH APR. 29. **Orchid Mystique: Nature's Triumph.** Plant & art exhibits. U. S. Botanic Garden. Washington, DC. (202) 225-8333. *www.usbg.gov.*

MAR. 28. Shenandoah Valley Plant Symposium: "A Gardener's Palette." Best Western Inn and Suites Conference Center. Waynsboro, Virginia. (540) 942-6735. E-mail: parksandrec@ci.waynesboro.va.us.

MAR. 30. **Unusual Broadleaved Evergreens.** Talk and tour. Scott Arboretum at Swarthmore College. Swarthmore, Pennsylvania. (610) 328-8025. *www.scottarboretum.org.*

RAP MAR. 31. Lahr Native Plant Symposium: Inspiring New Directions. Lecture series, plant sale. U. S. National Arboretum. Washington, DC. (202) 245-4523. www.usna.usda.gov.

APR. 13. **Pennsylvania Herb and Garden Festival.** York Expo Center/Memorial Hall. York, Pennsylvania. (717) 846-1848. *www.PAHerbandGardenFestival.com.*

APR. 20 & 21. American Daffodil Society Convention & Flower Show. Maryland Daffodil Society. The Sheraton North. Towson, Maryland. E-mail: marylanddaffodil@gmail.com. www.daffodilusa.org.

RAP APR. 25–28. **Spring Plant Sale.** University of Delaware Botanic Gardens. Newark,

National Cherry Blossom Festival Turns 100

IN 1912, Tokyo Mayor Yukio Ozaki presented the District of Columbia with a most unusual gift: 3,000 cherry trees. They came at the urging of First Lady Helen Taft to represent a lasting friendship between the two countries. Every year since then, Washington, D.C., residents and tourists alike have enjoyed clouds of cher-



Cherry blossoms at the Tidal Basin

ry blossoms around the Tidal Basin in spring. This year, D.C. celebrates the 100th anniversary of those original saplings with an extended five-week festival from March 20 to April 27.

The 2012 National Cherry Blossom Festival will feature many events highlighting Japan's art, culture, and music, beginning with an opening ceremony on March 25. Organizers have also launched a smartphone app, a photo contest, and an online compe-

tition for the country's favorite cherry tree variety between white-blossomed Yoshino cherry (*Prunus* ×*yedoensis*), pink-blossomed 'Kanzan' (aka 'Kwanzan'), and pink-blossomed, autumn-flowering Higan cherry (*P. subhirtella* 'Autumnalis').

Several local public gardens have planned their own cherry blossom events in conjunction with the festival, including an outdoor exhibit, self-guided tour, and lecture series at the U. S. National Arboretum highlighting its own cherry collections.

For more information, visit www.nationalcherryblossomfestival.org. —Helen Thompson, Editorial Assistant

Delaware. (302) 831-0153. http://ag.udel. edu/udbg/events/annualsale.html.

Looking ahead

MAY 12 & 13. Garden Fair. The State Arboretum of Virginia at Blandy Experimental Farm. Boyce, Virginia. (540) 837-1758. www.blandy.virginia.edu.

MAY 18. Spring Wild Flower Symposium. The Wintergreen Nature Foundation. Wintergreen, Virginia. (434) 325-7451. www.twnf.org.

SOUTHEAST

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

MAR. 28. South Georgia Native Plant & Wildflower Symposium. University of Georgia, Tifton Campus Conference Center. Tifton, Georgia. (229) 391-6868. www.sgnpws.org.

MAR. 29-APR. 1. Festival of Flowers. Providence Hospital Campus. Mobile, Alabama. (251) 639-2050. www.festivalofflowers.com.

RAP APR. 12–15. Spring Plant Sale. Birmingham Botanical Gardens. Birmingham, Alabama. (215) 414-3900. www.bbgardens.org.

APR. 13–15. 9th Annual Bloom 'n' Garden Expo. Williamson County Master Gardeners Association. Franklin, Tennessee. (615) 973-2112. www.bloomngarden.com.

APR. 14. Georgia Native Plant Society's Annual Plant Sale. McFarlane Nature Park. Marietta, Georgia. (770) 343-6000. www.gnps.org.

RAP APR. 14. Plantapalooza. Plant sale. The State Botanical Garden of Georgia. Athens, Georgia. (706) 542-1244. www.botgarden.uga.edu.

RAP APR. 18. Gardening in Containers. Class. Atlanta Botanical Garden. Atlanta, Georgia. (404) 876-5859. www.atlantabotanicalgarden.org.

APR. 21. Planting Your Seasonal Vegetable Garden. Workshop. Callaway Gardens. Pine Mountain, Georgia. (800) 225-5292. www.callawaygardens.com.

Looking ahead

MAY 11 & 12. Wildflower Whimsy. Festival. Highlands Botanical Garden. Highlands, North Carolina. (828) 526-2221. E-mail: michelleruigrok@gmail.com.

MAY 20-23. North Carolina Master Gardener Conference. Asheville, North Carolina. (828) 299-3645. www.ncmastergardeners.org.

NORTH CENTRAL

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

RAP MAR. 26. Spring Show Plant Sale. Ol-

brich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. www.olbrich.org.

MAR. 31. Community Garden Resource Fair. Gardening Matters, St. Paul, Minnesota, (612) 821-2358. www.gardeningmatters.org.

APR. 3. Seed Starting with Mini Greenhouses. Class. Minnesota State Horticultural Society. Roseville, Minnesota, (651) 643-3601. www.northerngardener.org.

APR. 9. The Joys of Container Gardening. Talk. Hennepin County Horticultural Society. Robbinsdale, Minnesota. (763) 551-1884. www.hchs-gardeners.org.

APR. 14. Gardening Saturday. Demonstrations, plant sale, activities. Grand Forks Horticulture Society. NDSU Extension Service. Fargo, North Dakota. (701) 780-8229. www.ag.ndsu.edu/grandforkscountyextension.

RAP APR. 21. David Howard: My Gardening Life. Lecture. Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. www.chicagobotanic.org.

RAP APR. 21 & 22. Fellows Riverside Gardens Daffodil Show. Exhibit and plant show. Mill Creek Metro Parks. Fellows Riverside Gardens. Youngstown, Ohio. (330) 740-7116. www.millcreekmetroparks.org.

RAP APR. 22. Tree First Aid: Protect Your Investment. Workshop. The Brenton Arboretum. Dallas Center, Iowa. (515) 992-4211. www.thebrentonarboretum.org.

RAP APR. 27. **NSA Arbor Day Plant Sale.** Nebraska Statewide Arboretum. University of Nebraska. Lincoln, Nebraska. (402) 472-2971. http://arboretum.unl.edu.

APR. 27-29. Orchard In Bloom Garden Show. Holliday Park. Indianapolis, Indiana. (317) 251-9253. www.orchardinbloom.org.

RAP APR. 28. Butterfly Gardening. Class. Taltree Arboretum. Valparaiso, Indiana. (219) 462-0025. www.taltree.org.

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

RAP MAR. 31. 55th Annual Garden Festival. Zilker Botanical Garden. Austin, Texas. (512) 477-8672. www.zilkergarden.org.

RAP APR. 7 & 8. Spring Plant Sale. Crosby Arboretum. Picayune, Mississippi. (601) 799-2311. www.crosbyarboretum.msstate.edu.

RAP APR. 11. Container Gardens and New Plants for 2012. Lecture. Botanica, The Wichita Gardens. Wichita, Kansas. (316) 264-0448. www.botanica.org.

RAP APR. 14. Big Bloom. Plant sale & garden festival. South Texas Botanical Garden & Nature Center. Corpus Christi, Texas. (361) 852-7875. www.stxbot.org.

APR. 14 & 15. Spring Garden Show. New Orleans Botanical Garden. New Orleans City Park. New Orleans, Louisiana. (504) 483-9386. http://garden.neworleanscitypark.com.

RAP APR. 15. Butterfly Gardening. Workshop. Botanical Garden of the Ozarks. Fayetteville, Arkansas. (479) 750-2620. www.bgozarks.org.

APR. 26-28. Herb Days. Demonstrations, plant sale, exhibit. St. Louis Herb Society. Missouri Botanical Garden. St. Louis, Missouri. (314) 577-5100. www.mobot.org.

RAP APR. 28 & 29. Orchid Heaven: 41st Annual Show & Sale. Heart O' Texas Orchid Society. Zilker Botanic Gardens. Austin, Texas. (512) 477-8672. www.hotos.org.

SOUTHWEST

AZ, CO, NM, UT

APR. 7. The Spring Garden. Workshop. Santa Fe Botanical Garden. Santa Fe, New Mexico. (505) 471-9103. www.santafebotanicalgarden.org.

APR. 14. The Ultimate Home Garden Tour. Tucson Botanical Garden. Tucson, Arizona. (520) 326-9686. www.tucsonbotanical.org.

RAP APR. 14 & 15. Spring Bulb Show. Red Butte Garden and Arboretum at the University of Utah. Salt Lake City, Utah. (801) 585-0556. www.redbuttegarden.org.

APR. 27–29. Maricopa County Home & Landscape Show. Arizona State Fairgrounds, Phoenix, Arizona. (602) 485-1691. www.maricopacountyhomeshows.com.

Looking ahead

RAP MAY 11 & 12. Spring Plant Sale. Denver Botanic Gardens. Denver, Colorado. (720) 865-3500. www.botanicgardens.org.

WEST COAST

CA, HI, NV

MAR. 30. Plant It, Grow It, Eat It. Teachers' workshop. Life Lab. Santa Cruz, California. (831) 459-3833. www.lifelab.org.

MAR. 31. Garden Tour for the Senses. San Diego Horticultural Society. San Diego, California. (619) 296-9215. www.sdhortsoc.org.

MAR. 31. Spring Garden Tour. California Native Plant Society, South Coast Chapter. South Los Angeles County, California. (310) 629-0500. www.sccnps.org.

RAP MAR. 31. Upgrade to a Water-Smart Landscape. Workshop, lecture. The Gardens at the Springs Preserve. Las Vegas, Nevada. (702) 822-7700. www.springspreserve.org.

RAP APR. 14. California Native Garden Grand Opening. South Bay Botanic Garden. Southwestern College. Chula Vista, California. (619) 421-6700 ext. 5371. E-mail: whomyak@swccd.edu.

RAP APR. 15. Day of Fruit. Displays, activities. California Rare Fruit Growers. South Coast Botanic Garden. Palos Verdes Peninsula, California. (310) 544-1948. www.southcoastbotanicgarden.org.

APR. 21 & 22. California Poppy Festival. Antelope Valley California Poppy Reserve. Lancaster, California. www.poppyfestival.com.

APR. 29. Native Canoe Plants and History. Walk & talk. Foster Botanical Garden. Honolulu Botanical Gardens. Honolulu, Hawaii. (808) 522-7066. www.honolulu.gov/parks/hbg.

Looking ahead

MAY 4-6. Grow! A Garden Festival. Los Angeles County Arboretum & Botanic Gardens. Arcadia, California. (626) 821-3222. www.arboretum.org.

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

MAR. 31-APR. 1. Saga Goryu Ikebana Exhibition. Portland Japanese Garden. Portland, Oregon. (503) 223-1321. www.japanesegarden.com.

RAP APR. 12. Rose Gardening in the Country. Talk. The Wyoming Prairie Rose Society. Cheyenne Botanic Gardens. Cheyenne, Wyoming. (307) 637-3114. www.botanic.org.

RAP APR. 16. Design Your Garden for Four Season Interest. Class. Idaho Botanical Garden. Boise, Idaho. (208) 343-8649. www.idahobotanicalgarden.org.

APR. 21-MAY 13. Lilac Days 2012. Show, festival, plant sale, guided tour. Hulda Klager Lilac Gardens. Woodland, Washington. (360) 606-7359. www.lilacgardens.com.

APR. 22. Spring Plant Sale. Northwest Perennial Alliance. North Seattle Community College. Seattle, Washington. (425) 647-6004. www.n-p-a.org.

RAP APR. 28. Designed to Eat: Combining Edibles with Ornamentals for the Table.

Class. Center for Urban Horticulture. University of Washington Botanic Gardens. Seattle, Washington. (206) 685-8033. http://depts.washington.edu/uwbg.

Renovated Huntington Japanese Garden Reopens

ON APRIL 11, the Huntington Library, Art Collections, and Botanical Gardens in San Marino, California, will reopen its newly renovated Japanese Garden, orig-



The Japanese Garden at the Huntington

inally constructed in 1912. The \$6.8 million project was completed this spring in honor of the garden's 100th anniversary.

"The Japanese Garden is arguably the most popular spot at the Huntington and has drawn more than 20 million visitors since the institution opened to the public in 1928," says James Folsom, the Telleen/Jorgensen Director of the Botanical Gardens. "It is a garden that functions on multiple levels at once; a magical place, intimate and

inspiring. At the same time, it teaches us about Japan's unique landscape traditions, craftsmanship, horticulture, and rituals."

The project included a restoration of the garden's central piece of architecture, a traditional Japanese house from the late 19th century, and the addition of two new features: a traditional Japanese tea house and a tea garden.

The Huntington will offer two special lectures in conjunction with the reopening ceremonies. On April 12, Soshitsu Sen, a grand master of chado, will give a talk and demonstration of a traditional Japanese tea ceremony. On April 17, Folsom will speak about the garden's centennial and the challenges and discoveries behind the scenes during the renovation. For more information, visit www.huntington.org.

California Native Plant Week

IN 2010, the California legislature passed a bill to establish California Native Plant Week every April with the goal of preserving the state's rich variety of native species and raising awareness about the importance of biodiversity. Sponsored by the California Native Plant Society (CNPS), this year's celebration runs from April 15 to 22.

CNPS chapters and botanical gardens across the state will host native plant sales, wildflower shows, gardening workshops, lectures, school programs, hikes, and many other events. For more information and a full event schedule, visit www.californianativeplantweek.org.

—Helen Thompson, Editorial Assistant

Looking ahead

MAY 8. Tip-Toe Through the Trilliums. Guided hike. Montana Native Plant Society. Missoula, Montana. (406) 258-5439. www.mtnativeplants.org.

RAP MAY 19. Annual Plant Sale. Alaska Botanical Garden. Anchorage, Alaska. (907) 770-3692. www.alaskabg.org.

CANADA

APR. 7. Cherry Tree Walk & Talk. VanDusen Botanical Garden. Vancouver, British Columbia. (604) 257-8335. www.vandusengarden.org.

RAP APR. 27–29. Royal Botanical Gardens Home and Garden Show. Royal Botanical Gardens. Hamilton, Ontario. (905) 527-1158. www.rbg.org.

RAP APR. 28 & 29. Spring Plant Sale. The Gardens at Horticulture Center of the Pacific. Victoria, British Columbia. (250) 479-6162. www.hcp.ca.

Looking ahead

RAP MAY 18-21. Plant Sale. Toronto Botanical Garden. Toronto, Ontario. (416) 397-1341. www.torontobotanicalgarden.ca.

GREAT ELIZABETHAN GARDENS



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PRONUNCIATIONS AND PLANTING ZONES

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

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

Actea simplex ak-TEE-uh SIM-pleks (USDA Zones 4–8, AHS Zones 8–1)

Aeonium arboreum ee-O-nee-um ar-BOR-ee-um (9-11, 12-8)

Agarista populifolia ah-guh-REES-tuh pop-yewlih-FO-lee-uh (6-9, 9-1)

Agave xylonocantha uh-GAH-vee zy-lon-uh-KANthuh (8-10, 12-6)

Aleurites fordii al-vew-RY-teez FORD-ee-eve (8-10.10-7)

Andromeda polifolia an-DROM-eh-duh pol-ih-FOlee-uh (2-6, 6-1)

Anemone ranunculoides uh-NEM-o-nee ruh-nungkyew-LOY-deez (4-8, 8-1)

Artemisia schmidtiana ar-teh-MEEZ-yuh shmit-ee-AN-uh (5-8, 8-4)

Athyrium felix-femina var. asplenioides uh-THIHree-um FIL-iks-FEM-ih-nuh var. uh-splee-NOYdeez (6-9, 9-1)

A. niponicum A. nih-PON-ih-kum (5–8, 8–1) Brunnera macrophylla bruh-NEH-ruh mak-ro-FILluh (3-7, 7-1)

Chamaedaphne calyculata kam-ee-DAF-nee kalik-yew-LAY-tuh (3-6, 6-1)

Clematis recta KLEM-uh-tiss REK-tuh (4-11, 9-1) Eubotrys racemosa yew-BOT-riss ras-eh-MO-suh (5-9, 9-1)

E. recurva E. ree-KUR-vuh (5–8, 8–1)

Eupatorium rugosum vew-puh-TOR-ee-um ROOgo-sum (4-8, 8-2)

Gaultheria procumbens gawl-THEER-ee-uh pro-KUM-benz (3-8, 8-1)

G. shallon G. SHAL-lon (6–9, 9–1)

Geranium pratense juh-RAY-nee-um pray-TENsee (4-8, 8-1)

Ipomoea batatas ih-po-ME-uh buh-TAH-tus (10-11, 11-1)

Leucothoe axillaris loo-KO-thoh-ee ak-sih-LAIRiss (6-9, 9-6)

L. davisiae L. day-VIS-ee-ee (6-8, 7-1)

L. fontanesiana L. fon-tan-ee-zee-AN-uh (5-8, 8-3) Lyonia ferruginea ly-O-nee-uh fair-oo-JIN-ee-uh (8-10, 10-1)

L. fruticosa L. froo-tih-KO-suh (8–10, 10–1) L. ligustrina L. lih-gus-TRY-nuh (4–9, 9–1)

L. lucida L. LOO-sih-duh (7–9, 9–1)

L. mariana L. mar-ee-AN-uh (5-9, 9-1)

Lysimachia ciliata liss-ih-MAHK-ee-uh sil-ee-AYtuh (5-8, 9-3)

L. congestiflora L. kon-jes-tih-FLOR-uh (7-9, 9-6) L. nummularia L. noom-yew-LAIR-ee-uh (4-8, 8-1) Magnolia acuminata mag-NOLE-yuh ak-yew-min-AY-tuh (4-8, 8-2)

M. ashei M. ASH-ee-eye (7–9, 9–7)

M. campbellii M. cam-BEL-lee-eye (7–9, 9–7)

M. cylindrica M. sih-LIN-drih-kuh (6-9, 9-6)

M. denudata M. deh-new-DAY-tuh (6–9, 9–6)

M. fraseri M. FRAYZ-yer-eye (6–9, 9–6)

M. grandiflora M. gran-dih-FLOR-uh (7–9, 9–1)

M. × **kewensis** M. kew-EN-sis (6-9, 9-6)

M. kobus M. KO-bus (5-9, 9-5)

M. liliiflora M. lih-lee-ih-FLOR-uh (4-9, 9-1)

M. × loebneri M. LOBE-ner-eve (4-9, 9-5)

M. macrophylla M. mak-ro-FIL-uh (6–9, 9–6)

M. obovata M. o-bo-VAY-tuh (5-9, 9-5)

M. salicifolia M. sal-iss-ih-FO-lee-uh (6-9, 9-6)

M. sargentiana M. sar-jen-tee-AN-uh (7-9, 9-7)

M. sieboldii M. see-BOWL-dee-eye (6-9, 9-7)

M. xsoulangeana M. soo-lan-jee-AN-uh (5–9, 9–5)

M. sprengeri M. SPRENG-ger-eye (7-9, 9-7)

M. stellata M. stel-LAY-tuh (4-9, 9-5)

M. tripetala M. try-PET-uh-luh (5-9, 9-5) M. ×wiesneri M. WEEZ-nur-eye (5-9, 9-5)

Mahonia nepalensis mah-HO-nee-uh

neh-PAL-en-siss (8-9, 9-8)

Molinia caerulea moh-LEEN-ee-uh see-ROO-leeuh (5–9, 9–1)

Ophiopogon planiscapus of-fee-o-PO-gon plan-iss-KAY-pus (6-11, 12-5)

Oxalis vulcanicola auk-SAL-iss vul-kan-ih-KO-luh (9-11.12-8)

Perilla frutescens peh-RILL-uh froo-TESS-enz (0-0.12-1)

Persicaria microcephala pur-sih-KAIR-ee-uh my-kro-SEF-uh-luh (5-8, 8-1)

Picea pungens PY-see-uh PUN-jenz (3-8, 8-1) Pieris floribunda py-AIR-iss flor-ih-BUN-duh (5-8, 8-5)

P. phillyreifolia P. fih-lih-ree-ih-FO-lee-uh (7-9, 9-5)

Polygonum cuspidatum pah-lih-GO-nay-tum kus-pih-DAY-tum (8-10, 11-7)

Ricinus communis rih-SY-nuss com-YEW-niss (0-0.12-1)

Syneilesis aconitifolia sin-ee-LEE-sis ak-o-ny-tih-FO-lee-uh (4-8, 7-4)

Torreya taxifolia tor-REE-uh tak-sih-FO-lee-uh (8-10.10-8)

Trifolium repens try-FO-lee-um REP-enz (4–8, 8–1) Trillium luteum TRIL-ee-um LOO-tee-um (5-7, 7-4)

Woodwardia unigemmata wood-WARD-ee-uh oo-nih-JEM-ah-tuh (8-9, 9-8)

Zenobia pulverulenta zeh-NO-bee-uh pul-vur-yew-LEN-tuh (5-9, 9-5)

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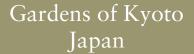
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PLANT IN THE SPOTLIGHT

Shredded Umbrella Plant—Rebel of the Aster Family

by Grahame Ware

THREDDED UMBRELLA plant (Syneilesis aconitifolia, USDA Hardiness Zones 4–8, AHS Heat Zones 7–4), a wonderful herbaceous groundcover in the aster family, is worth growing just for its astonishing foliage. Perhaps one reason it has not yet been widely embraced by American gardeners is that some consider its flowers insignificant. I beg to disagree. While it isn't very asterlike in flower or foliage, in my eyes its charm manifests itself in a kind of contrarian way—a makeover of the "pretty little composite" image, if you will.

FOLIAGE AND FLOWERS

Yes, gardeners really go gaga for this plant's foliage, which resembles a cross between a mayapple (Podophyllum peltatum) and a stinking hellebore (Helleborus foetidus). The leaves emerge in early spring, resembling little tattered umbrellas covered in ephemeral, white woolly hairs. By early summer the one-and-a-half- to two-foottall, medium green, deeply dissected leaves have fully unfurled and shed their "wool," becoming thicker and somewhat leathery.

The foliage provides a springboard for the striated purple pedicels that rise up another three feet. Opening in early to midsummer, the terminal clusters of elegant, white to frosted pink flowers look delicate yet are strong and persist for several weeks.

I'll admit that when the plant bloomed for the first time in my garden, I was a bit crestfallen. Upon taking a closer look, however, I came to appreciate the flowers' uniqueness.

Sources

Keeping It Green Nursery, Stanwood, WA. (360) 652-1779. www.keepingitgreennursery.com. Plant Delights Nursery, Raleigh, NC. (919) 772-4794. www.plantdelights.com.





CULTURAL REQUIREMENTS

Native to dry hillsides in China, Japan, Korea, and eastern Russia, shredded umbrella plant is quite drought tolerant and not particular about soil pH. It does need good drainage, however. If your soil is heavy, I suggest amending it with organic matter. It will thrive in part to full shade, but a little morning sun is fine, especially in cooler regions. I haven't noticed any pests or diseases bothering the foliage.

Provided with these simple cultural requirements, shredded umbrella plant Above: The foliage of shredded umbrella plant has a fine coating of white hairs when it emerges in spring. Left: The plant's unassuming flowers appear in summer.

blends companionably with other woodland plants, including barrenworts (Epimedium spp.), hostas, woodland saxifrages, Canton fairy bells (Disporum cantoniense), and a variety of ferns. Spreading slowly by rhizomes, plants eventually form clumps up to two feet wide. Place it near or at the back of the border so that it doesn't hide smaller plants.

SUBTLE BEAUTY

Though its flowers might not have the star power or classic beauty of its aster cousins, shredded umbrella plant-when viewed as a whole—still shines in woodland gardens, shady borders, or foundation plantings. Give this pretty little rebel a chance, and I predict you'll enjoy its subtle beauty as much as I do.

Grahame Ware is a freelance writer based in Ladysmith, British Columbia.

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