The American GARDENER

The Magazine of the American Horticultural Society



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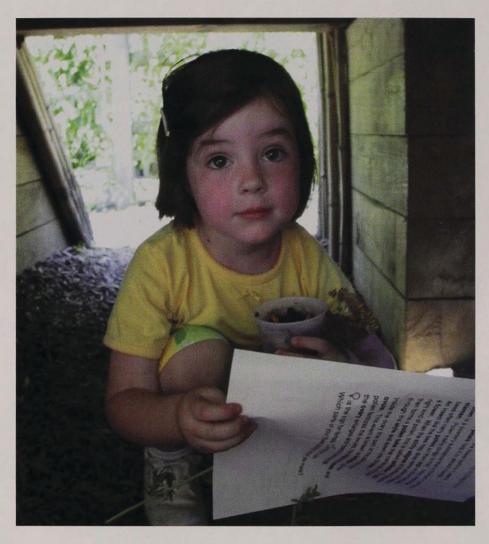
New Plants for 2003

Designing with Tropicals

Mulching 101

Flower Shows

Sarah Doesn't Care that AHS has been Inspiring and Educating Gardeners for 80 Years.



Sarah isn't all that interested in our 80th Anniversary celebration. Who can blame her? She just planted her first seed and found out that it will need water and sunshine to grow. She also learned that worms are very good for the soil—and a lot of fun to play with. Sarah is one of many children whose introduction to the joys of gardening happened because of the caring people who have supported AHS for the past 80 years. Living Lab programs at River Farm, like the one Sarah is involved in, are just a part of our larger mission to educate and inspire gardeners of all ages. We think that's pretty special and want to thank you on behalf of Sarah for being a part of that history. Take our word for it: Your support is very important to her.

She'd tell you herself, but she just spotted a butterfly on a nearby black-eyed Susan and is very busy watching it and wondering what it is doing. Thanks to you, she's about to find out.



If you'd like to make a donation to the American Horticultural Society, please contact Joe Lamoglia at (800) 777-7931 ext. 115, or visit our Web site at www.ahs.org.

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ON THE COVER: There's no denying the romantic appeal of Jasminum polyanthum. Native to China, this vigorous shrub produces fragrant white blossoms. Photograph by David Cavagnaro

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To receive an application for the Society's Intern Program, write to Trish Gibson at the address above or email her at tgibson@ahs.org. Intern application forms can be downloaded from the River Farm area of the Society's Web site at www.ahs.org.

RECIPROCAL ADMISSIONS PROGRAM

The AHS Reciprocal Admissions Program offers members free and discounted admission to flower shows and botanical gardens throughout North America. A list of participating shows and gardens can be found in this year's AHS Member Guide and also in the Membership area of our Web site. For more information, call (800) 777-7931 ext. 127.

TRAVEL STUDY PROGRAM

AHS members and friends can visit spectacular private and public gardens around the world through the Society's exclusive arrangement with the Leonard Haertter Travel Company. For information about upcoming trips, call (800) 777-7931 ext. 121 or visit the Events section of our Web site.

WEB SITE: WWW.AHS.ORG

The AHS Web site is a valuable source of information about the Society's programs and activities. It is also an important resource for getting the answers to gardening questions, finding out about gardening events in your area, and linking to other useful Web sites. AHS members can reach the membersonly section of the Web site by typing in this year's password: sunflower.

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The American GARDENER

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NOTES FROM RIVER FARM

APPY NEW YEAR! I hope each of you had a joyous holiday and that you are anticipating this new year as much as we are here at AHS headquarters. The first snow of the season blanketed the great lawn at River Farm like a puffy winter comforter and lit up the branches of each of our great trees like streaks of white lightning. To top that, the bald eagle that frequently visits our sycamore snag down by the Potomac River arrived the very morning the snow fell. He perched on a snowy branch, decorating our tree like no other.

There is so much going on here that it has been difficult to stand still long enough to take stock of these natural wonders around us. Over the past few months we have initiated several new national programs and put the finishing touches on

the planning for others already in the works. I have space only to cover a few highlights, but you can read more about all these exciting projects in the news section starting on page 7.

Updated USDA Plant-Hardiness Zone Map. This is an important and exciting project that the American Horticultural Society is working on in cooperation with the U.S. Department of Agriculture. With the USDA hardiness map and its companion AHS Plant Heat-Zone Map, we as gardeners now have critical tools that

work together to help us select exactly the right plant for the right spot. The new map will be released in March and all AHS members will receive a printed copy of the updated hardiness map in the next issue of The American Gardener.

Flower shows are blossoming everywhere and AHS has a relationship with many shows through its national awards program. The AHS Environmental Award will be presented at more than 30 flower shows to recognize environmental excellence in major garden displays. In addition, I will be speaking at a number of shows—including at AHS regional meetings in Oklahoma City and Atlanta—and our President Emeritus Dr. H. Marc Cathey is serving as a judge at others. We love to meet AHS members at these shows, so please stop and say hello.

Washington Blooms! This exciting new AHS annual event is being held right here in our own back yard the first week of April in conjunction with the famous National Cherry Blossom Festival in Washington, D.C. The whole week will be filled with festive events and amazing floral displays, but I'd particularly like to extend an invitation for you to join us on the evening of April 4 at the 2003 AHS Great American Gardeners Award banquet to help us recognize and celebrate the national horticultural heroes who are making a difference in American gardening.

The Growing Connection. To further encourage youth gardening in America, the Society has forged a partnership with NASA, the United Nations Food and Agricultural Organization, and several other groups to create a unique educational program for middle-school children in America and abroad. Growing nutritious food, learning about science, sharing across cultures, doing research, using technology, having fun—all of these are essential components of this creative new program.

As you plan exciting and inspirational activities for your new year, I hope you will consider participating in some of these AHS events!

Happy Gardening!

-Katy Moss Warner, AHS President

MEMBERS' FORUM

SHRUB ID

The article on the perennial border at the JC Raulston Arboretum (September/October issue) includes a photo on page 40 showing, on the left side, a shrub that has yellow flowers with small dark red throats. Is it a cultivar of *Abelmoschus moschatus?* I did not think this shrub was hardy in North Carolina. Whatever the identity of this shrub, I'd like to grow it here in Atlanta, which is not so different climatically from the JC Raulston Arboretum in Raleigh.

Hal Purcell Atlanta, Georgia

Bob Lyons, executive director of the JC Raulston Arboretum, responds: The plant is actually Abelmoschus manihot. It can indeed attain shrublike proportions, but while it is technically listed as a perennial from Southeast Asia, it is not hardy here to my knowledge. But it does indeed self sow vigorously and we find ourselves having to thin out the plants or removing them each year. Interestingly, this was also one of the few plants that actually returned after the bed was totally renovated and treated with methyl bromide to clean it up prior to replanting.

SOURCE FOR FLAG FLOWERS

In your September/October 2002 issue there is a picture of the American flag made using larkspur (Delphinium consolida) flowers supplied by Bodger Seeds. Can you give me the address of this seed company? None of the larkspur seeds we have bought here in the East could ever produce such dense and floriferous plants as were pictured in the flag. Maybe it's just the California sunshine that makes the difference between the spindly plants we get and the Bodger flowers, but I would like to buy some seeds, plant them, and see what happens.

Helene Moodie Alstead, New Hampshire

Editor's response: The Bodger floral flag

has generated a lot of interest. And you are right—the delphinium cultivars used in the flag created a dense planting with vivid colors that showed up well even in photographs taken from space. Bodger Seeds is a wholesale company, but the staff there referred us to Julie Chilcott, owner of Specialty Seeds, a mail-order nursery in Lompoc, California.

Chilcott says the approximately 400,000 seeds used to create the flag were sown directly in the ground on the 6.65-acre site. She also notes that the color of the 'Blue Spire,' and 'Carmine King' cultivars can vary depending on the distance from which they are viewed. Viewed close up, 'Blue Spire' takes on a more purple hue, while 'Carmine King' takes on a deeper pink hue.

Chilcott recommends planting lark-spur in full sun toward the back of a perennial border or in areas where height is needed. Sowing the seeds densely—a minimum of six plants should be clustered together—will provide a full, rich appearance in the garden. The seeds used in the flag are available by contacting Chilcott at Specialty Seeds, 202 E. Olive Ave., Lompoc, CA 93436. E-mail: Specialtyseeds@aol.com.

MORE ON FLAG AND HEIRLOOM APPLES

I enjoyed seeing the photograph of the flower flag created by Bodger Seeds. My friend Jack Bodger and his company do a lot for our local area here in Lompoc, California. At the end of their pack trials in mid-April every year, they donate many flowering plants to the Lompoc Valley Botanic and Horticultural Society. We sell these plants at our annual plant sale and the proceeds are used for plantand garden-related projects within the community.

I was also interested in the short feature about Johnny Appleseed that accompanied Rita Pelczar's article on heirloom apples in the same issue. It is my understanding that the main reason pioneers wanted to plant the apple trees was to make hard cider, a beverage not cov-

ered in some religious restrictions on consumption of alcohol.

Al Thompson Lompoc, California

Rita Pelczar responds: Production of cider was an important reason for pioneers to grow apples, but it was probably more a matter of practicality than religion. As Gayle Samuels points out in her book Enduring Roots (Rutgers University Press, 1943), many settlers avoided drinking water for fear of its ill effects—a holdover from their European origins. Cider was considered a safe alternative. Furthermore, while few of the pioneers' seed-grown apples were likely to get high grades for their dessert qualities, most, according to Samuels, were quite adequate for cider.

FAN MAIL

I began taking *The American Gardener* just last year and wanted to let you know how much I love it. In fact, I don't know how I survived without it. I read it cover to cover, learn many new things, and photocopy pages for my friends.

B.L. Homsy Santa Barbara, California

Editor's note: We're happy you enjoy the magazine and your membership in AHS. Please encourage other garden enthusiasts to become members so AHS can fulfill its mission of making America a nation of gardeners, a land of gardens.

CORRECTION

The photograph of *Cornus sanguinea* 'Winter Flame' published on page 29 of the November/December 2002 issue of *The American Gardener* was taken at Berkshire Botanical Garden, in Stockbridge, Massachusetts.

PLEASE WRITE US! Letters should be addressed to Editor, *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308, or you can e-mail us at editor@ahs.org. Letters we print may be edited for length and clarity.



AHS Programs and Events

Sky is the Limit for New AHS Program

THROUGH A NEW educational program initiated by the American Horticultural Society, school children from around the world will soon be able to share with one another the results of their experiments growing food plants from seeds exposed to high altitudes in a science balloon.

AHS is partnering with the Food and Agricultural Organization (FAO) of the United Nations and an array of national and international organizations, to—quite literally—launch "The Growing Connection: Cultivating Food, Connecting Minds,

Sunflower seeds will play a major part in the new AHS educational program.

and Harvesting Hope," a creative new educational program for middle-school children in America and around the world.

Among the other partners for the project are the National Aeronautics and Space Agency (NASA); Pennsylvania State University; the Rockland Teachers' Center Institute, a non-profit teachers group; and Laminations, a private company that is supplying growing containers called Earth BoxesTM. "The diverse resources and scientific credentials of the organizations that are partnering with AHS are what make this such an exciting program," says **Mary Ann Patterson**, AHS director of national programs and public relations.

The program will be formally unveiled on March 29 during Washington Blooms!, the AHS spring festival. Then, in April,

NASA will launch a science balloon carrying a payload of sunflower seeds and seeds of other edible plants into the Earth's upper stratosphere. The massive balloon—it will be the size of the Houston Astrodome when fully inflated—will float at an altitude of nearly 27 miles, exposing the seeds to cold temperatures, harsh solar radiation, and differential gravity.

Once the seeds return to earth, they will be sent to participating schools in America and around the world. Each school will also receive untreated "control" seeds and Earth Boxes. These self-contained growing units will be filled with a standardized soil medium that will ensure consistency for the experiment. The Earth Boxes will be planted with the seeds from the balloon and the control seeds. Participating schools will receive a specially developed curriculum that will explain the science behind what the children are doing with the seeds and support FAO's global efforts to share information about growing food plants. Children will be encouraged to use information technology to share their findings with participating students worldwide.

"This launch will connect school children around the world," says **Bob Patterson**, FAO's senior liason officer in Washington, D.C., "and bring their focus to the importance and rewards of growing food plants."

Join Us for Washington Blooms!

There's still time to make plans to join AHS for peak spring bloom in Washington, D.C., from March 29 through April 5. The week-long celebration, which coincides with the city's National Cherry Blossom Festival, kicks off with an exciting weekend of activities at River Farm.

More than 20,000 bulbs will be in bloom at River Farm, some of them in a unique bulb maze in the children's garden. There will be hands-on activities for children, a science balloon, and displays of botanical art.

During the week there will be daily tours as well as demonstrations by landscape architect James van Sweden, bulb specialists Brent and Becky Heath, Mississippi-based author Felder Rushing, and other experts.

For more information about Washington Blooms!, turn to pages 12 and 13, or visit the AHS Web site at www.ahs.org.



New AHS Mission Statement

AT A MEETING last September, the American Horticultural Society's Board of Directors approved a new mission statement that better reflects the widened scope of the Society's national programs and outreach. The Society's mission is "to open the eyes of all Americans to the vital connection between people and plants, to inspire all Americans to become responsible caretakers of the Earth, to celebrate America's diversity through the arts and sciences of horticulture, and to lead this effort by sharing the Society's unique national resources with all Americans."

According to AHS President **Katy Moss Warner**, approval of the new mission statement, "is the next step in the process our visioning committee outlined during a strategic planning session held last year." AHS Board Member **Susie Usrey**, who chairs the visioning committee, says the new mission statement "elucidates the important goals the committee established and ties in with our vision of making America a nation of gardeners, a land of gardens."

In line with the new vision and mission statement, AHS is already moving ahead with several projects, including the Growing Connection (described on page 7), an update of the USDA Plant-Hardiness Zone Map (see box, below), the upcoming launch of a SMARTGARDEN™ regional book series, alliances with groups such as America in Bloom that are promoting beautification programs (see article, opposite page), and establishing River Farm as a model for American horticulture.

Atlanta, Oklahoma City Sites for AHS Regional Meetings

THIS WINTER, AHS members are invited to participate in special regional meetings that are being held in conjunction with the Southeastern Flower Show in Atlanta and the Oklahoma Garden Festival in Oklahoma City. The AHS regional meetings will include early morning sneak previews of the flower shows, exclusive speakers, and an opportunity for question-and-answer sessions with AHS President Katy Moss



A hint of spring awaits at the Oklahoma Garden Festival. In addition to lavish displays like this one from last year's event, the show will feature a lecture by AHS President Katy Moss Warner.

Warner, who will be a featured speaker at both flower shows.

At the Oklahoma Garden Festival, the AHS meeting is scheduled for the first day of the show, which runs from January 30 to February 2. AHS members attending the regional meeting will enjoy early admission to the show, followed by breakfast and lectures by **Russell Studebaker**, garden columnist for *The Tulsa World*, and **Mark Miller**, AHS deputy director of national programs. Attendees will have a private question-and-answer session with Katy before hearing her lecture "Keep Them Growing—Making Children's Gardens Work" on the main show floor.

The AHS meeting at the Southeastern Flower Show will also be held on the opening day of the show, which runs from February 5 to 9. Attendees will get a guided preview tour of the show, including breakfast, then will join all flower show artendees in hearing Katy's presentation titled "SMARTGARDENTM: Inspiring a Nation of Gardeners." Afterwards, AHS meeting attendees will

Updated USDA Hardiness Map to Debut in March/April issue of The American Gardener

A printed copy of the revised and updated USDA Plant-Hardiness Zone Map will debut in a special pullout section of the March/April issue of *The American Gardener*. This printed version is the first to be available to gardeners, with an additional version expected later in the year. More information about public access to the map will be included in the next magazine issue.

The revised map—compiled by Meteorological Evaluation Service Company of Amityville, New York—was created using updated temperature information from thousands of weather stations throughout the United States. This edition features four new hardiness zones (12 to 15) that will make it easier for gardeners in subtropical regions such as southern California, the Gulf Coast of Texas, and southern Florida to select plants suited to their area and provide much-needed temperature information for indoor gardeners. It will also show state and county lines and county names to help gardeners identify their precise zone.

An article that accompanies the map in the March/April issue will define the zone changes reflected in the map and their relevance to the American gardener. The article will also detail how to use the new Plant-Hardiness Map in conjunction with the AHS Heat-Zone Map to establish the most meaningful guidelines for plant selection in each region.

In Memoriam: Ted Marston

Known from coast to coast for his knowledgeable garden writing, enthusiastic involvement in the world of horticulture, and engaging personality, **Theodore "Ted" Marston** died October 28 at his home in Kirkland, Washington. He was 70.

A graduate of Iowa State University with a degree in agricultural journalism, Ted founded and was publisher of *Plants Alive*, a critically acclaimed magazine focusing on house plants. Later he worked as a free-lance writer and



authored several gardening books, including *Annuals*. He was a past president of the Garden Writer's Association (GWA) and was named a GWA fellow in 1999.

Ted was an active participant in many regional and national horticultural organizations. In addition to his work with the GWA, he served on the American Horticultural Society's Board of Directors for five years and was one of three

founders of the Northwest Flower and Garden Show in Seattle, Washington.

"Ted had an incredibly inquisitive mind, a mind that was like flypaper—everything stuck to it," says long-time friend **Egon Molbak**, founder of Molbak's Nursery in Seattle. "I don't think he ever forgot anything." Ted's wife, **Dorothy**, says that her husband was an avid reader and traveler. "He was constantly reading about things—anything in the bookstore that caught his attention." As a host for many of the American Horticultural Society's Travel Study Program tours to gardens around the world, Ted was renowned for his knowledge of history, landscape design, and plants.

He was also known as an engaging conversationalist who loved to be around people. According to friend and fellow founder of the Northwest Flower and Garden Show, **Duane Kelly**, "Ted had an incredible way of connecting people—he knew and engaged people on all levels. Connecting people was his greatest gift."

-Eva Monheim, Editorial Intern

hear a private lecture with book signing by nationally recognized author **Carole Ottesen**, associate editor of *The American Gardener* and author of *The Herbal Epicure*. There will also be an opportunity for a private question-and-answer session with Katy and AHS Board member and nationally recognized perennial plant expert **Allan M. Armitage**, who is also a featured speaker at the show.

If you would like to attend one of the AHS regional meetings, pre-registration is required and is separate from registration for the flower shows. For additional information and registration forms for the AHS meetings, visit the AHS Web site at *www.ahs.org* or call Mark Miller at (800) 777-7931 ext. 117. Additional information about the two flower shows can be found through links under the National Events Calendar on the AHS Web site.

AHS in the News

THE AMERICAN HORTICULTURAL Society's leaders and programs have attracted prominent national media coverage over the last few months.

AHS President **Katy Moss Warner** was interviewed by *New York Times* garden columnist **Ann Raver** for an article, published in the November 7 issue of the *Times*, about the upcoming release of the revised USDA Plant-Hardiness Zone Map. The article discussed changes in weather and climate patterns throughout the United States and the effects these shifts are having on gardeners.

The publicity generated by Ann Raver's article attracted the interest of National Public Radio (NPR), which invited AHS President Emeritus **Dr. H. Marc Cathey** to be a guest on NPR's popular show "Science Friday," hosted by **Ira Flatow.** During the hour-long program, broadcast on November 15, Dr. Cathey discussed zone changes that will appear in the revised USDA hardiness map and explained how gardeners can use the hardiness map and the AHS Heat-Zone Map to select plants.

Another guest on the show was botany professor **David Francko** of the Miami University of Ohio, who is author of *Palms Won't Grow Here and Other Myths: Warm-climate Plants for Cooler Areas*, scheduled for release in February from Timber Press. Francko pointed out that many tropical and subtropical plants can be used in northern gardens once more accurate information about their hardiness and heat tolerance is available.

Katy was also interviewed for an article about plants blooming out of season that was published December 3 in the *Seattle Times*. The article mentioned the upcoming release of the revised hardiness map and described changes in growing conditions being experienced by gardeners around the country.

Kurt Bluemel, chair of the AHS Board of Directors, was profiled in major feature articles that ran in both the *New York Times* (October 17) and the *Baltimore Sun* (October 18). Each article emphasized Kurt's passion for ornamental grasses and described how he has championed the increased use of grasses and herbaceous perennials to create a more natural design style in American landscapes.

America In Bloom

PROMOTING THE beautification of America's cities and towns is the goal of America in Bloom (AIB), a non-profit organization that recently celebrated its inaugural year at an award ceremony and educational symposium this past fall. AHS President **Katy Moss Warner** served as a keynote speaker at the event, which was held in Reston, Virginia.

"Creating alliances with like-minded organizations is an important element of the American Horticultural Society's new mission," says Katy. "Like America in Bloom, we recognize the important role plants and green spaces play in the health and well-being of all people. We encourage communities to enhance their natural beauty by embracing public

America'

Join AHS and Master Gardeners in Cincinnati

Don't forget to mark your calendars for the 2003 International Master Gardener Conference, to be held June 18 to 21 in the greater Cincinnati and northern Kentucky area. AHS is a sponsor of this conference and several of the scheduled speakers, including AHS President Katy Moss Warner and Board Chair Kurt Bluemel, have AHS ties. Carole Ottesen, associate editor of The American Gardener, and Felder Rushing, an AHS Board member, will be speaking and conducting book signings during the conference. For more information, link to the conference Web site through the AHS Web site, or call (859) 261-7454.

parks, restoring natural areas, creating children's gardens, and hanging flowering baskets from lamp posts."

The America In Bloom program is modeled after Canada's Community in Bloom program, which in turn was modeled after a program developed in Great Britain. According to AIB director and contest chair Delilah Onofrey, the inaugural year of the America In Bloom program was a resounding success, with 38 cities participating. Awards were presented in six categories based on population size. Winning communities were Camp Hill, Pennsylvania; Fairhope, Alabama; Westlake, Ohio; Fayetteville, Arkansas; Kalamazoo, Michigan; and Chicago, Illinois.

AIB symposium attendees toured the Society's headquarters at George Washington's River Farm and were given an overview of the AHS SMARTGARDENTM program. Representatives of the award-winning communities were presented with complimentary AHS memberships.

If you're interested in getting your community involved with

the America In Bloom program, contact AIB Administrator Laura Kunkle at (614) 487-1117 or visit www.americainbloom.org.

Williamsburg Symposium

THE AMERICAN HORTICULTURAL Society, Fine Gardening magazine, and the Williamsburg Institute are co-hosting Colonial Williamsburg's 57th Garden Symposium, titled "Garden Earth: A Partnership," to be held April 6 to 8.

Based on the theme of environmentally friendly gardening, the symposium will cover topics ranging from "Unkillable Plants of the South" to "The Pleasures of a No-Lawn Landscape." Lecturers include keynote speaker AHS President Katy Moss Warner, writer and naturalist Sharon Lovejoy, botanist Arthur O. Tucker of Delaware State University, and garden writer Felder Rushing. For more information, call (800) 603-0948 or visit www. Colonial Williamsburg.org.



EVERYDAY GARDEN SCIENCE

Avoiding Plant Injury from Landscape Lights

by H. Marc Cathey

N THE late 1960s, a simple, inexpensive, and obvious redesign of street lighting fixtures by the General Electric Corporation (GE) preserved the health of millions of our trees. I was working at the USDA Agricultural Research Service (ARS) laboratories in



Beltsville, Maryland, at the time and, based on our research, we recommended that every street light fixture have adjustable internal deflectors to focus light on streets and buildings and

avoid casting light on trees and other plants. This flexibility in lighting fixtures had not been necessary for the use of incandescent, mercury vapor, and metal halide lamps because they did not put out such intense light as the new high-pressure sodium lamps that were introduced starting in 1965 to address a national concern about security in neighborhoods, business districts, and along interstate highways.

The golden yellow light cast by highpressure sodium lamps was in the middle of the visible light spectrum, where people most easily see light. The high-pressure sodium lamps were also brighter and twice as energy efficient as mercury vapor and incandescent lamps. While a 60-watt incandescent bulb emitted only 810 lumens, a 275-watt high-pressure sodium bulb emitted 25,000 lumens.

PHOTOPERIODIC EFFECTS

Our concern was what effect the installation of so many of these high-powered lights might have on plants. Several plant processes are triggered by daylength, or more accurately, the length of the dark period. Many plants "sense" darkness through the chemical changes that occur in the absence of light. If the light period

is extended, or the dark period is interrupted by sufficient artificial light, some plant process can be manipulated. Other photoperiodic processes include abscission, seed germination, and dormancy.

It was the dormancy factor we decided to investigate. If dormancy was delayed in trees and shrubs sited near the sodium lights, then we expected some serious problems to surface. Normally, trees and shrubs slow their growth as days shorten in the fall. Leaves of deciduous species are shed, and growth above ground stops. If artificial lights interfere with the longnight stimulus that triggers these critical processes, tissues will not harden properly and, as a result, will be subject to cold temperature damage.

In testing done in controlled environments at the ARS laboratories, we found that the standard mercury vapor and metal halide lamps used in street lights did not delay the onset of dormancy in plants in the fall of the year. High-pressure sodium lamps, however, supplied the red and far red region of the visible light spectrum, which delayed dormancy and promoted the continued growth of trees such as sycamores, elms, and zelkovas into winter. We were also concerned that these lights might delay or reduce flowering in daylength-sensitive plants. By placing deflectors in the street light fixtures, General Electric resolved most of our concerns and greatly reduced the likelihood that plants could be damaged.

SYMPTOMS OF LIGHTING PROBLEMS

As you walk around your garden and neighborhood this winter and spring, keep an eye out for the following characteristics of injury from lighting. I suspect that you will be able to identify a few plants that have been affected.

■ Retention of leaves: Because of delayed dormancy, normal leaf abscission—the process by which leaves drop from stems—will not occur and the shoots nearest the lamps will retain their leaves well into the next growing season.

- Continued growth: Shoots continue to elongate rather than becoming dormant. The plants will look like they are growing towards the lamps.
- Dieback: In temperate regions, plants that continue to grow rather than going into dormancy show signs of damage the following spring—the affected shoots will die back six to 16 inches only on the side nearest the lamps.
- Flowering: If your house is located near a street light, in some cases, house plants sitting on a windowsill exposed to street lighting may not flower on time. This is a rare occurrence, but chrysanthemums, Christmas cacti, poinsettias, and kalanchoes are among the plants that can be affected by street lights.

If you observe signs of light damage that you believe may be caused by incorrectly installed street light deflectors, call your local department of public works and ask if the deflectors can be adjusted.

LANDSCAPE LIGHTING

Street lights are not the only source of problems with delayed dormancy in landscape plants. The high-powered security and landscape lights that some homeowners and commercial landscape managers are installing can also cause plant damage.

To reduce the likelihood that these lights could affect the flowering schedules or dormancy of daylength-sensitive plants, be sure security lights are angled away from plants and put landscape lights on a timer so they go off automatically when they are not needed. In addition to conserving energy, your neighbors will probably appreciate the reduced glare! ••

Dr. H. Marc Cathey is president emeritus of the American Horticultural Society.

Washington Blooms!

The American Horticultural Society, in participation with the National Cherry Blossom Festival, celebrates the capital city's beauty and blooms!

MARCH 29 - APRIL 5, 2003

Washington Blooms! Schedule of Events Washington Bloom

MARCH 29 & 30, Opening Weekend Activities at River Farm

(Activities continue through April 5, no pre-registration required.)

- Help us launch the "The Growing Connection—Cultivating Food, Connecting Minds and Harvesting Hope" with a NASA science balloon on site.
- Tour the grounds and gardens featuring more than 20,000 bulbs in bloom, including a newly installed bulb maze.
- Hands-on activities for kids of all ages introduce them to the wonders of the plant world.
- Find out if you have a "Green Garage!"
- Zone in on Plants! Find out which plants give you the best chance for success in your specific zone.
- Follow along as we demonstrate a SMARTGarden™ right here at River Farm! Each day will bring a new tenet of the SMARTGARDEN™ program to life.

See the exacting beauty of botanical art as River Farm hosts a comprehensive collection from well-known botanical artists.

Food and beverage will be available at River Farm for purchase separately at the Washington Blooms! Spring Garden Celebration.

MARCH 31-APRIL 5
Great Garden Workshops
(Pre-registration is required.)

MONDAY, MARCH 31 "Gardening For Your Palate"

Spend a day learning about the farm and food plant revolution. This morning's speaker will discuss the importance of food plants and the rise of many organic and community sustainable agricultural farms across the country. Find out how

you can integrate food plants into your land-

scape with beautiful and delicious results! Take a private behind-the-scenes tour of one of the area's most talked-about organic farming enterprises—Sunnyside Farms in Rappahanock County, Virginia.

River Farm, 10:30 a.m. to 5:00 p.m.

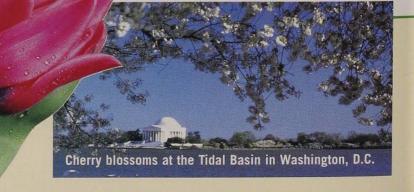
TUESDAY, APRIL 1 "Bulbs, Bulbs And More Bulbs!"

Bulbs aren't just for spring! Brent and Becky Heath will show how bulbs can provide year-round enjoyment. Learn how to mix bulb colors and textures with other plants in your garden. In the afternoon, tour some of the capital city's most beautiful natural and cultivated blooming areas including the Tidal Basin, the Franciscan Monastery, and Roosevelt Island.

River Farm, 10:30 a.m. to 5:00 p.m.

WEDNESDAY, APRIL 2
"Container Gardening:
Learn Now, Learn More Later"

Learn the art and science behind great



Join us at the American Horticultural Society's headquarters at River Farm for an eight-day celebration of the beauty of springtime in the nation's capital area. Each day you and your family can enjoy tours of spectacular gardens ablaze with blooming bulbs and trees, participate in a variety of engaging special activities, or attend informative workshops on the hottest topics in gardening today. Come for the sights—come for the inspiration!



Schedule of Events Washington Blooms! Schedule of Events

container gardening from apples to zinnias. Great design and new technology will be covered in a day of demonstrations and hands-on activities. Your fee includes a one-year subscription to the online container gardening program from the Horticulture Gardening Institute.

River Farm, 10:30 a.m. to 5:00 p.m.

THURSDAY, APRIL 3

"Gardening With A New Generation"

How do you pass on the joy and love of plants and gardening to your favorite little person? Noted television and radio personality and author Felder Rushing will share his easy tips and techniques. A highly entertaining and informative morning session will be followed by tours to creative children's gardens in the local area.

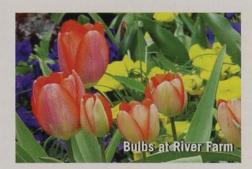
River Farm, 10:30 a.m. to 5:00 p.m.

FRIDAY, APRIL 4

"New American Garden Design"

Acclaimed landscape architect James van

Sweden will take us into the world of contemporary design through his vision of space, form and plants. Later, we will take an exciting tour of some of the spectacular city gardens designed by Mr. van Sweden. Hotel Washington, 10:30 a.m. to 5:00 p.m.



SATURDAY, APRIL 5

"Washington's Spring Garden Glory"

Get behind the scenes of some of Washington, D.C.'s most acclaimed public gardens. Tour includes Dumbarton Oaks, the Enid Haupt Garden and the Ripley Garden, and concludes with a reception at the newly renovated United States Botanical Garden.

Hotel Washington, 1:00 p.m.-7:00 p.m.

Great American Gardeners Award Banquet

at the Hotel Washington

6:30 p.m.-10:00 p.m.

On the evening of Friday, April 4, 14 of America's "horticultural heroes" will be honored with the 2003 Great American Gardeners Awards. Since 1953, the American Horticultural Society has put the spotlight on those people dedicated to plants, gardens and gardening. Whether it be the books we read for enjoyment and education, the science we depend on to make it all work, the greening of communities that bring a city together, the food we eat to be strong and healthy, or the way we engage the next generation of gardeners—these people have made a difference. Join us for cocktails and dinner and meet these wonderful people!

The Hotel Washington is AHS's headquarters hotel for the Washington Blooms! Spring Garden Celebration. It is located at 15th Street and Pennsylvania Avenue N.W., Washington, DC, 20004. AHS room rates are \$145 for an inside room and \$185 for an outside room. Please mention AHS to get these special rates. For more information about the hotel or to make reservations, call (202) 628-9760 or visit the hotel's Web site at www.hotelwashington.com. Deadline to register for rooms at these rates is March 30, 2003.

Brochure for the AHS "Washington Blooms!" festival with details and admission fees and a registration form is available at www.ahs.org. For more information call (800) 777-7931 ext. 117.



Horticultural News and Research Important to American Gardeners

Plant Hunters Rediscover Lost Rhododendrons

Three previously described but never introduced rhododendron species were among the plant treasures discovered by a group of Scottish plant hunters during an expedition to

India last October. The rediscovered rhododendrons are a low-growing species called *R. trilectorum*, the low-altitude, pink-flowered *R. arunachalense*, and *R. kasoense*, a yellow-flowered species that blooms in fall. A fourth species identified by the team, *R. boothii*, had been introduced in 1928 and 1952, but lost to cultivation.



Father-and-son team of Peter and Kenneth Cox, above, rediscover *R. kasoense*, right.

The team of nine adventurers—led by Peter Cox, one of the world's foremost authorities on rhododendrons, and his son, nurseryman and author Kenneth Cox—succeeded in penetrating the remote Indian province of Arunachal Pradesh, on the border between India and Tibet, "one of the last regions on earth to be properly explored," says Kenneth Cox.

"The heavy rainfall, steep terrain and almost impenetrable jungle give rise to a...very rich, little-known flora," explains Kenneth Cox. It is also a combination of factors that make exploration difficult. In addition, the political climate can be equally discouraging at times. A previous attempt to explore

Arunachal Pradesh—made by Peter Cox, his wife Patricia Cox, and their friend Peter Hutchison in 1965—had been curtailed by the unsettled atmosphere following the Chinese invasion



of that province. Nevertheless, it yielded three new species and tantalizing glimpses of the rich flora.

Thirty-seven years later, the team of plant explorers was able to identify 40 species.

Cox describes the October bloom of *R. kasoense*—which was in flower at the time the

team identified it—as "a very nice surprise," noting that although autumn-blooming rhododendron species were discovered as early as the 1920s and '30s, none had been brought into cultivation until recently, when *R. monanthum* was introduced. "We think *R. kasoense* is a better looking and more showy plant," says Cox. "It should be suitable for the Pacific Northwest and northern California. Crossed with hardy species, it might provide hybrids suitable for the eastern United States." An article about the expedition will be published in an upcoming issue of the *Journal of the American Rhododendron Society*.

MANY-SPLENDORED GRASS

Lemon grass (Cymbopogon citratus, USDA Zones 10–11, AHS Zones 12–1) is far more than just another pretty face in the garden. A single clump can flavor foods, provide tea, and keep you healthy to boot.

An aromatic member of a tropical genus that also includes citronella, lemon grass is a staple in Vietnamese and Caribbean cuisines. Its lemon-flavored culms—the tough, fibrous stems—are starting to find their way into American cooking. The flavorful blades can be

stuffed into baking chicken and chopped into soups and stews.

As useful medicinally as it is in the



kitchen, lemon grass can be steeped for a sedative tea that is a traditional headache remedy in the Caribbean. The essential

oil is an antiseptic with bactericidal and fungicidal qualities and has been used to treat athlete's foot, acne, and ringworm. But lemon grass's most promising use may be against colon cancer. In Thai

An attractive ornamental, lemon grass also shines in the kitchen and medicine cabinet.

and Japanese studies, lemon grass extract inhibited the development of two early markers (pre-cancerous formations) of colon cancer.

Lemon grass is also drop-dead gorgeous. In warmer climates (USDA Zone 8 and above) the handsome blue-green blades will reach six feet. In colder areas, lemon grass may survive temperatures as low as 10 degrees Fahrenheit if heavily mulched, or can be potted up and brought into a bright, frost-free place over winter.

ENDANGERED CYCADS STOLEN

Fairchild Tropical Gardens in Coral Gables, Florida, is offering a \$25, 000 reward for information leading to the arrest and conviction of the person or persons who stole 43 cycads from the Gardens between March and August 2002.



This Zamia pseudoparasitica at Fairchild is one of the cycads thieves did not take.

There is not much to go on—"no evidence, no witnesses," says Detective Edward Claughton of the Coral Gables Police Department."They have been stolen for a personal collection by an avid collector, or by someone dealing in them for profit."

Among the missing is the extremely rare Encephalartos laurentianus, "the largest and most majestic of the living cycads," says Loran M. Whitelock, author of The Cycads. Also missing is a Zamia amplifolia-a victim of habitat destruction in its native Columbia-and an enormous Zamia pseudoparasitica with eight-foot leaves. Although many cycads become huge, it's a slow process—sometimes taking 100 years or more.

Cycads have been traced back more than 200 million years in the fossil record, so the thefts are an enormous loss to

Fairchild as well as to science. Considered endangered in their natural habitats, cycads are protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Nevertheless, theft of cycads, says Claughton, is an international problem. In South Africa, trafficking in these protected plants is so commonplace the government has set up a special task force to crack down on theft. Many of the plants now have microchips embedded in them to aid in identifying them in case of theft. And South Africans must be licensed to possess a cycad.

Anyone with information about the Fairchild Tropical Gardens thefts is asked to contact Rick Echeverria, Fairchild's director of facilities and security, at (305) 667-1651 ext. 3319, or by e-mail at rechevarria@fairchildgarden.org.

NATIVE CINQUEFOIL MAKES A COMEBACK

Not all the news on the conservation front is gloomy: For the first time ever, a plant listed on the federal list of Endangered and Threatened Plants has been removed from the list because of successful conservation efforts.

Robbins' cinquefoil (Potentilla robbinsiana), endemic to the treeless alpine zone of White Mountain National Forest, was on the brink of extinction 22 years ago when it was placed on the list. Now, thanks to the concerted efforts of the New England Wild Flower Society, the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Appalachian Mountain Club, numbers of known plants have grown from a low of only 3,700 to today's more than 14,000.



Robbins' cinquefoil is making a comeback in the White Mountains of New Hampshire.

People and Places in the News

SHEPHERD'S SEEDS CATALOG FOLDS

The Shepherd's Garden Seeds catalog is no more. The popular line of heirloom and gourmet seeds will still be sold under that name through the White Flower Farm catalog and Web site, but the retail portion of Shepherd's Garden Seeds has been acquired by former owner Renee Shepherd and will be folded into her Renee's Garden business.

IN MEMORIUM: JOANNA MCQUAIL REED Legendary gardener Joanna McQuail Reed, 85, whose Longview Farm in Malvern, Pennsylvania, has been the subject of countless books and articles, died October 21, 2002.

Reed received the Pennsylvania Horticultural Society's Distinguished Achievement Medal in 1985, the Catherine H. Sweenev Award from the AHS in 2001, and numerous awards from the Herb Society of America.

Typically working in the garden until dark, she once instructed an interviewer to call her at 10:30 p.m., saying, "No, it's not too late. I'll have a long time to rest later, and there



Joanna Reed

are still so many things I want to do."

NICHE GARDENS CHANGES HANDS

Kim Hawks founded Niche Gardens in 1986 to produce quality mail-order plants and to propagate southeastern natives in an eco-friendly manner. In 17 years. Niche Gardens became one of the most successful innovative small mail-order nurseries in the country. On October 17, 2002, Hawks passed the baton into the "good hands" of the new owner, Blair Durant, who, says Hawks, is the man to bring Niche Gardens "to the next level."

GARDENER'S INFORMATION SERVICE

Our Experts Answer Your Gardening Questions

CARING FOR BUR OAK

I recently planted a young bur oak tree. We have mostly alkaline gumbo soil and the pH is 8 to 8.5. The growing season is short, winters are very cold, and we are in the third year of a devastating drought. What should I do to ensure that the tree thrives?

-J. R, VIA THE INTERNET

Bur oak (*Quercus macrocarpa*) is adaptable and does well in a variety of soils and conditions, but grows best in full sun.

"The high pH and cold climate probably are okay as long as the tree came from parents native to that area and that soil type," says Guy Sternberg of Petersburg, Illinois, coauthor of *Landscaping with Native Trees.* "Keep it well watered in summers for at least the first two to three years. Once it is well established and has its roots down into a dependable water table, it will begin to perk up and grow faster."

To help retain moisture between waterings, the entire root zone area—typically a circle around the tree with a radius as long as the tree is tall—"should be mulched two to three inches deep with organic material," says Sternberg, who recommends using a highly acidic material such as chopped oak leaves or pine straw to offset the alkaline gumbo soil.

NON-BLOOMING MOCK ORANGE

My five-year-old mock orange, *Philadelphus* × *virginalis* 'Minnesota Snowflake', receives good sunlight, water, and fertilizer, and grows well but has never bloomed. I have trimmed it moderately, but only after the time when it should have bloomed. A balanced fertilizer was applied at intervals last year and this spring. How can I get this plant to bloom?

-J. W., CAMAS, WASHINGTON

According to Phil Normandy, plant collections manager at Brookside Gardens in Wheaton, Maryland, mock oranges

WE'RE READY TO HELP: For answers to your gardening questions, call Gardener's Information Service at (800) 777-793I, extension I3I, between I0 a.m. and 4 p.m. Eastern time, or e-mail us anytime at gis@ahs.org.

flourish in lean, well-drained soil and full sun. Your mock orange is very likely a vigorous young shrub that is producing non-flowering whips. Excessive vegetation grows at the expense of the reproductive (flowering) process when the plant is fertilized.

"Leave it alone for a year or two," advises Normandy. Hold back on the fertilizer and avoid pruning it. "The lifespan of a good mock orange branch is about four years," says Normandy. Look for and retain the "little twiggy growths." These will produce flowers.

If needed, prune immediately after flowering by cutting back the outer stems that have just bloomed. Make each cut just above a strong, outer-facing bud or new shoot. Next year's blooms will appear from these buds. When pruning, remove some of the old wood close to the plant's base to allow more light to the central shoots and encourage the development of new branches for subsequent bloom.

BEST TIME TO PLANT IN PACIFIC NORTHWEST

I live in Seattle and just moved to a new home that needs lots of plantings to make it look the way I want. I have been told not to plant until fall since the summer is too warm and demanding for new plants. Is this true?

-B.Q., SEATTLE, WASHINGTON

"We, here, consider the fall the *best*, but not the *only* time to plant," says Janet Sears, Program Coordinator for the Pierce County Washington State University Master Gardeners, "because plants can take advantage of the rains in the fall and winter to encourage healthy root growth in our mild, maritime winters."

Also, most deciduous woody plants tend to do better when planted in the fall because late planting allows roots an opportunity to establish before vegetative growth begins in the spring.

"We traditionally have dry summers. Planting at that time requires extra watering during the growing season," says Sears. For the last several years, summers in Seattle have been drier than usual. October ushers in the rainy season in Seattle, when rainfall and temperature are usually optimal for setting out new plants.

ORGANIC CONTROL FOR SPIDER MITES

My lemon tree has spider mites. Is there an organic product to get rid of them?

-T.Z., TORONTO, CANADA

Spider mites are tiny sap-sucking plant pests that are commonly found on indoor plants, particularly when the humidity is low. Their presence can be detected by the stippling—loss of color—of leaves accompanied by needle-like puncture marks and a fine webbing where leaves attach to the stem.

Washing the leaves weekly with a mild liquid dishwashing detergent or insecticidal soap, followed by a thorough rinse, may work for light infestations.

For more persistent problems, use neem oil, from the tropical neem tree (Azadirachta indica). Neem oil is available under a number of brand names and can be found in most garden supply centers and many mail-order sources. Follow the product directions for use—usually weekly spray applications. Neem is also effective for controlling aphids and white flies.

To reduce the likelihood of future infestations, increase the humidity in the room where your lemon tree grows.

William May, Gardener's Information Service Volunteer, and Marianne Polito, Gardener's Information Service Manager.

OFFSHOOTS

It's So Hard to Say Goodbye

by Nancy Stedman

WHILE AGO I READ an article describing how legendary gardener Christopher Lloyd transformed Aan old rose patch by filling it completely with cannas and other tropicalissimo plants. I couldn't get beyond one thought: What happened to the old perennials and bushes? Did Lloyd relocate them, give them away, or—as I suspect—consign them to the compost pile?

I am a person who has sold off family heirlooms, seriously edited closets, and tossed out old love letters. I can, in short, move on, put the past behind me, make a fresh start. But somehow the notion of knowingly killing a plant paralyzes me. It's ironic because for years I refused to accept the true character of my tiny parcel of land (shady, and often very dry), and planted greenery that, as is said about some children, simply failed to thrive. And so I have played hostess to more than my fair share of plants that, while not exactly deadthat would be too easy-struggle along each year, making me question their right to take up space.

Sure, there have been some no-brainers. There were the heavily mildewed New England asters that sported one spidery bloom each and looked as if they were about to start some kind of gardenwide pandemic. It was easy to give those the boot. There were the daylilies that were extraordinarily robust—possibly because they never had to face the inconvenience of blooming. Some—the tall, late-blooming 'Autumn Minaret'cost double what I normally pay for mailorder perennials. But when I finally gave them all to my mother, a daylily fanatic with sun to spare, I knew they had gone to a better place.

The case is not so clear with my cimicifugas, however. I had such hopes; they were to be the highlight of my midsummer garden. I imagined their tall candelabra inflorescences creating an ethereal effect at the edge of the woods next door. The cimicifugas do, in fact, bloom a little but they tilt so alarmingly sideways to-



ward the light that they remind me of the Andrew Wyeth painting "Christina," where a young woman lies on a slope, arms outstretched, full of yearning. It's less the messiness of the cimicifugas that bothers me than this overt expression of longing—the longing to be some place where the sun shines, any place but here.

But cimicifugas are not easy plants to give away. Few people are familiar with them, and most do not have the right spot—a shady place that's relatively free of tree roots. And I still believe that if I do just one more thing-remove a tree limb, add fertilizer, or suddenly develop an aptitude for staking-that these plants will earn their keep.

My attempts at losing plants are usually more subtle than overt. I may purposely neglect the extra effort needed to nurture an ailing plant back to health kind of like putting a "Do Not Resuscitate" sign on it. Or I move plants to an out-of-the-way spot where they're not in sight and on their own.

But why play these games? Why is it so difficult to admit failure-and toss out the evidence? I think it's more than mere cheapness and the Puritanical desire to get value from everything. It's also a question of expectations. No one feels guilty about throwing out the \$5 mums we all buy each fall—because we know when we buy them that this is what we'll do.

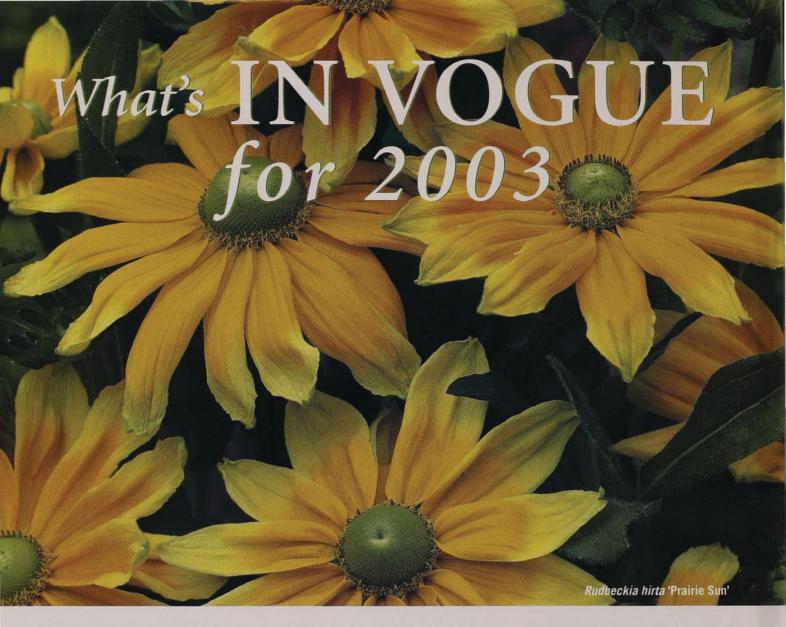
The problem comes when we get so invested in our idea of what was supposed to happen that we have a hard time accepting what really did take place. For me, the life-anddeath decisions are especially hard when—as with my cimicifugas—

I've spent several summers nurturing plants to maturity.

Still, I believe that the ability to take an objective look at your greenery is what separates a true gardener from someone who simply plays around with plants. And, as I have totally run out of room in the garden, I have begun to revise my standards for which plants stay and which have to go. Last spring, for the first time, I threw out a dozen large healthy tulips after they bloomed. Why take up space with their dying foliage, especially when the plants' vigor will decline with each passing year?

I'm hoping that, eventually, I will be able to admit I've made an error in less than four years—the time frame I'm operating under now. After all, with gardening, unlike with life, most mistakes can be undone. And the sooner, the bet-

Nancy Stedman is a free-lance writer who gardens in Bronx, New York.



THERE HAVE been overlaps between gardens and fashion ever since Adam first donned a fig leaf. Like fashion designers, plant breeders study trends; they try to anticipate what gardeners will be looking for-a new flower color, a new fragrance, greater drought tolerance or disease resistance. Both industries gear up to introduce their new lines; paralleling the launch of the upcoming season's designer fashions is the unveiling of the new plants for 2003. While designers first present their new fashions on the runways in Paris, Milan, and New York, new plants are spotlighted in seed catalogs and at nurseries and garden centers.

With new plant and seed catalogs ar-

New plant introductions come in shapes, colors, and styles to suit all kinds of gardens.

BY EVA MONHEIM

riving daily in your mailbox, the number of introductions can be mind-boggling. The competition is fierce, with each company hoping you will find space in your garden for its new releases. It is important to cast a discriminating eye over each new selection you consider, because although style may create a short-term

garden celebrity, it is the character of the plant that will determine which introductions become classics.

To assist you in your selections, here are our favorite choices for the 2003 garden season. No matter what kind of garden you have, you will find something fashionable among these latest introductions.

Annuals garden accessories

Most gardeners use annuals as accessories to fill in gaps in established plantings or provide color in early spring and late summer when many perennials are spent. But with the burgeoning interest in subtropicals and other so-called tender perennials, the division between annual and perennial is becoming blurred.

Retail sources for many of the plants described in this article are listed on page 23. For selections that were available only through whole-sale sources at the time this article went to press, the name of the wholesale distributor is listed together with contact information the first time the plant is mentioned. Contact distributors directly to locate retail sources, or ask your local nursery to order the plant.



If, as garden clairvoyants predict, yellow will be a trendy color this summer, then Thompson & Morgan's *Rudbeckia hirta* 'Prairie Sun' (USDA Zones 3–7, AHS Zones 7–1) will be all the rage. An All-America Selection, it has a crisp clean look that shouts, "Look at me!" The petals range in color from deep gold at the base to light lemon yellow at the terminals, while the central cone is an eye-catching olive green. The flowers bloom in late summer on two- to three-foot plants.

American Daylily and Perennials (www.americandaylily.com) introduces two new selections in its Patriot™ lantana series: 'Marc Cathey' and 'Deen Day Smith' (Zones II, 12–I). 'Marc Cathey', named for the American Horticultural Society's president emeritus, features a profusion of lacyedged florets similar to the appearance of white lace appliqués with clear lemon-yellow centers. The coarse-textured, dark

green leaves provide a perfect complement to the blooms. 'Deen Day Smith' opens canary yellow, but as the florets mature, they turn to an old rose pink with touches of apricot at the center of each bloom. Both are vigorous shrubby plants that flower earlier and longer than other lantanas and attract butteflies. Because lantanas tend to self sow prolifically where they are hardy, these selections have been bred not to set viable seeds.

They say that if you keep something in your wardrobe long enough, it will come back into style. The pendulum seems to have swung back toward snapdragons this year with the release of *Antirrhinum nanum* 'Tequila Sunrise' (Zones 7–9, 9–1) from Thompson & Morgan. This is the first bronze-foliaged snapdragon with an array of floral color in the warm hues—yellows, oranges, pinks, and reds. The bronze foliage provides color before the blooms emerge. Snapdragons grow best in cool weather.

Ball Horticultural Company (www. SimplyBeautifulGardens.com) is debuting Scaevola aemula 'Zig Zag' (Zones 11, 12–1), appropriately named for the white-and-purple-striped, fan-shaped flowers patterned to create a zigzag effect. The plant has a mounded and trailing habit and spreads two to four feet and grows six inches tall, making a great thick ground cover. This sun-loving plant flowers throughout the hottest of summers and performs well in drought conditions.

Million bells (Calibrachoa spp., Zones 11, 12-1) have made great inroads in the landscape industry over the past several years, and Proven Winners (www.proven winners.com) is following up on this success by introducing several new SuperbellsTM Calibrachoa cultivars: 'Blue', 'Coral Pink' and 'White'. Million bells have prolific one-inch-wide, petunialike flowers triggered by long days. The plants grow three to six inches tall, and the trailing stems vary in length from six to 20 inches. They are most often seen in containers and hanging baskets, but try them as a ground cover in bright sunny areas where they will provide color all summer.

Perennials the basic wardrobe

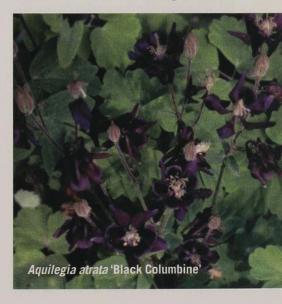
Herbaceous perennials are the basics that keep the garden well-dressed from one sea-



son to the next. We rely on these special plants to mark time and add color to the ever-changing organic tapestry of our gardens. It is through creative use of perennials that the gardener has the greatest opportunity to put together a wardrobe that is rich in textures, colors, shapes, forms, and lines.

SPRING There is always at least one new plant that causes palpitations among avid gardeners, and this year *Podophyllum* 'Kaleidoscope' (Zones 3–9, 9–1) from Terra Nova Nurseries (www.terranovanurseries. com) caught the attention of our editorial staff. This is no ordinary mayapple! Selected from a species native to the Himalayan region, this 18-inch-wide plant will stop traffic right on the footpath. It's the sensationally mottled umbrella-shaped leaves that inspire its name, but the clusters of burgundy red flowers that bloom in midto late spring certainly generate additional interest in the shade garden.

Black is a foundation color for the fashion industry, but until recently gardeners have viewed "black"-flowered plants more



as novelty items than design staples. Over the past couple of years, however, black flowers have suddenly become trendy.

Garden Medicinals and Culinaries is introducing Aquilegia atrata 'Black Columbine' (Zones 4-7, 7-1), selected from a columbine native to rocky clearings on the forested slopes of the Austrian Alps. The flowers—six to 10 per plant, blooming in May and June—are actually deep purplered like the darkest eggplant. The plant reaches nearly two feet in height and grows best in a well-aerated, organic-rich soil in part sun or light shade.

Another exciting new columbine arrives in a series called Aquilegia Origami™ (Zones 4-7, 7-1), introduced by Goldsmith Seeds. Each selection has colorful two-tone flowers that will bloom the first year from seed and attract hummingbirds. Origami selections in shades of red, rose, pink, blue, and yellow are available through Park Seed Company.

For those seeking a higher level of energy in the garden, Heuchera 'Harmonic Convergence', introduced by The Primrose Path, vibrates with silver-and-bronze marbled foliage. Soft pink floral sprays emerge in late spring through summer on this heuchera, which forms an 18-inch clump at maturity and makes a wonderful addition to the edge of a woodland garden or a partly shaded border.

SUMMER Despite the recent trend toward brighter colors in the garden, white is never out of style. Agapanthus 'Snow Storm' (Zones 8-11, 12-1), from Monrovia (www.monrovia.com), produces dense umbels of bright white flowers that do not pale in full sun. It is a compact selection reaching 27 to 30 inches in height—with a long blooming season, ideal for containers, borders, and cutting gardens.

Gardeners who live in regions with hot, dry summers will appreciate Penstemon tubaeflorus (Zones 4-8, 8-1), a new offering from High Country Gardens. It has tubular white flowers that bloom on twoand-a-half to three-foot stems in early summer. Native to Kansas and Nebraska, this easy-to-grow penstemon is deer and rabbit resistant and can tolerate more soil moisture than other penstemons.

If you are looking to attract butterflies to the garden, Terra Nova's Thalictrum aquilegiifolium 'Sparkler' (Zones 5-9, 9-5)



is a good choice. Blooming on three-foot stems, the white, powder-puff-textured flowers on this handsome new meadow rue are twice the size of its relatives. Grow it in full sun or part shade.

To add a regal touch to the summer garden, try Plum Perfect™ (Zones 5-10, 10-1), a richly colored daylily from American Daylily and Perennials. The scapes are 11 to 28 inches in height, with 31/2-inch flowers that progress from a golden center with indigo throat to a purple floral trumpet. Plum Perfect™ blooms for up to 175 days in light shade or full sun and is semievergreen. Its counterpart, Frankly Scarlet™ (Zones 4–10, 10–1), boasts a rich red blossom. Both have lush dark green foliage and are heat and drought tolerant.

Dutch Gardens is introducing an Orienpet lily aptly named 'Shocking' (Zones 4-9, 9-1), produced from a cross between an Oriental lily and a trumpet lily. The sweetly scented, eight- to nine-inchdiameter flowers have yellow-bordered, red-brush-stroked petals. The flowers

bloom on three- to four-foot stems.

Capitalizing on the resurgence of interest in calla lilies (Zantedeschia spp.), Dutch Gardens is also introducing a new selection named 'Mango' (Zones 8-10, 10-4). The intense orange-red-swirled, trumpetshaped flowers open in mid- to late summer and are dramatic as cut flowers. Calla lilies thrive in full sun or part shade.

FALL Many of us tend to overlook fall in the excitement of planning the spring and summer gardens. This year, Anthony Tesselaar International (www.tesselaar.com) is reintroducing "My Favorite Perennial Mums" (Zones 3-9, 9-1), a perennial chrysanthemum series in a mix of five autumnal shades. Planted in spring for fall blooms, these hardy mums develop a compact mound shape without the need for pinching, but will spread into enormous clumps in succeeding years.

Singing Springs Nursery is debuting Bergenia 'Appleblossom' (Zones 4-8, 9-1). This shade-loving evergreen perennial has soft pink flowers that rise on plum-red spikes above rosettes of broad, leathery leaves in spring to early summer. But the best display comes in fall, when the leaves turn various shades from yellow to bronze.

WINTER It seems that gardeners can't go through a year without a new hellebore to try, so Pine Knot Farm is releasing two new bear's claw or stinking hellebores (Helleborus foetidus). Pine Knot's 'Variegated' form (6-9, 9-1) has striking new growth that is tinged pink. The mature foliage is speckled, and the flowers are chartreuse.

'Golden Bullion' (7-9, 9-1) has bright







golden leaves that stay that color in cooler climates but tend to revert to chartreuse in warmer climates.

Trees and Shrubs the classic lines

Woody plants are the classic elements of a garden—long-term investments that provide reliable service year after year, much as a fine wool suit does in a wardrobe.

For 2003, Moon's Tree Farm (www. moonstreefarm.com) will introduce the lacebark elm (Ulmus parvifolia) cultivar 'UPMTF' (Zones 5-9, 9-5), trademarked Bosque®, a heat- and drought-tolerant selection featuring puzzlelike, exfoliating bark. Unlike traditional vase-shaped elms, Bosque® is teardrop in shape with a central leader. Eventually growing 50 to 60 feet tall and 35 to 40 feet wide, it has dark green leaves that turn golden yellow in autumn.

Moon's is also offering a new river birch, Betula nigra Dura-Heat (Zones 5-7, 7-2). It features shiny, dark green, leathery leaves that change to a soft buttery yellow in autumn. Compared to other species, Dura-Heat is more resistant to pests such as borer and leaf miner, and the close spacing of the leaves creates a dense canopy.



From Wayside Gardens comes Magnolia 'Vulcan' (Zones 5-9, 9-1), a slender tree reaching 30 to 50 feet tall and only 18 to 24 feet wide in 10 years. This New Zealandbred magnolia thrives in a wide range of soil types and looks good as a specimen or in group plantings. The huge pinkish-red flowers bloom in early to mid-spring.

Extending the flowering season is the goal of many shrub breeders, and this year Flowerwood Nursery and Plant Development Services will introduce Autumn SangriaTM (Zones 7-9, 9-5), another in its line of spring- and fall-blooming Encore Azaleas. Available from Plants by Mail, Autumn Sangria™ has luscious, bright pink flowers up to three-and-a-half inches in diameter on a mounded shrub reaching four-and-a-half feet tall by four feet wide.

Roses fashion fragrances

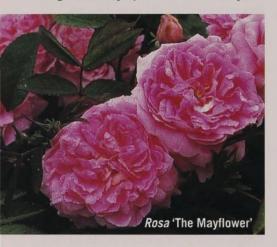
Fragrance is as important to the garden industry as it is to the fashion industry. This year's rose introductions include a slew of fragrant selections in a range of colors.

David Austin Roses (www.davidaustin roses.com) has several new introductions to tantalize the senses. The headliner is 'The Mayflower' (Zones 4-9, 9-3), hailed as a breakthrough in English roses for its continuous flowering throughout the summer. And if the rich pink to violet flowers and true "old rose" fragrance aren't enough, 'The Mayflower' also boasts resistance to fungal diseases such as blackspot, rust, and powdery mildew.

Two other likely winners for this year are 'Alnwick Castle', which has peonyshaped flowers in soft pink, and 'Corvedale', a violet-pink, open-cupped rose. All three of these David Austin selections are compact shrubs growing four feet in height and width.

Conard-Pyle is introducing three new fragrant roses in its Star series, available from Star® Roses. 'Meichibon' (trademarked Tchaikovsky) is a dreamy-looking, cloudlike, layered rose with more than 100 petals per flower and a hypnotic fragrance that betrays its Romantica rose heritage. The rose opens to reveal a white to buttercream face with hints of blush pink on the outer edges. 'Meifovett' (trademarked Baby Paradise) is a new lavender miniature rose with a peppery fragrance that grows one-and-a-half to two feet tall.

'Meitozaure' (trademarked Raspberry Rugostar) is a new low-growing rose developed from a hybridizing program with the hardy and disease-tolerant rugosa rose. Its large purplish-pink blossoms, clustered five to eight per stem, emit the lingering fragrance of spicy cloves. This compact,



disease-resistant plant is ideal for borders or naturalizing.

Vines and Ground Covers lacy adornments

In fashion, lace adds a romantic touch and softens the lines of clothing. Vines, prostrate plants, and ground covers serve the same purpose in the garden, softening the hard corners of buildings and providing a romantic cloak for bowers and trellises.

Pride of Place Plants is introducing several new clematises this year, available from Roseville Farms. Clematis KullusTM has silvery-lavender flowers that produce a free-flowering display from June to October. Because it only grows five to six feet tall, it is suited for growing in any location, including containers. With bright red flowers that have a texture like silk bro-



cade, Ruutel™ is a good selection for a pergola, obelisk, or trellis. Reiman™ takes center stage in June through September with its blue-violet flowers highlighted by magenta streaks.

For a more tropical touch, consider a new mandevilla from Monrovia. Mandevilla ×ambilis 'Monrey', trademarked Tango Twirl (Zones 10-11, 12-1), has a delicate, soft, double pink bloom resembling a fully opened dancing skirt. The vine twirls and twists 15 to 20 feet in one growing season. The dark, rich, lustrous foliage is a handsome complement to the flowers.

Heronswood Nursery is introducing an as-yet unnamed selection of Gaultheria nummularioides var. minor (listed as EDHCH 97283 in the catalog, Zones 7-8, 8-7). A prostrate plant with tiny, rounded, leathery leaves, it bears soft pink to white flowers in spring and black fruits in winter. This evergreen enjoys rich, moist, acidic, soil. Heronswood is also offering a



trailing white aster (Aster divaricatus 'Snow Heron', Zones 4-8, 8-1) that grows in either dry shade or full sun.

A new lingonberry selection (Vaccinium vitis-idaea, Zones 2-6, 6-1) selection named 'Koralle'-imported from Europe by Raintree Nursery-provides a shrubby ground cover that has brilliant evergreen foliage and edible cranberrylike fruits. A low, upright, bushy plant that spreads slowly by rhizomes, it grows best in part shade but tolerates full sun where summers are cool.

Ohme Gardens Arboretum introduces Thymus serpyllum 'Ohme Garden Carpet' (Zones 4-9, 9-1), sometimes called "Mauve Thyme" because of its pale purple early-summer flowers. It forms a slowspreading carpet of fragrant, fine-textured foliage when planted in full sun. This plant is available from High Country Gardens.

Lamium 'Pink Pewter' (Zones 4-8, 8-1) is a new introduction by Ball. The soft pink flowers and luminescent silvery foliage make it ideal for sunny to partly shaded areas that need contrasting color.

Vegetables and Herbs culinary fashion

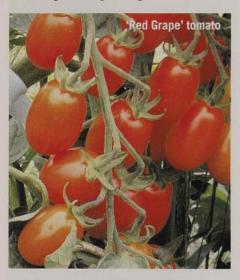
Garden Medicinals and Culinaries is offering a new sweet pepper called 'Bulgarian' that produces green to dark brown to deep red fruits on three-foot plants. Fruits mature in 75 days on this vigorous pepper plant, which is resistant to disease and sunscald and tolerates drought.

Lettuce used in borders and as edging along a walkway creates a great conversa-

tion piece. Try 'Renee's Caesar Duo' from Renee's Garden, a blend of crispy red- and green-leafed romaine lettuce varieties. Renee's Garden is also introducing 'True Thai' basil, which has a clove-mint flavor. Its plum- and violet-hued leaves also make it a great ornamental.

Harris Seeds debuts a new winter squash called 'Windsor Cup', produced on compact bushlike plants that are great space savers in the garden. The two- to four-pound fruits, which resemble butternut squash, mature in 100 days.

Park Seed Company's Spring Swallow Hybrid is a high-yielding cucumber that can be harvested in 60 days from seed. This heat-tolerant and disease-resistant cucumber produces seven- to 10-inch fruits that are great for pickling.



Tomato lovers will enjoy 'Red Grape' tomato from Johnny's Selected Seeds. Prolific grapelike clusters of bite-size tomatoes are ready to harvest in 60 days. And while you are planning your edible garden, consider French tarragon (Artemisia dracunculus var. sativa), a new herb selection also from Johnny's.

The most intriguing combination of edible and ornamental characteristics may be Thompson & Morgan's 'Sun Bright' runner bean (Phaseolus coccineus). The golden foliage and bright red blossoms on the eight-foot vines are a visual appetizer for the main feast, a bumper crop of beans ready for picking in only 90 days. Get ready—here they come down the trellised runway. Let the blanching begin!

Eva Monheim is editorial intern for The American Gardener.

Sources for New Introductions

Retail mail-order sources for many of the plants and seeds described in this article are listed here. For selections that were only available through wholesale distributors at the time we went to press, the name of the distributor and contact information are provided in the article. Contact distributors for retail sources.

Dutch Gardens, New Hartford, CT. (800) 944-2250.

www.dutchgardens.com.

■ Lilium 'Shocking', Zantedeschia 'Mango'

Garden Medicinals and Culinaries, Earlysville, VA. (434) 964-9113. www.gardenmedicinals.com.

■ Aquilegia atrata 'Black Columbine', 'Bulgarian' sweet pepper

Harris Seeds, Rochester, NY. (800) 514-4441.

www.harrisseeds.com.

Windsor Cup' winter squash

Heronswood Nursery, Kingston, WA. (360) 297-4172.

www.heronswood.com.

■ Aster divaricatus 'Snow Heron', Gaultheria nummularioides var. minor EDHCH 97283

High Country Gardens, Santa Fe, NM. (800) 925-9387.

www.highcountrygardens.com.

■ Penstemon tubaeflorus, Thymus serpyllum 'Ohme Garden Carpet'

Johnny's Selected Seeds, Albion, ME. (207) 861-3900.

www.johnnyseeds.com.

■ Artemisia dracunculus var. sativa, 'Red Grape' tomato

Park Seed Company, Greenwood, SC. (800) 845-3369. www.parkseed.com.

■ Aquilegia Origami™ series, Spring Swallow Hybrid cucumber

Pine Knot Farm, Clarksville, VA. (434) 252-1990.

www.pineknotfarm.com.

■ Helleborus foetidus 'Gold Bullion' and 'Variegated'

Plants By Mail, (888) 922-7374. www.plantsbymail.com.

■ Encore Azalea Autumn Sangria™

The Primrose Path, Scottsdale, PA. (724) 887-6756

www.theprimrosepath.com.

■ Heuchera 'Harmonic Convergence'

Raintree Nursery, Morton, WA. (360) 496-6400.

www.raintreenursery.com.

■ Vaccinium vitis-idaea 'Koralle'

Renee's Garden, Felton, CA. (888) 880-7228. www.reneesgarden.com.

■ 'Renee's Caesar Duo' romaine, 'True Thai' basil

Roseville Farms (retail distributor for Pride of Place Plants),

Apopka, FL. (800) 370-9403. www.rosevillefarms.com.

 Clematis Kullus™, Ruutel™, Reiman™

Singing Springs Nursery, Cedar Grove, NC. (919) 732-9403. www.singingspringsnursery.com.

■ Bergenia 'Appleblossom'

Star® Roses (retail distributor for Conard-Pyle), www.starroses.com. Baby Paradise™, Raspberry Rugostar™, Tchaikovsky™

Thompson & Morgan, Jackson, NJ. (800) 274-7333.

www.thompson-morgan.com.

■ Antirrhinum nanum 'Tequila Sunrise', Phaseolus coccineus 'Sun Bright', Rudbeckia hirta 'Prairie Sun'

Wayside Gardens, Hodges, SC. (800) 845-1124. www.waysidegardens.com.

■ Magnolia 'Vulcan'



The Copper Flowers

Trailer McQuilkin documents rare and endangered American wildflowers in delicately beautiful copper sculptures.

BY LINDA ASKEY

RAILER MCQUILKIN is a born storyteller. He brings a tale to life with the same meticulous attention to detail he puts into remarkably realistic sculptures of rare plants portrayed in their habitats. Fashioned from copper, primer, and oil paint, these works of art tell of his dedication to art and nature.

Like many folks who have moved to Ocean Springs, Mississippi, McQuilkin speaks with the unmistakable cadence of New Orleans, learned in his youth, along with a streetwise outlook. His is not an urban toughness, but a brightness that illuminates his path. It has been a self-directed journey; perhaps that's why no one else has gone this way before.

When asked which aspect of his work he most enjoys, McQuilkin says it is the people. In fact, those are the stories he

seems to relish. He tells of the critique of his early work by Thalasso Cruso and the approving phone call from Andrew Wyeth about the Christmas present McQuilkin had been commissioned to make. At times his work is pure adventure, whether it is on a Texas ranch called Pandora, riding the cattle guard in search of wildflowers, or hiking to the base of the 900-foot-tall granite face shimmering in the sun that penetrates Georgia's Tallulah Gorge. He usually begins with, "Now that's a story."



Trailer McQuilkin displays a sculpture of grass-pink (Calopogon tuberosus).

THE YOUNG ARTIST

His earliest tale is a painfully familiar one. He hated college, left, and waited tables in a rock-and-roll club on Bourbon Street. Soon he became immersed in the lively artistic subculture of New Orleans.

"I had a lot of friends who were artists, and I admired them," McQuilkin recalls. "I used to go to shows and ended up hanging around with a lot of people who were creative." Briefly, he found a niche in photography working as a photo assistant for two-and-a-half years, but when the photographer moved to Houston, he opted to stay in New Orleans.

Then serendipity stepped in. Always open to opportunity, he took to a six-week job helping an artist prepare for a show by cutting out pieces of tin that the artist then formed into flowers. After the boss left for

the show, McQuilkin tended shop, made his first metal flower, and gave it to his girlfriend, Sharon, who would become his wife.

Although this first flower was crude compared to the highly detailed work McQuilkin does today, Sharon was impressed and urged him to do more. He sold the resulting plants in his aunt's gift shop. He was young; he bought champagne with the first profits from his work.

A self-starter, McQuilkin did not wait for a gallery to recognize his talent. He hosted his first show in a local garden,



Above: McQuilkin's copper sculpture of a stand of least trillium (Trillium pusillum) shows it in the context of a forest floor. Opposite page: A close-up of a red-orange blossom in McQuilkin's sculpture of wood fily (Lilium philadelphicum). Both are from the Callaway Collection.



Above: It typically takes McQuilkin two to three months to complete a sculpture. Here he adjusts a stamen on a dogwood flower with tweezers. Right: McQuilkin's painstaking attention to detail can be seen in this close-up of his rendering of Spanish bayonet (Yucca gloriosa), which is in a private collection.

displaying his work on cypress stumps cut from the river. He sold all but one or two. That was when T.C. LaRue, the social editor for the *Times-Picayune*, introduced him to her aunt from Baltimore, where he held another successful garden show. "We were traveling," McQuilkin grins.

He heard about a gallery opening in Kennett Square, Pennsylvania, so he took the remaining sculptures from the Baltimore show and presented them to the owner, who wanted all of them. McQuilkin made him wait until he had shown them to the window designer at Tiffany & Company. He had heard that Tiffany's had been looking for work like his.

The gallery got the pieces and sold them all before Mc-Quilkin got back to his New Orleans workshop to start work on the flowers ordered for Tiffany's Easter window display. After Easter, the gallery sold those, too.

CHAMPIONING RARE WILDFLOWERS

McQuilkin's career was moving fast, and not just up the East Coast. He was only in his mid-20s and his work had already been displayed at Tiffany's. However, it was back in his hometown of New Orleans that his work came of age. In preparation for the Louisiana Bicentennial celebration in 1976, McQuilkin was commissioned by Edith Stern to create a collection of the wildflowers of Louisiana (see box on facing page). It was at this point that he began to work in copper instead of tin and to use living plants as models rather than photographs. The botanical detail that is his hallmark began to emerge.

McQuilkin's interest in American native plants had been whetted by the Louisiana wildflower collection and he began looking for similar commissions. McQuilkin remembers, "When Sharon and I started focusing on rare plants, it was another level, which was great." In the mid-1980s he created a sculpture of a rare Mississippi wildflower for Judy Freeman, president of the Garden Club of New Orleans. Because McQuilkin's emphasis had shifted to threatened species, he yearned to work on a series that could be seen by a wide audience.



His break came in 1988, when Freeman approved his suggestion to create a collection of rare plants of the Gulf South area to display during the annual convention of the Garden Club of America (GCA) to be held in New Orleans a couple of years later.

For this commission, McQuilkin needed the help of regional botanists, but first he had to gain their trust. After all, what botanist dedicated to the preservation of endangered plants would lead a stranger to them who was intent on digging them up? "For years it had been so easy for us to go out and get samples of plants," says Sharon, "but when we started working on rare and endangered plants, things became more complicated."

McQuilkin developed a conservationist's policy of digging plants from populations large enough to tolerate it and returning them to the original site or to a botanical garden. The resulting collection of 12 sculptures was displayed at the GCA meeting, and, subsequently, at the New Orleans Museum of Art and the Walter Anderson Museum of Art in Ocean Springs, Mississippi.

Then came the most monumental commission of all, the one that has resulted in the largest collection of McQuilkin sculptures available for public viewing. McQuilkin had met Deen Day Smith (now Sanders) at his show at the Atlanta Botanical Gardens in the mid-'80s where she had purchased several pieces for her offices. McQuilkin later proposed a collection of rare and endangered Georgia plants. Smith, a well-known conservationist and past president of the National Garden Club Inc., agreed, commissioning twelve over the next two years even though she wasn't sure where they would be displayed.

"I do private commissions," McQuilkin says, "but basically

I really want them available to be seen by the public, to let them know how fragile everything is. There might be a time that, for some of these plants, the sculpture may be all there is left." Because Smith had been a generous supporter of the Atlanta Botanical Garden, the State Botanical Garden of Georgia, and Callaway Gardens, McQuilkin felt confident that these works would eventually be on public display. Two years of work became eight; ultimately he created 42 pieces.

For this project, McQuilkin relied on the expertise of Tom Patrick and Jim Allison, botanists with the Georgia Natural Heritage Program. They helped select and locate plants.

"We had some adventures in trying to find them," says Patrick. "One of the wildest was going after a plant we never found. We spent all day looking for something called a starflower in a wilderness area without any trails. We bushwhacked up and down boulder fields and little streams and found an undiscovered population of a rare plant called southern red trillium (Trillium sulcatum). There was a whole slope of these trilliums, and we selected a particular one for his use. Trailer put it in a plastic bag, then placed it in a bucket to keep it intact. He came back down through the brambles like a big black bear trying not to get the plant hung up on anything because he was going to use it as a model."

Patrick emphasizes, "He went out of his way to see a plant's actual setting to re-create a little bit of its habitat." Because each sculpture includes not only flowers, but buds and seed pods along with other plants associated with it, McQuilkin's works of art can serve as botanical models suitable for teaching. On the patch of ground he portrays, he always includes leaves that would have fallen from the trees above, clues to the canopy species. He may use real cones, but the pine needles are copper. It's almost impossible to tell the difference.



Yellow lady's-slipper orchids (Cypripedium calceolus) grow amid the leaf litter of a forest floor in this sculpture from the Callaway collection.

YOU JUST HAVE TO SEE IT

Trailer McQuilkin's exquisite attention to detail—from the minute hairs on a stem to the gradations of color on a petal and the brown-edged insect damage on a leaf-is impossible to fully appreciate in a photograph.

Fortunately, you can see Wildflower Treasures at the Virginia Hand Callaway Discovery Center in Pine Mountain, Georgia, 60 minutes southwest of Atlanta and 30 minutes north of Columbus, Georgia. For more information, call (800) CALLAWAY or visit www.callawaygardens.com.

And if you are planning to be in the New Orleans area, don't miss the 20 pieces commissioned by Edith Stern that remain at Longue Vue House and Gardens. Located in the Playhouse, the McQuilkin sculptures complement 50 watercolors by the late Louisiana wildflower enthusiast Caroline Dorman. Together they speak of Stern's deep love of wayside flowers. For more information, call (504) 488-5488 or visit www.longuevue.com.

To contact Trailer McQuilkin, e-mail trailer 94@aol.com or call (228) 875-2900. -L.A.

"Almost every plant is so accurate," says Patrick. "I say 'almost' because we have had an argument about the exact shade of color on one of the plants. The painting of details on copper was so accurate that you would have to look very closely to tell whether it was the art or the real plant. In other words, the painting is just as important as the sculpture. And some of the paintings were tricky—like the iridescent blue of the fringed gentian."

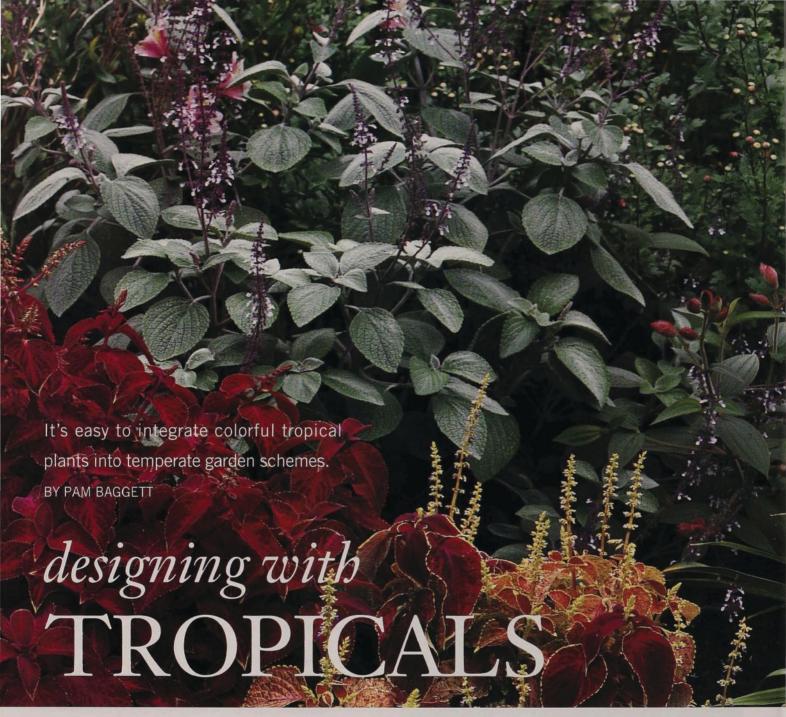
While McQuilkin was working on the rare plants of Georgia, Callaway Gardens was designing and breaking ground on its new Virginia Hand Callaway Discovery Center. Deen Day Smith gifted his work for a permanent display in this facility (see box above).

According to Rachael Crumbley, public relations director at Callaway Gardens, the most frequent comment from guests as they stare into the glass cases that house the copper flowers is, "I wonder how they water them." But the ultimate compliment came from nature. "When I was setting up a show in Pennsylvania," McQuilkin remembers, "I took the sculptures outside to photograph them. All these bees started landing on them and taking off. That was pretty cool."

The work goes on, most recently with the rosebay rhododendron (Rhododendron maximum) of West Virginia and the blue columbine (Aquilegia caerulea) of Colorado. At 55, McQuilkin is thinking about how many more sculptures he will do, and how to make them all meaningful. He wants to make people aware of how much we have to lose.

An outdoor person at heart, McQuilkin now enjoys the natural surrounds of the saltwater wetlands on the Mississippi coast. Sharon gardens, but McQuilkin says, "We have the wetlands in front and nice walkways. I want to leave everything alone as much as possible. Why mess with things that are already gorgeous?" ...

Formerly a senior editor with Southern Living magazine, Linda Askey is a free-lance writer in Birmingham, Alabama.



TENDER TROPICAL AND SUBTROPICAL plants—those exotic-looking species that grow so effortlessly in the landscapes of southern Florida, coastal Texas, and California—are extending the plant palette of gardeners as far north as Michigan and Maine. Grown as annuals, most equatorial plants require no more care than the average hardy perennial. And, unlike hardy plants that often begin to decline in late summer, many tropicals continue to produce fresh flowers and foliage right up until frost. Moreover, they thrive on the heat and humidity that often turn traditional summer annuals—and not a few perennials—into mush by late summer. Given their eagerness to grow, exciting possibilities exist for incorporating tender plants into the temperate garden design.



ADDING ACCENTS TO THE BORDER

Using tropicals as accents is an easy way to work them into your existing borders. Just follow two basic principles. First, identify places in the border where you would like season-long color or a more profound change of texture. Second, select tropicals that echo or provide a desirable contrast to the bed's hardy inhabitants. For example, enhance a crimson daylily by repeating the flower color with the deep red leaves of 'Oxblood' coleus (Solenostemon scutellarioides 'Oxblood') or the thread-fine foliage of Alternanthera ficoidea 'Red Threads'.

Hardy perennial *Rudbeckia fulgida* 'Goldsturm' is a great plant, but is too often paired with *Sedum* 'Autumn Joy'. Be different: Combine 'Goldsturm' with *Lantana* 'Golden Spreader', which carpets the ground with crisp green leaves and bears egg-yolk yellow flowers from plant-

Opposite: Richly colored coleus and plectranthus brighten the foreground of a mixed border. Right: Canna 'Pretoria', aka 'Bengal Tiger', provides a bold focal point as it towers above purple coneflowers (Echinacea purpurea) in the author's garden.

ing time until frost. For the six weeks that 'Goldsturm' is in flower, you will have a stunning duet of closely matched golden tones. As for *Sedum* 'Autumn Joy', play its pink-to-ruby-to-russet bloom cycle against the wine-red flowers of *Salvia splendens* 'Van Houttei' (sometimes listed

Bananas in the far north? Yes! This is Abyssinian banana (Ensete ventricosum) in the children's garden at VanDusen Botanical Garden in Vancouver, British Columbia. Its height, large leaves, and overall exotic look make it the focal point of any garden.

as *S. vanhoutii)*, which will dangle tantalizingly over the sedum's stiff heads, adding a weeping textural contrast as well as a tremendous display of blossoms and long-lasting bracts.

Few fall-blooming asters claim intriguing foliage as attributes, but you can amplify the textural contrast with the bold, cannalike leaves and white flowers of butterfly ginger lily (*Hedychium coronarium*). Add a lantana, whose forest-green foliage makes a handsome backdrop for its round clusters of tiny tubular flowers. Selections are available in pastel shades as well as saturated pinks, oranges, and reds; all provide a butterfly-attracting display of blossoms from early summer until frost.

DRAWING THE EYE WITH FOCAL POINTS

When a tropical plant is brazen enough to be considered a scene-stealer, treat it as a focal point. Scene-stealing tropicals usually boast either towering height or jumbo leaves. Group hardy banana (Musa basjoo) with the boldest perennials you can find and still none can compete when it rockets up to eight feet tall by midsummer, waving its three-foot-long leaves in the breeze. Now that's a focal point.



Right: Large leaves like those of this elephant's-ear plant provide a dramatic textural contrast and a cool green backdrop for the colorful, more finely textured coleus, caladiums, and *Rudbeckia triloba*. Bottom right: The broad leaves of *Solanum quitoense* are studded with decorative purple spikes. This exotic plant is native to South America.

Other tropical giants include cannas, other selections of banana (Musa spp. and Ensete spp.), and some elephant's-ears, especially seven-foot Colocasia esculenta 'Fontanesii' and eight-foot Alocasia odora. Five-foot-tall, coal-dark Colocasia 'Black Magic' is at its best paired with hot oranges and yellows. Its drooping two-foot leaves provide a spectacular midsummer contrast to the domed heads of orange butterfly weed (Asclepias incarnata) and feathery golden Coreopsis verticillata—both native American perennials.

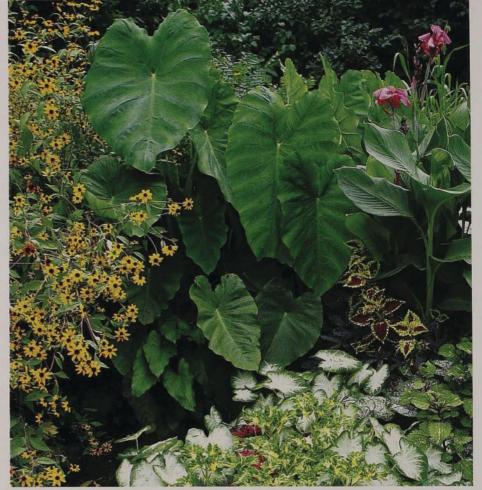
Even two-foot *Alocasia* 'Hilo Beauty' serves as a focal point among smaller gardens and in container groupings. Its speckled cream-and-green leaves are nearly a foot long, yielding dramatic results in light shade when underplanted with the tiny pebblelike leaves of moisture-loving native blue moneywort (*Lindernia grandiflora*).

Large leaves aren't exclusive to elephant's ears, though. Imagine a three-foottall eggplant relative, its 24-inch leaves held nearly parallel to the ground, the better to see the spiky purple thorns protruding from their veins. That's *Solanum quitoense*, which will stop viewers in their tracks.

The same goes for *Tibouchina grandifolia*. In addition to its huge terminal panicles of red-purple flowers, its head-high stems support felted, 10-inch leaves that change from soft sage green to pumpkin orange before falling. Golden swamp sunflower (*Helianthus angustifolius*) is one perennial that benefits by association with tibouchina, and what better shrub to complement the scene than our native beautyberry (*Callicarpa americana*), with its bunched clusters of magenta berries clinging to the stems in late summer?

CURING THE GREEN-EDGE EFFECT

In my North Carolina garden, some perennials finish blooming in May and June and others don't even think about opening a flower bud until October. Naturally, the ones that bloom late are often





taller, since they have months to grow to full height before flowering, whereas many spring bloomers tend to be under 30 inches tall and thus are relegated to the border's edges.

One day it dawned on me that I had a spring-flowering ruffle around my border that was mostly green foliage by midsummer, when color shifted to the taller, later-blooming plants. Then I discovered an easy way to keep the foreground colorful throughout the season: Place lowgrowing tender plants among the perennials for months of continuous color that breaks up the green ruffle effect. Magenta-flowered Petunia integrifolia is terrific for this purpose, flowering steadily until frost and combining beautifully with silver-leaved plants. Shorter coleus, such as 12-inch-tall, red-and-chartreuse 'India Frills' and its darker sport, 'Ruby Ruffles', work wonders at border edges, especially when they echo taller perennials with similar colors.

BUILDING BAYS IN THE BORDER

For a grander exotic effect, leave unplanted bays in the border where tropicals can be added each spring. These can be tiny coves or, in a bigger garden like mine, large areas 10 feet or more across where showy tender plants dazzle from early summer until autumn.

Consider this design advantage: When dealing with hardy perennials, one must do much digging and dividing to rearrange the garden picture, but with tropicals you can provide an easy change of scene each year simply by using new plants.

For instance, try shrubby *Duranta erecta* 'Aurea' with the grassy blades of *Dianella tasmanica* 'Yellow Stripe', the deep red *Pentas lanceolata*, creeping *Acalypha repens* 'Firetails', and the smooth, buttery leaves of ground-covering *Sedum makinoi* 'Ogon'. Back these with the black-red leaves and stoplight-red flowers of *Canna* 'Australia' for a stunning display.

The following summer, you can change the look completely by using four-foot-tall *Ruellia brittoniana* with its petunialike violet-blue blooms and dark stems. Fronted by a carpet of *Verbena* 'Blue Princess', with inky-black 'Dark Star' coleus and silver *Plectranthus argentatus* in the midground, all that's left to satisfy the composition are fountains of soft green

Tips for Growing Great Tropicals

Tropicals are easy to grow. Typically they thrive in well-mulched, decently drained soil of average fertility. If your conditions support good growth of herbaceous perennials, it's likely your tropicals will do fine. Don't hesitate to fertilize; since you don't need to harden tropicals for winter, you can feed even in late summer to promote a lush autumn display. Use liquid fertilizer or a compost tea aimed at the tropicals' root zone, so you won't inadvertently dose your soon-dormant perennials and woody plants.

Plan to irrigate as you would for perennials. Even in a July drought, I only have to water every 12 to 15 days, thanks to well-amended soil and two inches of mulch. A few tropicals savor a richer diet: Cannas, ginger lilies, bananas, and elephant's-ears prefer rich soil and average to very moist conditions. Cannas and elephant-ears will also grow in standing water. In perpetually dry areas, opt for lantanas, kalanchoes, and small-leaved salvias such as selections of *Salvia microphylla* and *S. greggii*. Look to Mexico and South Africa for other intriguing tender plants adapted to restricted water budgets.



Ginger lilies such as Hedychium coronarium thrive in heat but require rich, moist soil.

Full sun or light shade suits most tropicals; in the far South they may appreciate more shade. Non-stop flowering plants such as lantanas and cupheas tend to prefer more sun, while a waxy leaf coating on a tropical indicates that it may be well adapted to shade. Trial and error will help determine which multicolored foliage plants do well in less light. In my experience, variegated green-and-yellow *Abutilon pictum* 'Thompsonii' turns green in shade, while glossy *Alpinia zerumbet* 'Variegata' holds its similar two-tone color beautifully. Each coleus cultivar I've tried responds differently to light shade; some look even more lovely than in full sun, but none of them appreciates deep shade. Persian shield (*Strobilanthes dyerianus*) looks just as handsome in light shade as in full sun.

Tropicals love heat. Avoid planting until night temperatures remain above 50 degrees. Summer heat and long days stimulate swift growth that quickly makes up for having to delay planting until late spring. In fact, tropicals may grow faster in your temperate garden than in the tropics, where year-round 12-hour days and steady, moderate temperatures induce slower photosynthesis rates.

—P.B.



Above: Backed by *Miscanthus sinensis* 'Morning Light', this bed of mixed tropicals includes coleus 'Purple Emperor', pink and white forms of *Lantana trifolia, Salvia coccinea* 'Alba', *Gomphrena* 'Lavender Lady', and *Verbena* 'Abbeville'. Right: The pink margin on the leaves of *Acalypha wilkesiana* 'Obovata' can be used to echo pink flowers in a border.

lemon grass (*Cymbopogon citratus*) and a backdrop of fall-blooming, silver-leaved Mexican bush sage (*Salvia leucantha*).

Your bays needn't be vacant all spring while waiting for their summer residents. Fall-planted pansies and early spring-blooming bulbs readily share space with tropicals. The bulbs go dormant just as the weather warms enough to plant tender annuals, so you can dig them up and store them until fall. Or you could consider the tropicals a perfect sequel to a mass of disposable tulips.

BRIDGING THE BLISTERING HEAT GAP

One of the first characteristics that drew me to tropicals was their ability to keep cool in the face of fiery midsummer temperatures. In the early days of my garden, perennials such as yarrow and daylilies flowered through June before ceding to July's relentless heat. Other hardy garden denizens took up the call in early September, but they, too, refused to flower until the days became cool. Now I can number hundreds of happy blossoms and handsome foliage plants on any day of summer.

Certain genera are especially rich with possibilities. The ones I rely on most for flowers are *Cuphea*, *Lantana*, and *Salvia*, while for steam-proof foliage I favor *Solenostemon*, *Plectranthus*, *Alternanthera*, and *Acalypha*.

No tropical foliage plants are as well known as coleus (Solenostemon scutellarioides), available in so many color schemes that there is a selection for any garden.

Less well-known but just as intriguing are the acalyphas, which have leaves tending to copper, brass, and coral-often all on one plant. Acalypha wilkesiana 'Cypress Elf' bears narrow, weeping leaves of chocolate edged in coral. It's the textural equivalent of confetti and a standout against any plant of firmer structure. Acalypha wilkesiana 'Obovata' sports a similar color scheme, but with broader leaves that have a hang-dog look to them. They weep like beagle's ears—the better to see that hot coral rim! My favorite hardy companion for either is Achillea 'Orange Queen', a yarrow that echoes the acalyphas' coral edges in a softer shade.

Plectranthuses are tropical mints, but they don't run rampantly underground,

and, besides, they freeze when frost strikes. Their stout, 30-inch stems bear thick, fleshy leaves, usually covered in fine downy hairs that glint in sunlight. You'd think these felted plants would rot in humidity, but they thrive in everything summer throws at them, be it drought or downpour. Plectranthus argentatus offers leaves in new-minted silver. Those of *P. forsteri* 'Green on Green' are lime

and chartreuse, lovely in contrast with the hardy magenta *Geranium psilostemon*. And *P. forsteri* 'Marginatus' offers up a blend of lime and white, which is easy to incorporate into almost any setting.

The genus *Alternanthera* includes some wonderful plants for a border's edge. The slender, grassy leaves of 10-inch-tall *A. ficoidea* 'Red Threads' and 'Golden Threads' make lovely domed mounds in their respective colors. *A. dentata* 'Rubiginosa' and 'Tricolor' are bolder; 'Rubiginosa' bears deep wine leaves, while the foliage of 'Tricolor' begins green and quickly changes to

deep purple with a beet pink margin. I love 'Rubiginosa' planted with pastels, where its richly saturated leaves can anchor fluffier colors. 'Tricolor' makes a luscious partner for the pink yarrow, Achillea millefolium 'Montrose Rose'.

Tender and semi-hardy salvias have gained notice since the 1980s, when garden writers like Allen Lacy began proclaiming their virtues. Salvia splendens 'Van Houttei' is a real trouper in hot weather. Its burgundy-tinted blossoms hang from deeper-toned, long-lasting bracts on plants that reach three to five feet tall.

Rosebud sage (Salvia involucrata 'Bethellii') bears dense clusters of rosy-red flowers in late summer on three- to six-foot stems. Pair it with Plectranthus argentatus or grow it en masse.

Lantanas perform even in Texas-hot summers. I often see them used in parking lot medians, where they are never out of flower. Lantana montevidensis offers vibrant rosy-purple blooms, and as pure a white as you will find in the form 'Alba'. They make sheets of color, spreading three feet or more but staying under 18 inches tall.

Three-foot-tall, rounded Lantana hybrids 'Confetti' and Patriot 'Desert Sunset' both offer shades of warm pink and yellow that I love with early-summer coneflowers (Echinacea spp.). Lantana 'Dallas Red' stops traffic with deep scarlet flower clusters. Grow it at the base of a purple smokebush (Cotinus coggygria 'Atropurpurea') for a richly saturated color scheme. Some selections of lantana



Salvia involucrata 'Bethellii', a Mexican sage, bears dense clusters of rosy-red flowers.

Salvia 'Waverly' appeared mysteriously on the garden scene a few years ago. Its fuzzy purple bracts and white flowers suggest that fall-blooming Mexican bush sage (Salvia leucantha) is one of its parents. But 'Waverly' grows wider than tall, produces green leaves, and flowers steadily from early summer on. It grows quickly to three feet tall. In my border, it backs white-flowered S. coccinea 'Alba' and the near-black coleus 'Dark Star', combined with white yarrow and silver Artemisia 'Huntington'.

set seed copiously and can prove invasive in the warmer parts of USDA Zone 8 and south, so use with caution. Breeders are now coming out with selections that don't set viable seeds.

CREATING AN AUTUMN CRESCENDO

Last, consider the crescendo of colors and textures that results when woody plants and fall-flowering perennials combine with perpetually fresh-looking, long-season tropicals. Mums with salvias, grassy

Sources

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

Logee's Greenhouses, Danielson, CT. (860) 774-8038. www.logees.com. Catalog \$4.95.

Singing Springs Nursery, Cedar Grove, NC. (919) 732-9403. www.singingspringsnursery.com. Catalog free.

Stokes Tropicals, New Iberia, LA. (800) 624-9706. www.stokestropicals.com. Catalog \$7.95.

Resources

The Exotic Garden by Richard R. Iversen. Taunton Press, Newtown, Connecticut, 1999.

Hot Plants for Cool Climates by Susan A. Roth and Dennis Schrader. Houghton Mifflin Company, Boston, Massachusetts, 2000.

panicums overhanging the pentas' final flowers—swan-songs such as these linger long in the memory. Just remember to time your displays to your frost date so you aren't pulling freeze-blackened tropicals out of still-productive perennials.

In my garden, October 23 is often the evening that a curtain of frost laces tender leaves. Any perennial still in bloom on that date deserves companions that can also take the cold. Meanwhile, you will find me out on that first frigid night, flashlight in hand. I'll be cutting bouquet after bouquet of tropical flowers and foliage, postponing for a few more days the end of a long and spectacular garden season.

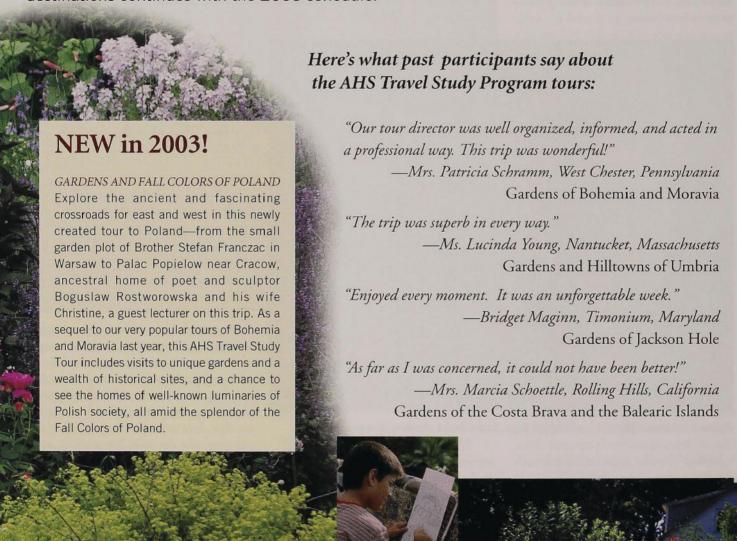
Garden writer Pam Baggett owns Singing Springs Nursery, a mail-order nursery in Cedar Grove, North Carolina, that specializes in uncommon tender plants and choice perennials and tropicals.

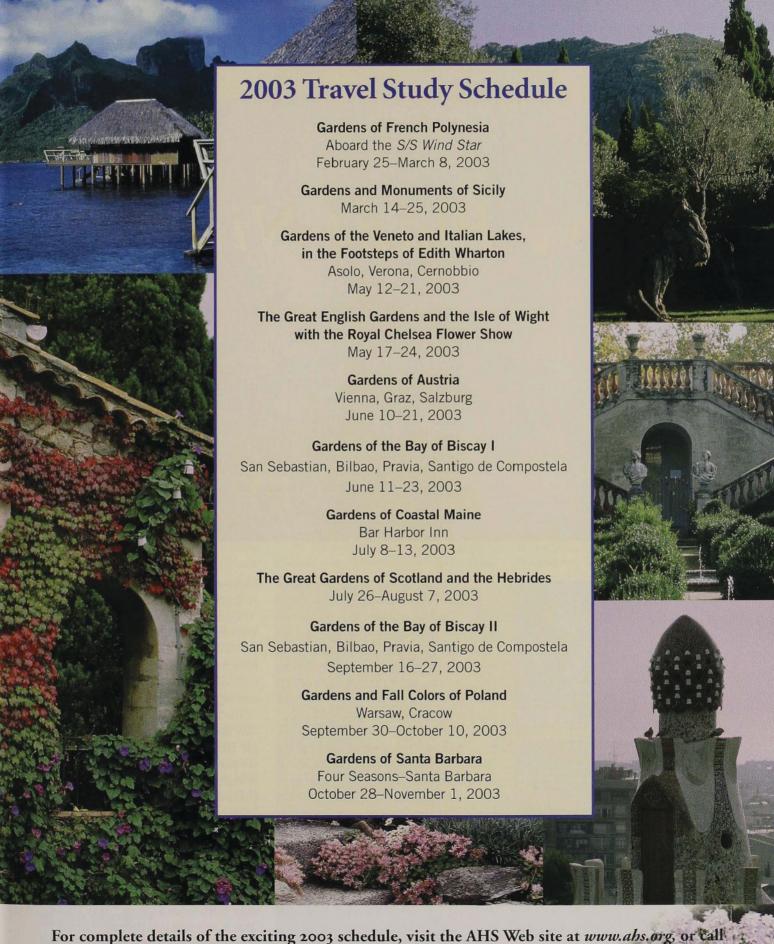


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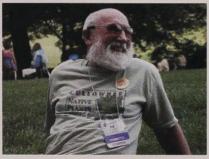
No member dues are used to support the Travel Study Program.

Native Plant Nirvana

For 20 years, the Cullowhee conference has been a summer ritual for native plant fanatics who gather to share their passion for American plants.

BY CAROLE OTTESEN





Attendees enjoy an informal regional networking session outdoors at a recent Cullowhee conference.

◀ HERE IS MAGIC in the misty Great Smoky Mountains. Every July, when more than 400 native plant enthusiasts convene at Western Carolina University (WCU) in Cullowhee, North Carolina, the blue mountain haze rolls down to engulf the '60s institutional architecture, the sweltering dorm rooms, and the school cafeteria food. And out of the mist emerges a wonderful, magical, 72-hour-long horticultural Brigadoon. At least that's the way it's perceived in the minds and hearts of attendees who convene and connect at the Conference on Native Plants in the Landscape, known by regulars simply as "Cullowhee."

"I wouldn't miss the Cullowhee conference—the people, the location, the mission—for anything," says Deanne Eversmeyer, head horticulturist for Washington Golf and Country Club in Arlington, Virginia. "It's kind of like recharging my battery." Kim Hawks, founder of Niche Nursery in Chapel Hill, North Carolina, agrees. "I go to

Cullowhee to be re-fueled, re-charged, re-energized...to re-connect."

Connecting is what makes the magic. It is what people do at Cullowhee.

"We're a group of gifted, wonderful, friendly people, but many of us are loners," says former conference director and steering committee member Mary Painter of the ardent plant people who attend. "We needed a place to go and meet people like ourselves," adds the nurserywoman from Hume, Virginia. Jan Midgley, another former director and steering committee member, says, "Nowhere else do I find such a large number of people who have interests and values in sync with mine." Finding soulmates makes the conference an emotional and intellectual homecoming and the inevitable parting a sweet sorrow. "It is the only conference I go to," says Hawks, "that is so painful to drive away from."

It is hardly surprising that what makes Cullowhee so special is the unique connection felt by the participants. It was the idea of getting native plant lovers together that started it all in the first place.

THE BEGINNINGS

It may seem strange now, but 20-odd years ago, the idea of landscaping with native plants was new. "Not much was really known about growing wildflowers using standard nursery practices and conditions," remembers Leo Collins, chief botanist with the Tennessee Valley Authority (TVA), who is often called the "father of Cullowhee." In the early 1980s, research by one of Collins' co-workers, Rob Farmer, revealed that wild plants responded famously to nursery culture. When Farmer left TVA soon thereafter, the job of caring for the plants fell to Collins.

"I agreed to take care of the plants until we could give them away to various state and municipal organizations," recalls Collins. As he did so, he observed that the people interested in natives seemed isolated. "Everyone felt he or she was the only one interested in native plants," he says. What was needed, Collins thought, was a means for these people to network.

Then, serendipitously, a TVA project was canceled and the budgeted money was freed up for a one-time project. Collins and TVA co-worker Judith Bartlow decided to organize a native plant conference.

"We knew we needed speakers," says Collins, "but we also needed lots of time for people to talk to each other." From the beginning, getting people together in a loosely structured setting has been an important aspect of the conference and one that most participants remember fondly. Originally designated as "socials," the name was changed to "regional networking sessions" after one post-conference questionnaire was returned with the comment, "Some employers (i.e., the federal government) don't like to see social events featured when they are footing the bill." Whatever they are called, these gettogethers have fostered friendships, knowledge about natives, new introductions, mutual projects, plant sharing, and—now and then-even marriages.

THE FIRST CONFERENCE

Rather than holding the conference at a resort, Collins and Bartlow chose a university setting to keep the price low.



Western Carolina University, nestled in the Great Smoky Mountains, has been the setting for the annual conference since its inception nearly 20 years ago.

"We didn't want to exclude anybody," says Collins, who recalls that the cost for the first conference, including a room and meals for two days, was \$45. "We wanted all people interested in natives, not just nurserymen." This philosophy still prevails: Last year, the conference registration fee was \$75, and room and board for three nights cost \$127.

The budget in the first few years did not allow for speakers' fees, although travel costs were sometimes offset. But money has never been the object and there has never been a lack of talented speakers.

At the first conference in 1984, John Creech, then director of the USDA Plant

Exploration Division and a former director of the U.S. National Arboretum and president of the American Horticultural Society, led off the conference with a presentation titled "Why Don't We Copy the Japanese for a Change?" Noting the Japanese emphasis on their own natives in horticulture, Creech pointed out that in the United States there are native counterparts to many of the imported plants-often of Japanese origin—that were so popular in the American nursery trade at the time.

Among the other speakers at the first conference were Harry Phillips, author of the propagation bible Growing and Propagating Wild Flowers and Universi-



Making connections: Serious plantspeople Bill Martin, George Ellison, Mary Painter, George Mitchell, and Peter Loos relax among kindred spirits at a recent Cullowhee conference.

SHILLES OF LED COLLINS

"Nobody mentioned politics or sports. It was all plants."

-Leo Collins, on the first Cullowhee conference in 1984

ty of Georgia woody plant expert and author Michael Dirr, whose topic was "Native Shrubs and Trees Suitable for Horticulture."

One hundred twenty-seven people attended the first conference. "The energy level was really high," remembers Collins. "At the end of the second day, people who had been up late the night before were up early for the programs." A veteran of countless conferences, Collins was surprised that "nobody mentioned politics or sports. It was all plants."

UNQUALIFIED SUCCESS

The following year, the conference moved to larger quarters within the uni-

gins," says Painter, "and getting in can take some ingenuity or extra push. Some hand-deliver forms, FedEx them, or send them by overnight mail."

In its first years conference organizers made ends meet with help from TVA; suddenly and in spite of itself, it became profitable. "Even charging as little as we did, we were still accumulating money," says Collins. "We started giving student scholarships and paying our speakers—\$50 in 1987, \$100 in 1988."

The conference might easily have grown to 800 participants, but, as Collins wrote in a 1987 letter to the steering committee, "most of us value the intimate 'feel' of the conference as it now stands."

founded in Millersville, Pennsylvania. Gulf Coast satellite conferences have been held in New Orleans, Lafayette, and Baton Rouge, Louisiana, and a Lone Star conference has been organized in Texas (see box, page 40, for details on satellite conferences).

In three short years, what had begun as a one-time event had turned into an institution. The Cullowhee conference was an unqualified success, but it had mushroomed without much structure. "It was organized by an ad hoc volunteer steering committee of attendees," says Collins, adding with typical, wry modesty, "we were a bunch of hippies; we didn't trust ourselves to run it."

"It was the closest thing to an Andy Hardy movie—let's do a conference—that I have ever been associated with," jokes Dick Bir, Extension specialist in horticulture at North Carolina State University, who became director in 1988. "We remained the most rule-less group I have ever worked with. The rules that exist belong to the university, not the conference." Highly organized himself, Bir wisely loosened the reins at Cullowhee so it retained its warm, friendly, and intimate atmosphere.

"We want people to come to the meeting, learn, share, and have a good time," says Bir. "There is lots of good fellowship with new friends with a common interest...lots of sitting in the dark enjoying mountain nights, sipping, and sharing."



Leo Collins, who is known as the "father of Cullowhee," took this photograph of a tour of campus landscaping during the first Cullowhee conference in 1984.

versity and attracted 327 participants. By 1986, when the conference could accommodate 430, Collins says, "We maxed out; we had people on the waiting list and had to send back money." Since that time, the conference usually fills within three weeks after registration opens. Despite a location that seems remote from everywhere, it draws people from 20 states and England. "Fifty percent of the conference attendees are 'Cullowhee vir-

Instead, he proposed holding a "satellite" conference to provide additional opportunities for native plant people to gather.

In 1987, the first satellite conference was held in Memphis, and others soon followed. Painter remembers sitting at a diner with F.M. Mooberry—who at the time was coordinator of horticulture at the Brandywine Conservancy in Chadds Ford, Pennsylvania—to map out the conference that Mooberry subsequently

THE PERFECT MIXTURE

But the feel-good atmosphere is only a comfy cocoon for the real purpose of the conference: information about using natives, presented in lectures of the highest caliber. "Tops in their fields" isn't enough. "Speakers must be both informative and engaging," says Collins. "Life is too short to sit through a dull lecture on an exciting subject."

Speakers have numbered among many of horticulture's bright lights. A very short list includes the late J.C. Raulston of the North Carolina State Arboretum (now the JC Raulston Arboretum); Ed Blake, director of the

Crosby Arboretum in Picayune, Mississippi; Darrel Morrison, dean of the School of Environmental Design at the University of Georgia; Alabama nurseryman Tom Dodd, Jr.; Bob McCartney of Woodlanders nursery in Aiken, South Carolina; and countless others.

The combination of horticultural excellence and easy-going spontaneity creates the kind of atmosphere that fosters collaboration. "A lot of things have been spawned at Cullowhee," notes Painter. "For instance, the Georgia Native Plant Society was formed by a list posted on a message board at Cullowhee."

The atmosphere also allows serious plantspeople to let down their hair. "People who are innately shy will get up there to entertain others," says Painter. "And we just happen to have in our ranks people who are exceptionally talented in many ways-including musically." It is not uncommon to see participants setting up musical instruments in the driveway in front of Reynolds Hall dormitory. Eager vocal accompanists quickly join these impromptu ensembles.

One serendipitous meeting of attendees from different states has enhanced regional networking sessions. Attendee Bill Flemmer, a New Jersey nurseryman who is also a guitarist and singer, met nurseryman Wayne Hitt, who plays keyboard, and Mark Gormel, of the Brandywine Conservancy in Pennsylvania, who plays drums. Their band is able to practice for only a few hours before performing on Friday night.



Nurseryman Bob McCartney of Woodlanders lectures to a group of conference attendees in the plant sale area.



On a pre-conference field trip to local nurseryman Darwin Thomas' backyard, participants examine a bog garden filled with carnivorous native plants.

Likewise, the Cullowhee Players, who perform skits after dinner on Friday night, hail from 10 to 12 different states. They receive scripts from Painter—who writes the scripts, directs, and acts-but have only about "a half hour for rehearsal on the volleyball court on Thursday night."

FAMILIAR FORMAT

The conference is always held the third week of July. For those who don't come early for the highly sought-after pre-conference field trips, it begins on Thursday afternoon. Most stay in university residence halls, where creature comforts in-

> clude two sheets and a pillowcase, a small, thin towel, and a miniature bar of soap.

> Friday is devoted to lectures, including the popular walks around campus with a landscape architect or with WCU botanist Dan Pittillo. Friday evening is the "regional networking session" picnic, held at the baseball field, featuring music, dancing, and entertainment by the Cullowhee Players and anyone else Painter can cajole into

performing. The conference ends at noon Saturday after the session, "Plants with Promise," in which attendees briefly describe native plants they feel have potential for landscape use.

A highlight of the conference every year since 1987 is the Tom Dodd, Jr., Native Plantsman Award. Originally called the North American Plantsman Award, it was renamed to honor its first recipient. It recognizes "an individual or organization conserving, studying, promoting, or propagating native plants." Recipients include legendary Texas nurseryman Lynn Lowery, 1988; Lady Bird Johnson, 1990; Caroline Dorman (posthumously), 1994; and The Nature Conservancy, 1998.

Rubbing shoulders with the legends of horticulture, listening to brilliant lectures, enjoying music and entertainment, and finding a fellowship of people with overlapping passions are heady activities to be squeezed into less than 72 hours. What puts the Cullowhee experience over the top are all the other offerings. Field trips, which quickly fill up, take attendees into the Smokies for botanizing. Kim Hawks remembers these jaunts as "the most special day of the conference...rain or shine, with a van-load of plant enthusiasts eager and open and in love with native plants." Other popular destinations include the Biltmore Estate—the country retreat of George Vanderbilt in Asheville-and the

Attending the Cullowhee Conference

Details of the 2003 conference (July 22-26) will be posted at http://cess.wcu.edu/np starting in May. Attendees may register either online or by mail (not by phone). For more information, contact the WCU Department of Continuing Education and Summer School, Western Carolina University, Cullowhee, NC 28723; (800) 928-4968.

SATELLITE NATIVE PLANT CONFERENCES

Lone Star Regional Native Plant Conference, May 28-June 1, 2003. Nacogdoches, Texas. For information contact: David Creech at dcreech@sfasu.edu, (936) 468-4343; or Peter Loos at info@ecovirons.com, (281) 362-1107.

Native Plants in the Landscape, June 5-7, 2003. Millersville, Pennsylvania. Call the Professional Training and Education office at (717) 872-3030 for a printed brochure, available in March 2003, that includes conference information and a registration form, or visit the Web site http://muweb.millersv.edu/~npitl/index.html. Note: The Web site is not yet updated for 2003.

Joyce Kilmer National Forest where, Midgley says, trippers can see "awe-inspiring forests of pre-settlement America." One of the local excursions is a visit to the backyard of nurseryman Darwin Thomas, where attendees learn to assemble containerized bogs of carnivorous natives.

SHOPPING AT CULLOWHEE

Every year, a contest is held for the design of the souvenir T-shirts. Depicting a native plant along with the name "Cullowhee," the T-shirts are highly prized and collected. A book sale, initiated in 1992, offers hard-to-find books on natives and other horticultural topics.

The annual plant sale features perhaps the most phenomenal collection of southeastern natives assembled anywhere. "The initial reason for having it was to show attendees the actual plants that were being talked about," says plant sale chair Ed

Clebsch, emeritus professor of biology and ecology at the University of Tennessee, Knoxville, and the 2002 recipient of the Tom Dodd, Jr., Award. Cognoscenti appreciate the rarity of some of the offerings, spend freely, and fill trucks and back seats with loads of plants. Along the interstates, cars packed with greenery draw stares and, sometimes, reactions. One year, nurserywoman Sally Kurtz was stopped along I-40 by a Virginia state trooper, who mistook Hibiscus coccineus for a marijuana plant.

Each winter, Eversmeyer, who first came to the conference as a scholarship recipient in 1989, sends out "Notes from Cullowhee," a newsletter containing updates on the conference, its satellites, and other native plant happenings around the country. "It's my contribution to a conference that's doing good work with natives and is great fun," says Eversmeyer.

Run by a volunteer steering committee whose members reside in half a dozen states, Cullowhee somehow has managed to grow and prosper. "For two decades, it has worked," says Bir, "because of dedicated volunteers." He also cites the help of Western Carolina University and Jim Horton, the university's liaison with the steering committee. Veteran conference attendees also credit Sue Dietz, former WCU coordinator, for her superb handling of campus details. "We were lucky to fall in with Cullowhee," says Collins. "Somewhere else—we wouldn't have had the same people support, the same atmosphere, the same beautiful landscape."

The Queen Mother of native plant conferences will celebrate her 20th anniersary July 22 to 26. In two decades, Cullowhee has grown up, grown larger, and grown more sophisticated. There is a bittersweet sense among early organizers that the conference has outgrown its ad hoc beginnings. "Being the director of the conference early on was just a lot of work you did because you wanted to," says Collins. Now there's a paid director. "It's something that could go on your résumé," he adds.

"Now that we are on the verge of adulthood," says Bir half jokingly, "lots of '60s folks are passing the torch." A new generation of native plant enthusiasts is taking the long trip through the mountains to connect with like-minded souls and experience the magic of Cullowhee.

Above: At the plant sale, attendees can see and buy the plants mentioned in the lectures. Right: Participants snap up native treasures often unavailable elsewhere.

Carole Ottesen is an associate editor of The American Gardener and a Cullowhee conference regular.



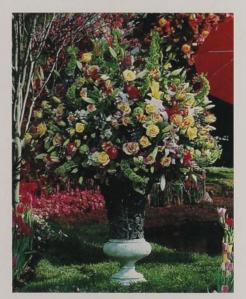
An American tradition, flower shows provide a foretaste of spring for winter-weary gardeners.

BY EVA MONHEIM

S THE ESCALATOR carried me down to the show floor, the magical colors, fragrances, and sounds heightened my senses and quickened my pulse. I was a young girl at the time-oh, so many years ago-totally enthralled with the idea of going to my very first Philadelphia Flower Show. But the sensation of that first show has stayed with me through the years.

That feeling is a key part of the mystique associated with flower shows and helps explain why people are drawn to them year after year. "They give people a breath of spring and creative ideas for their gardens," says Jane Pepper, manager of the Philadelphia show and director of the Pennsylvania Horticultural Society (PHS).

Flower exhibitions and shows have deep roots in the United States, dating back to at least 1829, when PHS members



This sumptuous floral arrangement, above, and inviting poolside scene, top, were on display at the Philadelphia Flower Show last year.

held a flower exhibition in Philadelphia (see "Birth of An All-American Tradition," page 43). That exhibition evolved into the Philadelphia Flower Show, which now attracts some 300,000 visitors each year and has been a significant influence on the development of other shows.

While Philadelphia can lay claim to the longest-running show, more than 30 other major flower and garden shows are held throughout North America each year between January and June. Each show has its own regional flavor and unique characteristics, but all offer a blend of the standard elements that attendees look forward to seeing each year: creative landscape exhibits, displays of the latest plants and gardening products, floral competitions, and educational offerings. There is something for everyone—from rank beginner to seasoned gardener.

AHS FLOWER SHOW AWARDS

As part of its national mission, the American Horticultural Society has historically presented awards at flower and garden shows throughout the United States. Currently the Society offers two types of awards, the Environmental Award and the Bole Medals.

ENVIRONMENTAL AWARD

The recently renamed Environmental Award (previously known as the AHS Citation Award) is given to flower show exhibits that best demonstrate a combination of skillful design and environmental excellence.

Criteria used to evaluate exhibits include the use of native plants; water conservation; providing habitats for wildlife; man's function within the design; and the function and context of the design in relation to the larger environment. The new name and revised judging criteria for the award were developed by AHS staff and Board members to better reflect the importance of environmental awareness within garden landscapes.

BOLE MEDALS

A devoted amateur plant collector, Nancy Bole funded the creation of the Bole Medals in the hope of perpetuating and heightening the awareness of exemplary horticultural practices in plant collections.

The Bole medals are awarded in two categories based on the number of exhibit entries. The gold medal is presented to deserving individuals or groups who exhibit entries that represent meticulous horticultural practices of 15 different species or cultivars of cut flowers or container-grown plants. The silver medal is awarded to entries that include eight different species or cultivars.

For a complete list of shows that participate in the AHS award program, see the flower show listings in the AHS Member Guide or visit the AHS Web site at www.ahs.org and click on the link for the National Events Calendar.

Over the last few years, education has become a more significant aspect of these shows. Some—such as the one in Philadelphia and the Northwest Flower and Garden Show in Seattle—offer hundreds of lectures, presentations, and demonstrations.

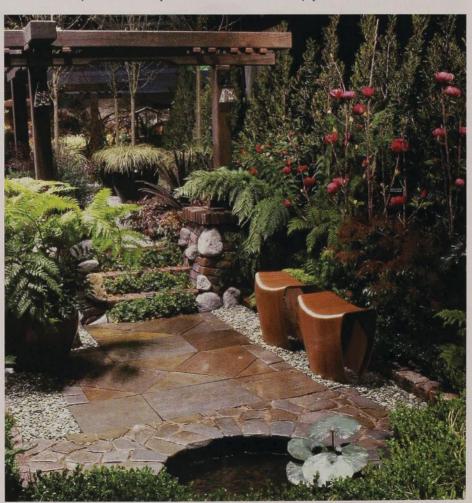
Another important component of most garden shows is award presentations to exhibitors. Awards are a significant way to recognize exhibitors and competitors who represent horticultural excellence. As part of its national award program, the American Horticultural Society presents two different kinds of awards at flower shows (see the sidebar at left).

THEME AND THEATRICS

According to Jane Pepper, PHS director and manager of the Philadelphia Flower Show, coming up with creative themes year after year is one of the most critical elements for a successful show. The theme of this year's Philadelphia Flower Show's (March 2–9), "Festival de las Flores," will pay special tribute to the significant Latin community in the Philadelphia region, but, Pepper says, "the color and excitement of the show will appeal to everyone."

Now in its 15th year, the Northwest Flower and Garden Show in Seattle is renowned for its entertaining format and lavish exhibits. The show's director, Duane Kelly, cites Pepper's work with the Philadelphia show as a major influence on his own style. This year, Kelly is taking theatrics to a whole new level by hosting a performance of *Betrothal*, a play by Pulitzer Prize-winning playwright Lanford Wilson during the Northwest show, which will be held February 19 to 23. Kelly, a member of the American Horticultural Society's Board of Directors, also coordinates the San Francisco Flower Show.

Show coordinators must use an everchanging array of theatrical techniques to continually pull visitors to their events.



Among the exhibits at a recent Northwest Flower and Garden Show was this one by Shapiro Ryan Design for Monrovia Nursery titled "Westmoreland Place."



Heather Griswold, event director for the Oklahoma Garden Festival Foundation an Oklahoma City-based garden show supported by the Oklahoma Horticultural Society-says her show depends on the "wow factor" to attract and entertain gardeners and non-gardeners alike. The theme of this year's show (January 30-February 2) is "Gardens Through the Ages."

LOCATION, LOCATION, LOCATION

Location, facilities, and timing are additional key ingredients that keep the millions of people attending shows each year. The Pennsylvania Convention Center-which houses the 10-acre Philadelphia Flower Show—is located close to mass transit at the heart of the city.

Like the Philadelphia show, the North-

This colorful, whimsical display was featured at the Oklahoma Garden Festival.

west Flower and Garden Show is held in a region with a temperate climate that supports a variety of plants and gardening styles. The timing of the show—a couple of months before spring-makes it an ideal forum for specialty nurseries, landscape firms, designers, and landscape architects to showcase their work to an audience infected by cabin fever and eager to get a jumpstart on spring.

According to Griswold, the Oklahoma Garden Festival was spawned by the revitalization of downtown Oklahoma City. Major beautification projects and the addition of the cultural arts center were seen as great tie-ins with the flower show, which Griswold says is a "type of art form" that appeals to a broad audience. With new facilities and a re-energized downtown, Griswold is optimistic that tens of thousands of people will continue to flock to this major cultural and art event each year.

GIVING BACK TO THE COMMUNITY

Without community support, flower shows would not exist, so successful shows channel money back into the communities that support them. For instance, proceeds from the Philadelphia Flower Show go to Philadelphia Green, an urban greening program.

Similarly, proceeds from the Oklahoma Garden Festival benefit greening programs for the city sponsored by organizations such as the Myriad Garden Foundations, Oklahoma City Beautiful, and the Oklahoma Horticultural Society.

In Seattle, the Washington Park Arboretum Foundation runs the preview Gala for the Northwest Flower and Garden Show. Revenue from this event supports the operations of Seattle's 230-acre Washington Park Arboretum.

The popularity of flower shows is a testament to the growing desire of Americans to support the expansion of the gardening movement and continue an enduring national tradition. "Some people say they have been coming for 40 years with their mother," says Pepper of the Philadelphia Flower Show.

Eva Monheim is editorial intern for The American Gardener.

BIRTH OF AN ALL-AMERICAN TRADITION

In 1829, 25 members of the fledgling Pennsylvania Horticultural Society gathered to show off their plant treasures from around the world. The exhibition was held in Philadelphia's Masonic Hall, which at a modest 82 by 69 feet bears little comparison with the mammoth exhibition halls used for today's flower shows. Among the plants displayed were magnolias, peonies from China, an India rubber tree, an Arabian coffee tree, and sugar cane from the West Indies. From that modest beginning sprang the Philadelphia Flower Show, now the largest indoor flower show in the world and arguably the oldest. By comparison, England's renowned Chelsea Flower Show dates back only to 1913.

The Philadelphia plant exhibition was one of the first indications that the horticultural revolution of the 19th century was underway. The steady growth of interest in plants by both collectors and the general public during this period fueled the development of plant exhibitions and stimulated the formation of regional and national plant societies.

One of the next stages in the evolution of flower shows occurred in New England, where horticultural enthusiasts sought better ways to exhibit collections of individual plant genera. The earliest form of what came to be known as the "gardenesque" movement was seen in 1873 at an exhibition on Boston Common, when the Massachusetts Horticultural Society displayed a collection of rhododendrons and mountain laurels in a naturalistic setting. At a time when few people were able to travel far from their home towns—and before the advent of television—the gardenesque exhibits gave flower show attendees a vicarious sense of how plants look in their natural settings around the world. The attention to detail and creativity that was used in that period to re-create plant habitats influenced subsequent generations of flower show exhibitors and is still in evidence at major shows today.

Now stronger than ever, the garden show movement in America is a treasured tradition. -E.М.



asmines

Beloved of poets, perfumers, and gardeners, jasmines bring mystery and sensuality to any home or garden. BY RAND B. LEE

HE FIRST JASMINE I ever grew was Jasminum sambac 'Grand Duke of Tuscany'. I was living in Key West, Florida, at the time and sent away for a start of the plant, impressed by its regal name and the evocative description of its sweet-smelling flowers.

It arrived in due course, a barely rooted stub of a thing. I planted it outside against the north wall of our house, across from a papaya tree, and it thrived in the humidity and night coolness.

It grew into a rangy graceless shrub that eventually covered the wall and broke out into flowers so fragrant I could scarcely believe my nose. They did not look like the jasmine flowers you see in books; they looked like little gardenias, only of a purer white. They were not particularly numerous, but if I picked them, more budded and blossomed, the sticklike shoots nosing off at all angles, like vegetable beagles. I have been hooked on jasmines ever since.

I speak of "jasmine" as though there is only one, but actually there are some 300 species in the genus Jasminum, not to mention the other plants commonly known as jasmines (see box, page 47).

True jasmines are in the olive family (Oleaceae), which makes them relatives of forsythias, lilacs, and fragrant olives (Osmanthus spp.). Most of the cultivated species are native to temperate or subtropical areas of the Mediterranean, the Middle East, and Asia. Their diversity makes it hard to generalize about their form and culture: Some jasmines can take frost, though most cannot; some are evergreen and others are deciduous; some behave like shrubs, others like climbers;



Jasminum sambac 'Grand Duke of Tuscany'

some are scented, others are not.

Except for a few double-flowering forms, most bear white, pinkish white, or yellow tubular blossoms that open out flat into a star-shaped pattern of five or six petals. The flowers are borne in clusters or panicles sprouting from the ends or sides of their stems. The compound, featherlike leaves of most jasmines, composed of three to nine leaflets, are arranged in pairs along the leaf stem.

A Delectable Smell

The first jasmines arrived in Europe in the 16th century, and people have been swooning for them since. Thomas Hyll, in his 1577 manual The Gardener's Labyrinth, lists "jacemine" as one of those vital plants bearing sweet-smelling flowers "that the City greatly needeth." This antidote to the stench of 16th century London was probably Jasminum officinale, the common white jasmine, which proved hardy in many parts of Britain. Hyll recommended growing it on an arbor with musk roses, damask roses, and privet, where "it yieldeth a delectable smell, much refreshing the sitters underneath it."

Cultivation of the plant spread quickly throughout England. In 1629, John Parkinson reported that the white jasmine was distributed "ordinarily in our Gardens throughout the whole Land." By the first decade of the 19th century, jasmines had reached the United States: Thomas Jefferson grew "star jasmine" (most likely J. officinale rather than what we know as star jasmine today) at Monticello.

The Best Scented Jasmines

The common white or true jasmine (J. officinale, USDA Zones 9-11, AHS Zones 12-8) is the one poets and romance writers are usually thinking of when they speak of the genus. Native from Iran east through northern India to central China, true jasmine is a vigorous, deciduous, twining vine reaching 10 to 30 feet tall. It produces clusters of single, fragrant, inchwide, pure white flowers any time from June to October. The fragrance is strongest just as dusk gives way to evening, so it is ideal for a sheltered trellis outfitted with a smooching bench. It has proven hardy to USDA Zone 7 or 8 as long as it is planted in rich, loamy soil and protected from cold winds.

True jasmine's variants are numerous. The Spanish or Catalonian jasmine (J. officinale var. affine, Zones 9-11, 12-9) has larger flowers than the species and the outer surfaces of the blossoms are tinged pink. A variegated cultivar, 'Aureovariegatum', sports leaves blotched creamy yellow.

Jasminum officinale forma grandiflo-



Jasminum polyanthum bears fragrant single white flowers flushed in palest pink.

rum (sometimes listed as 'Grandiflora') is an extremely vigorous Himalayan form bearing fragrant white flowers tinged reddish pink at their bases. This is the jasmine grown for the perfume trade near Grasse, France. It is a glossy, semi-evergreen to deciduous vine that grows rapidly to 10 to 15 feet and is lovely for covering a fence. Given the right conditions it can bloom all summer, although it is not reputed to be as free-flowering as the species.

Known variously as winter jasmine and Chinese jasmine, *J. polyanthum* (Zones 8–10, 10–8) is closely related to *J. officinale* and shares the throne as the archetypal jasmine. Native to southwestern China, it's a vigorous half-hardy climber that grows 10 to 20 feet tall, with dark green, leathery leaves and seemingly delicate—but irontough—tendrils.

It is extremely free-flowering and ideal for a cool greenhouse or sheltered patio. Anytime from April to July outdoors—November to April under glass—it can bear dense panicles of small, single, fragrant white and pale pink flowers—pinkest in the bud—that cast their scent afar at night. For earliest flowering indoors, keep this jasmine in a place where temperatures stay above 50 degrees.

Some clones appear to be more floriferous than others, so buy your plant in bloom or take cuttings in March from a proven specimen (see "Growing Jasmines" on page 48 for propagation tips). Outdoors, in USDA Zones 8 and warmer, plant *J. polyanthum* in a sheltered south or west position, against a wall or trellis or as a ground cover.

Royal or angelwing jasmine (*J. nitidum*, Zones 10–11, 12–7) is native to the Admiralty Islands off New Guinea. It has a rather shrubby habit, growing 10 to 20 feet tall outdoors. In late spring and summer, small clusters of purplish buds open to fragrant, white pinwheel flowers that are purplish beneath. The leathery, glossy green leaves grow to two inches long. The specific epithet means "shining," and the white blossoms are certainly very lovely set off against the dark foliage. Most people seem to like the fragrance, but I find it



Jasminum sambac 'Maid of Orleans' is a superb house plant that blooms year round.

Sources

Greer Gardens, Eugene, OR. (541) 686-8266. www.greergardens.com. Catalog free.

Kartuz Greenhouses, Vista, CA. (760) 941-3613. http://members.aol.com/kartuzexotics. Catalog \$2.

Logee's Greenhouses, Danielson, CT. (860) 774-8038. www.logees.com. Catalog \$4.95.

Woodlanders Inc., Aiken, SC. (803) 648-7522. www.woodlanders.net. Catalog \$2.

sweet in just the wrong way—watery, like cheap toilet soap.

Royal jasmine is one of the easiest jasmines to grow indoors, although its ungainly habit makes training it a challenge. It responds well to drastic pruning, however, and does not require high humidity. Water moderately, fertilize lightly while the plant is in active growth, and repot twice yearly. Royal jasmine is not reliably hardy below 25 degrees, so it is best to plant it in a sheltered place if your winter temperatures regularly dip much below 40 degrees. It also needs a long, warm growing season to bloom best outdoors; I certainly had no trouble getting it to flower when I lived in Key West.

My beloved Arabian jasmine (J. sambac) is the species whose flowers are used in Hawaiian leis and Chinese jasmine tea. A tender warmth-craving evergreen native to India, Burma, and Sri Lanka, it has undivided glossy leaves. When happily sited, it continuously bears clusters of powerfully fragrant white flowers about an inch in diameter.

If given sufficient humidity—to help prevent infestations of the spider mites that are likely to plague it in dry climates—it can be easily maintained as a small compact shrub in a container indoors.

There are several delicious cultivars of Arabian jasmine. 'Belle of India' bears large, white, starry, loosely double fragrant flowers year round on a vining shrub that Pink flowers distinguish the hybrid J. xstephanense from most other jasmines. It is a little hard to find, but worth the search.

can be kept to two feet tall in a pot. 'Grand Duke of Tuscany' vields whorls of waxy, quilted leaves and fully double, gardenialike white blossoms of heady perfume in summer. 'Maid of Orleans' bears small, deliciously scented, pristine, single white flowers with rounded petals.

For outdoor planting, Arabian jasmine and its cultivars require full sun and high humidity for best flowering, will not take any kind of freeze, and do best where temperatures stay above 60 degrees year round.

Rare Jasmines

Once you've grown some of the most readily available jasmines, you may be tempted to try one of the rarer and harder-to-find species. One worth finding is J. xstephanense (Zones 8-11, 12-8) a vigorous, twining, 10 to 20 foot hybrid between J. officinale and J. beesianum. Around midsummer, it bears single, fragrant, pale pink flowers and distinctive leaves: dull green above, light green below, some narrow and oval, others compound and possessing five leaflets. It has been known to withstand some USDA Zone 7 winters if planted in a warm, sheltered position.

Dwarf jasmine (J. parkeri, Zones 7–11, 12-7) makes a cute, twiggy, densely leaved hummock or dome eight to 12 inches wide by two feet tall. From May or June on, it bears small, half-inch, single, bright yellow, scented flowers, one per stem tip. A native of northwestern India, dwarf jasmine is the perfect jasmine for small spaces, rock gardens, and containers.

How does a jasmine hedge sound? Yellow jasmine (J. humile, Zones 7-9, 9-7) is an erect shrub that is evergreen or nearly so



and forms a mound up to 20 feet tall and 10 feet wide. The shoots are willowy, bearing light green, undivided leaves and nickel-size, bright yellow, slightly scented flowers from July to September. Although it is sometimes referred to as Italian jasmine, it is not native to Italy, but, rather, to the Middle East, Burma, and China.

The blossoms of J. humile 'Revolutum' (Zones 7-9, 9-7) are more than twice as broad, with rolled-back petals in clusters up to six inches long and a stronger perfume than that of the species.

The Scentless Jasmines

I have never seen much point in growing the scentless jasmines, but for those who live in more temperate climes or are not as slavishly addicted to fragrance, a few species have ornamental value.

The most widely grown scentless jasmine is winter jasmine (J. nudiflorum, Zones 6-9, 9-6). Known in its native China as Ying Ch'un (Welcomer of Spring), this glossy, narrow-leaved, green, scandent 10-foot shrub produces small single, bright yellow flowers anytime from late fall to early spring, depending on climate zone.

Its wiry, polished stems tend to droop and cascade, so it is ideal for a sloping bank or the top of a wall. Winter jasmine blooms on new wood, so cut back flowered stems to a couple of inches from the base after the blooms fade. Where the stems or stem tips touch the ground, they will often take root, like a bramble, so you can expand your collection or share the new plants with friends.

Jasmine Impostors

If imitation is indeed the sincerest form of flattery, then the appeal of jasmines is reflected in the number of unrelated climbers that are called "jasmines." These include Carolina jasmine (Gelsemium sempervirens), Chilean jasmine (Mandevilla laxa), Italian jasmine (Solanum seaforthianum), Madagascar jasmine (Stephanotis floribunda), and Confederate or star jasmine (Trachelospermum jasminoides). With the exception of Italian jasmine, all are fragrant. -R.B.L.

Growing Jasmines

Outdoors, all jasmines grow best in full sun or part shade in well-drained soil made up of equal parts peat and loam with some sand. Indoors, provide a soil-based, well-drained potting mix and protection from the full heat of the sun. All require supplemental watering during dry spells in the spring and summer, especially the larger-leaved specimens; water more sparingly in winter.

Outdoors or in, feed monthly with a balanced, low-nitrogen liquid or slow-release fertilizer. Fish emulsion or liquid seaweed are good organic amendments. If you are growing jasmines in containers, bear in mind that, generally speaking, they flower most profusely when slightly potbound, so transfer them to bigger pots only very gradually.

Most scented jasmines hail from tropical or subtropical regions, so they thrive on humidity. In winter, the dry heat in many homes is hard on them, so mist the foliage regularly or put the plants in a room with a humidifier. Good air circulation will also reduce susceptibility to insect pests such as spider mites. Outdoors, their pests are relatively few. The worst culprits are aphids, mealybugs, and a fungal disease called gray mold that has never bothered my jasmines. Insecticidal soaps generally dispose of aphids and mealybugs as well as the spider mites.

Pruning jasmines is relatively simple; only a few species need anything like special treatment. Most jasmines are content with an occasional thinning of overcrowded stems after the plants bloom. In addition, remove the flowered-out stems of *Jasminum officinale*, and cut back *J. humile* and *J. nudiflorum* to their strong new buds or lower foliage as often as needed.

SUPPORT FOR SHRUBBY SPECIES

Although I have seen vining jasmines confined to hanging baskets and cunningly trained to cover topiary wreaths, any healthy jasmine will outgrow such treatment in a month or so. Trellises, arbors, and pillars make the best outdoor supports for both shrubby and vining types, but indoors, few of us have greenhouses or sunrooms spacious enough to provide full-wall jasmine displays. My solution is to grow my jasmines indoors in sturdy pots into which I have sunk, to one-third their depth, cylinders formed of stout wire—chicken wire will do if you double it. In his book *The New Houseplant*, Elvin McDonald suggests using a teepee created from four bamboo stakes to help train shrubby jasmines such as *J. nitidum* indoors.

PROPAGATION: CUTTINGS ARE EASIEST

To propagate tender jasmines, take cuttings in March and root them in a mix of equal volumes sphagnum peat and sand with bottom heat of about 60 degrees. In summer, after the cuttings have rooted and grown big enough to transplant from three- to five-inch pots, harden them off outdoors, watering sparingly. Bring them indoors at the end of September, keeping the pots just moist until their flower buds begin to swell; then water more freely. To force new growth, provide a cool or cold greenhouse, restricted roots, plenty of winter sun, regular watering, good air circulation, and severe pruning after flowering.

Hardy jasmines can be layered in fall and usually root within a year. Or take three- to four-inch-long cuttings of actively growing wood that is beginning to harden, making sure to include part of the "heel"—a portion of the junction where the shoot was attached to its parent stem—with each cutting.

If you live in a mild winter climate, you can plant the cuttings in a cold frame and overwinter them at 45 to 50 degrees Fahrenheit. If rooting your cuttings indoors, give them bottom heat of about 60 degrees. When rooted, pot each cutting singly into three-inch pots. Pinch out once just before transplanting into five-inch pots; then provide support for the elongating shoots.

—R.B.L.



Though it lacks fragrance, *Jasminum* nudiflorum is a hardy early bloomer that brings cheer to the winter garden.

Another unscented jasmine to consider is showy jasmine (*J. floridum*, Zones 7–9, 9–4). A compact, evergreen sprawler or half-climber, it bears profuse clusters of golden yellow flowers from late summer to fall. There is also a vining tropical species, king jasmine (*J. rex, Zones II*, 12–10), worth growing for its three-inchwide white blossoms, which are said to be the largest in the genus. A slow grower native to Thailand, it can be kept to two feet tall in a pot, where it will bloom fall and winter in full or part sun.

No matter where you live or how brown your thumb is, there's no excuse for not growing at least one jasmine—and if you have a romantic bone in your body the jasmine will be a fragrant type. As soon as you get a whiff of the first blossom, you will begin to understand why they have been inspiring poets and gardeners for centuries. After that, I am confident you will be as hooked as I am.

President of the North American Cottage Garden Society, Rand B. Lee is the author of Pleasures of the Cottage Garden, published by Friedman/Fairfax in 1998. He lives in Santa Fe, New Mexico.



There are proven benefits to using mulch in the garden, but it's important to choose the appropriate type and apply it properly. BY RITA PELCZAR

LTHOUGH MULCHING is a beneficial practice for nearly Levery garden, the characteristics of specific mulching materials, as well as geographical differences in soil and climate, need to be taken into consideration. Despite the many benefits it can provide, the overuse or misuse of mulch can do more harm than good. The bottom line is simply that some mulches are better suited for certain jobs and locations than others.

Many people view mulching primarily as an aesthetically pleasing way to put the finishing touches on a bed or to hide imperfections. Yet mulching provides many well-documented, practical benefits to the garden-retaining soil moisture, controlling weeds, preventing soil surface crusting and the resulting erosion, buffering soil temperatures, minimizing maintenance, and protecting plants from mowing injury.

Mulches generally fall into two categories: inorganic and organic. Inorganic mulches include gravel and stone; plastic-either black, clear, or the newer colored plastics (see "Colors that Count," page 52); landscape fabrics, sometimes called geotextiles; recycled rubber; and aluminized mulches.

For landscaping purposes, gravel and pebbles are particularly useful for weed control around plants that thrive in dry soils. Landscape fabric mulches are commonly used under more aesthetically pleasing organic mulches—such as shredded bark-to enhance weed control. Plastic and aluminized mulches are usually

reserved for vegetable gardens, where they can be laid between rows.

Organic mulches include byproducts of the lumber industry such as chips, shavings, bark, and sawdust; other agricultural byproducts such as cocoa hulls, peanut shells, ground corncobs, and straw; and yard and kitchen wastes such as grass clippings, tree trimmings, leaf mold, pine needles, and compost.

A subset of organic mulches is living mulches or cover crops. These have traditionally been annual grasses or leguminous plants used by farmers and vegetable gardeners to prevent erosion, crowd out winter weeds, and return nitrogen to the soil.

Above: Shredded leaves make an attractive, inexpensive, and relatively long-lasting mulch.

CHOOSING A MULCH

In selecting a mulch, a number of factors come into play, including availability, cost, personal preference, the site to be mulched, and the nature of your soil and climate. In any one landscape, several different types of mulch may be needed to accomplish different goals.

Some organic mulches such as pine straw and oak leaf mold are acidic and will lower your soil's pH. Application of limestone may be necessary to neutralize the soil reaction.

Environmental concerns may also influence mulch selection. The overuse of cypress mulch is depleting the natural stands of this ecologically important species (see "A Clear-cut Problem," page 51). There are also concerns about harvesting practices for pine needle mulch, commonly sold in southeastern states.

A REGIONAL APPROACH

Mulching practices vary from region to region, largely depending on the climate and the availability of different materials.

For Mary Deweese, project designer and owner of Acorn Landscapes in West St. Louis County, Missouri, shredded hardwood is the material of choice for ornamental plantings. "It is economical, the natural material blends well with most landscape schemes, and it breaks down to enrich the soil." She notes that lighter





mulches such as cocoa hulls tend to blow away and that rubber mulches "become unsightly as they age and mix with fallen leaves and such."

The Nebraska Statewide Arboretum in Lincoln uses only organic mulches. "We feel mulch is critical in this semi-arid region to retain moisture in the root zone—especially around young plants," says Justin Evertson, the arboretum's assistant director. "We never recommend plastic weed barrier or rock mulch. We feel those options have more problems than





Two useful mulches for vegetable gardens are straw, above, and black plastic, left. In addition to preventing weed growth and moisture loss, black plastic retains soil heat.

they do benefits and they just don't look good in the landscape."

The mountain climate and topography at the Denver Botanic Gardens demand a different approach to mulching. "Our soil is not the product of eons of leaf drop from deciduous trees," explains the garden's artistic director, Rob Proctor. "We don't use any organic mulches unless you count top dressing, which is applying several inches of compost to perennial beds and shade gardens."

Even the use of compost as a top dressing and soil amendment is limited to shade plants that are not native to the region. "Putting an organic mulch, such as bark, on other types of beds," Proctor explains, "is completely unnatural for this region." Taking further cues from nature, Proctor adds, "we do use inorganic mulches, specifically pea gravel, in areas where we have rock garden plants or native western plants that evolved in stony soil."

Carol Bornstein, director of horticulture at the Santa Barbara Botanical Gardens in California makes a similar observation about plants from Southern California's chaparral plant community. "Many of our native species naturally

Mulch is most attractive when it is used in harmony with the natural habitat of the plantings. Pine bark, far left, is appropriate in a woodland garden, and pebbles, left, are applied around the base of a bitterroot (Lewisia rediviva), native to rocky soils.

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grow in areas with little organic matter either in or on the soil surface," she says, "therefore organic mulches should be used sparingly or not at all."

At the Desert Botanical Garden in Phoenix, Arizona, most mulching is done with a two-inch layer of decomposed (granular) granite. "We don't usually use organic mulch unless we are planting things that aren't native or adapted to our typically alkaline, low-organic soils," explains horticulturist Kirti Mathura. Most of the native and adapted exotic plants displayed in the garden, says Mathura, "have evolved to thrive in soils with minimal organic matter." Organic mulch "just looks out of place in the desert." According to Mathura, the decomposed granite not only controls weeds, but helps keep plant roots a bit cooler in summer.

In Alaska and parts of the West another factor enters into the equation when selecting a mulch material: flammability. A bulletin from the Alaska Department of Natural Resources suggests using only nonflammable mulches within 30 feet of your home if you live in an area where wildfires are a threat.

MULCHING PLANTS WITH PLANTS

Another option for controlling weeds and preventing surface crusting and moisture loss is the use of living mulches. At the Denver Botanic Gardens, "using ground cover perennials as alternatives to mulch is a widespread practice," says Proctor. "We use plants such as thyme, creeping veronica, creeping phlox, and other short-spreading perennials."

This is a particularly worthwhile consideration if the area you want to cover is large. "Sometimes people expect too much from mulch," says Evertson, who sees many Nebraska gardeners mulching large beds with lots of open space between the plants. "Even with mulch, these spaces are prone to weed infestations down the road," he observes. He encourages a combination of mulch and ground cover plants to minimize open spaces and reduce weeds.

MULCH MISTAKES AND PROBLEMS

Despite all the benefits of mulch, misuse can create serious problems. Perhaps the most common mistake is placing mulch in direct contact with the crown, stem, or trunk of plants. This traps

A Clear-Cut Problem

In Florida, cypress mulch is very popular with homeowners and landscapers. It is attractive and relatively inexpensive. It is touted for its resistance to decay but, according to Susan Vince of the University of Florida School of Forest Resources and Conservation in Gainesville, "The very large, very old bald cypress trees that were harvested in the early 1900s contained a high proportion of rot-resistant heartwood. The trees that are cut today are much younger and have little heartwood, so the mulch made from them is no more durable than other types of mulch such as pine bark."

Cypress mulch is not without other drawbacks, observes Extension agent Wendy Wilber of Alachua County. It turns a dingy gray within a few seasons and, when applied too thickly, tends to prevent water from soaking into the soil.

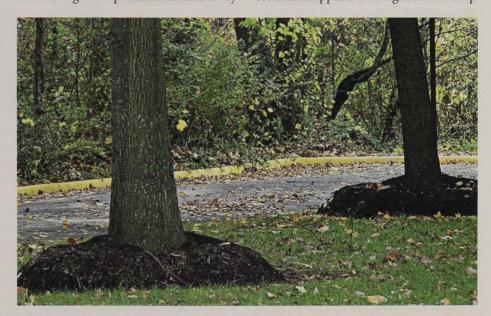
Yet the demand continues, and cypress swamps are being clear-cut to supply consumers with both mulch and lumber. Approximately 129,000 tons of cypress mulch is produced from Florida wetlands each year. These slow-growing trees, a critical component of the wetlands ecosystem, are disappearing at an alarming rate. In the past, harvested cypress stands have regenerated naturally, but "today's landscape is very different from that of 100 years ago, especially the widespread lowering of the water table due to drought and human use," says Vince. "These conditions make it less likely that harvested cypress stands will quickly return."

In response to environmental concerns, some municipalities have banned the use of cypress mulch on municipal property. For gardeners, there are excellent alternatives to cypress mulch, including one derived from the melaleuca tree, an exotic and highly invasive tree that is overwhelming stands of native plants. "Melaleuca mulch is great," says Wilber. "It smells wonderful, it comes from a serious, invasive tree of the everglades, and it has some claims to insect repellency."—R.P.

moisture and provides a favorable environment for bacteria and fungi that may cause diseases. Mulch that covers the base of a plant also encourages the development of shallow roots in the mulch layer, which are then subject to drying and damage. Keep mulch an inch away

from the base of plants and avoid covering the crown of dormant perennials.

Applying too much mulch is another common mistake. "We have lots of people in this state who seem to think that the more, the better," says Evertson. "Often we see mulch applied over eight inches deep



Piling mulch directly against the stem or trunk of a plant, as shown with these trees, can trap moisture, which in turn can invite a host of fungal and bacterial diseases.

and often in cone-shaped piles around the base of trees." Thickly applied mulch can hinder the exchange of gases that occurs in trunk and root tissue and also affords shelter for potentially injurious insects, slugs, and rodents.

Most experts suggest applying between one and four inches of mulch, depending on the material. "Something that quickly decomposes could be used on the high side; something that mats or doesn't break down quickly should be used on the low side," explains Illinois horticultural Extension educator Sandra Mason. Where you live also dictates how thick and how often to apply mulch: In warm regions, mulch decomposes more rapidly than in cooler areas.

Dense mulches such as sawdust should be applied at a thinner rate—usually one to two inches-compared to a coarser material such as wood chips that might be used at a depth of two to four inches. Mason prefers a compromise: "I like what is called a forest mulch, which has a mix of several size materials from small, welldecomposed materials to larger chips."

BEWARE THE HUNGRY MICROBES

As they slowly decompose, organic mulches contribute nutrients to the soil. But when fresh organic mulches such as wood chips are applied around plants, a temporary nitrogen deficiency can result because soil microorganisms responsible for decomposition of organic matter require nitrogen: If they are unable to obtain sufficient nitrogen from the mulch, they take it from the soil, resulting in a nitrogen deficiency in plants. Symptoms of this are yellowing leaves and stunted new growth.

The critical aspect of plant nutrition in mulch is the ratio of carbon to nitrogen (C:N ratio). Fresh organic matter has a higher level of carbon content than nitrogen. As the mulch decomposes, the relative amount of nitrogen increases and becomes available to the plants.

Resources

Mulch and Soil Council (formerly National Bark and Soil Producers Association), 10210 Leatherleaf Court, Manassas, VA 20111-4245; (703) 257-0111; www.nbspa.org.

Colors that Count

According to recent studies conducted by the U.S. Department of Agriculture's Agricultural Research Service (ARS), plants can be tricked to produce larger and

sometimes tastier crops using a colorful mulch as a stimulus.

A substance in plants called phytochrome senses the presence of neighboring vegetation by the color of light reflected off the leaf surfaces. The reflection of green leaves results in an abundance of far-red wavelengths. When these are detected, the plant seems to respond to the competition by trying to outgrow its neighbors.

Using red plastic mulch that mimics the reflection given by green leaves, ARS plant physiologist Michael Kasperbauer has demonstrated increased yields in tomatoes and strawberries. Greater yields of both crops were



Red plastic has been shown to increase fruit production in tomatoes and in strawberries.

produced using "red selective reflective mulch" (SRM-Red) compared to plants grown over black plastic. Additionally, participants preferred the strawberries grown with the SRM-Red mulch in preliminary taste tests.

-R.P.

To avoid such a nitrogen deficiency, use composted mulch or apply a top dressing of a relatively nitrogen-rich fertilizer—one with a nitrogen-potassiumphosphorus (NPK) ratio of around 10-5-5—prior to spreading the mulch.

TOXICITY

Cocoa hulls, a byproduct of the chocolate industry, have a fine, uniform texture, and a delicious chocolate fragrance. Unfortunately, dogs may be attracted to the smell, and the mulch, like chocolate, can be poisonous to them. "This is a real problem, according to our local University of Illinois vets," says Mason, "especially with young dogs that tend to chew." Homeowners with dogs are advised not to use cocoa hull mulch.

Some mulches can also be toxic to your plants. Never use grass clippings from a lawn that has recently been treated with an herbicide. And fresh grass clippings and unshredded leaves can form a dense mat that can suffocate roots and prevent water from penetrating.

Certain plants secrete chemicals that inhibit the growth of other plants, a phenomenon known as allelopathy. Walnut trees (Juglans spp.) are known to be allelopathic, so their leaves and chipped branches should not be used as mulch. "Some people avoid using eucalyptus mulch because of its known allelopathic properties," says Bornstein of the Santa Barbara Botanical Gardens, "but this is more of a problem when trying to promote seed germination of desirable annuals. Otherwise, its weed-inhibiting properties are an asset."

SMART MULCHING PAYS DIVIDENDS

As with most gardening efforts, attention to the nuances and details of mulching will pay off in healthier plants and reduced maintenance. In the end, "the biggest mistake is not to mulch," says Greg Armstrong, director of the University of Wisconsin Arboretum. By matching the right mulch to your garden's needs and being mindful of placement and depth, you can put the powerful benefits of mulch to work for you.

Rita Pelczar is an associate editor of The American Gardener.

SEASONAL GARDEN GOODS

Applying the right type of mulch to your garden can help prevent the growth of weeds, reduce loss of soil moisture, and boost fruit yield. Here are some products that make mulching more productive.



USDA tests have shown that the use of red plastic mulch increases the yield of tomatoes. Try the **High Yield Red Tomato Mulch** yourself this summer. An 18-inch-by-25-foot- roll retails for \$5.95 and is enough to mulch a row of about 10 plants; two rolls are \$11, or get four for \$19.95. Park Seed Company, (800) 845-3369. www.parkseed.com.



Turn last year's leaves into this year's mulch with the Flowtron Leaf Eater 900 Ultimate. It shreds leaves, pine needles, and even grass clippings. The portable unit is under 4 feet high, weighs 17 pounds, and can be mounted on top of a trash can or fitted with a plastic bag for collecting the shreds. Its 8-amp motor runs on household current. Flowtron Outdoor Products. Available at many retail hardware stores and Internet sources starting around \$120. One online source is www.composters.com. which can also be reached at (800) 233-8438.



stores in rolls from 3 by 50 feet to 6 by

150 feet; retails from \$10 to \$60 a roll.

Call (800) EASY-INC for local suppliers.

Ordinary garden forks have flat tines designed for working soil; this Bentpattern

4-tine Manure Fork from
Ames True Temper has 12-inch-long pointed oval tines spaced 25/8 inches apart that make it easier to lift and gather a variety of mulches. It has a 9-inch-wide head and 48-inch-long wooden handle. Available for \$24.83 at www.cornerhardware.com, (800) 361-1787. Also sold by many retail sources.

Products profiled are chosen based on qualities such as innovative design, horticultural utility, and environmental responsibility; they have not been tested by the American Horticultural Society. Send new product information to New Products, *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308, or e-mail to editor@ahs.org.

BOOK REVIEWS

Recommendations for Your Gardening Library

The rising popularity of orchids and their increasingly wide-spread availability at affordable prices have led many to experiment with these rewarding plants. To accommodate this growing interest, there has been a proliferation of books about orchids. Some of the new books are definitely geared for the die-hard orchid lover and grower. But for orchid novices—who have perhaps received a flowering orchid plant as a gift, or who simply could not resist that lovely creature at the supermarket—there are several sources of basic cultural information.

Orchid Growing for Wimps.

Ellen Zachos. Sterling Publishing Company, New York, New York, 2002. 128 pages. Publisher's price, softcover: \$17.95.

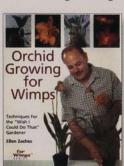
Orchids and Their Conservation.

Harold Koopowitz. Timber Press, Portland, Oregon, 2001. 176 pages. Publisher's price, hardcover: \$39.95.

Ultimate Orchid.

Thomas J. Sheehan, in cooperation with the Smithsonian Institution and the American Orchid Society. DK Publishing, New York, New York, 2001. 160 pages. Publisher's price, hardcover: \$24.95.

CLEARLY PATTERNED after the wildly popular Dummies series, *Orchid Growing for Wimps* gives a fairly good treatment of how folks with other houseplants can grow orchids—at least some orchids—right alongside. And this makes sense, because so many



of our commonly grown houseplants grow right alongside orchids in nature. The book contains a few misspellings and, well, it is *fir* bark used for orchid media and not *pine* bark, but overall this is a good way for the aspiring orchid grower to get his or her feet wet.

The section specifically for "wimps" is quite good, and the "don't try this at home" section offers particularly welcome advice. But I personally

disagree with the inclusion of dendrobiums as a group for beginners. Too many new growers start out with plants that are destined to fail and disappoint. Zachos generally provides a real service in steering novices away from this sort of plant.

Orchids and their Consersvation is not a book for the beginner, but for those seeking a solid treatment of the orchid family by one of the most knowledgeable "orchid guys" of our time.

Harold Koopowitz devotes wonderfully readable chapters to explanations of what makes an orchid an orchid, their ecology, their role in the larger ecosystem, and concerns about their conservation. He is extraordinarily well informed on CITES (Convention on International Trade in Endangered Species) and gives a thorough analysis of how this complex treaty affects the orchid trade. The coverage of specific plants and their conservation

is particularly interesting, as Koopowitz's intimate knowledge of the plants lends a depth to the presentation unavailable anywhere else in print.

For those who want to know and understand orchids and their place in modern conservation-related thought, this book is a must.

Tom Sheehan, author of *Ultimate Orchid*, is one of our foremost orchid experts. This is a splendid book, almost

a paragon of what an orchid book should be. The photography, representing the best from the vast photo collection of the American Orchid Society, as well as outstanding selections from the Smithsonian archives, simply cannot be faulted. The captioning is accurate and clear.

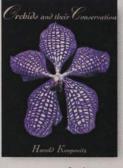
A university professor, Sheehan has spent his career educating horticulturists and it shows in this book. History, morphology, classification, and variability are presented with exceptional clarity. Sheehan's overview of the various alliances is detailed yet concise, offering a comprehensive view of today's spectrum of widely available orchids. His thoughts about conservation are right on

the money. Also of great value is the section on general care of orchids, with some of the best and most illustrative photos I have seen.

These three books represent a good cross-section of the spectrum of orchid books available today. In the end, the final assessment of a book is whether or not you would buy it or recommend it to your friends. As a career orchid grower, I would buy the

latter two books, and I would recommend, with qualifications, *Orchid Growing for Wimps* to a novice orchid grower.

-Ned Nash



Ned Nash has made a career of growing, studying and writing about orchids. He is director of conservation for the American Orchid Society in Delray Beach, Florida.

FOR MORE INFORMATION ABOUT ORCHIDS, including an extensive listing of available books on all topics relating to these plants, visit the American Orchid Society (AOS) Web site at http://orchidweb.org/.

Alpine Plants of North America.

Graham Nicholls. Rick Lupp, consulting editor. Timber Press, Portland, Oregon, 2002. 344 pages. Publisher's price, hardcover: \$49.95.

ALMOST ANY week from late winter to autumn, somewhere in Great Britain or Ireland, you can find a lavish plant show offering

ALPINE PLANTS

OF NORTH AMERICA

immaculate pots brimming with perfectly grown, rare alpine plants. Tables groan with alpine daphnes covered with thousands of flowers, Himalayan primroses galore, and immense, symmetrical cushions of Dionysia—cousins to rock jasmine (Androsace spp.)—from Iran.

But if you are looking for American alpines at these shows, you will be frustrated. You will quite certainly encounter a number of superbly grown Lewisia or Douglasia species and an occasional trillium or gangly calochortus. But the daisies, Indian paintbrushes, penstemons, phloxes,

milkvetches, buckwheats, and cresses that paint the alpine meadows of the Rockies, Sierras, and Cascades like a surrealistic canvas are almost excluded.

Graham Nicholls' book should do much to shine a spotlight on these glorious and insufficiently valued resources. It is not as encyclopedic as its front cover boasts: Ferns, sedges, and grasses; succulents like sedums, Rhodiola, and cacti; as well as practically all dwarf woody subjects such as Cassiope and Kalmia are conspicuously absent. But there is a superabundance of the major groups of wildflowers that grow at the highest elevations, particularly those with a compact habit and showy blooms.

Any such ambitious effort can be expected to have a few blemishes. For instance, the photograph on page 44 is mislabeled Aquilegia saximontana—the flowers on true A. saximontana have an unmistakable color and shape and are always nodding, unlike this pale, upfacing impostor. The text implies that Astragalus

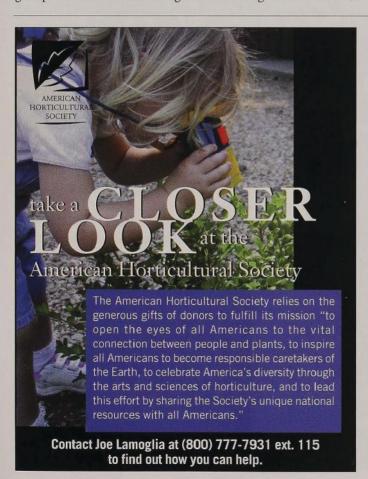
> coccineus is restricted to the White Mountains of California, but it has a much wider range that includes the Sierra Nevada. And Zauschneria garrettii does not grow in California. There are other factual inaccuracies, but to give Nicholls credit, his book has a far lower percentage of errors than, say, Harold Rickett's monumental wildflower encyclopedias produced a few decades ago.

> Nicholls has spent an enormous amount of time gathering information, making lists, and taking photographs. His tips for germinating seed and growing plants in pots are authoritative and

invaluable to anyone who yearns to grow our native alpine gems. Best of all, he has actually grown a large portion of the plants he covers, thus his descriptions are precise and they glow with an honest enthusiasm. Thanks to this book, we can look forward to many more American alpines on the benches of the English plant shows—and hopefully in our gardens here as well.

-Panayoti Kelaidis

Panayoti Kelaidis is curator of plant collections at the Denver Botanic Garden, where he created the world-renowned Rock Alpine Garden.





GARDENER'S BOOKS

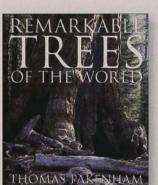
Noteworthy New Titles

There are many more new books on the market than we have time or space to review, but here are a few that recently caught our eye. Through a partnership with amazon.com, AHS members can order these and other books at a discount by linking to amazon.com through the Society's Web site at www.ahs.org.

Remarkable Trees of the World.

Thomas Pakenham. W. W. Norton & Company, New York, New York, 2002. 192 pages. Publisher's price, softcover: \$49.95.

IN THIS INFORMATIVE and inspiring book, which spans four continents and two decades of research, historian and photographer Thomas Pakenham shares his passion for some of the world's most dramatic trees as well as his concern for their survival. Chapters cover giant trees, tiny trees, old trees, historic



trees, and trees in peril. Each tree has a story, which Pakenham reveals through historical anecdotes and exquisite photographs.

The hollowed interior of the Chene-Chapelle (Chapel Oak), located in Allouville, Normandy, has served as a chapel since the late 17th century. This unusual specimen has survived a revolution, lightning, and disease. Pakenham describes it and every

other tree he visits, with an honest appreciation and a measure of awe for nature's majesty.

Making Gardens Works of Art: Creating Your Own Personal Paradise.

Keeyla Meadows. Sasquatch Books, Seattle, Washington, 2002. 128 pages. Publisher's price, softcover: \$21.95.

AWARD-WINNING designer and artist Keeyla Meadows shows you how to create your own style in the garden by combining plants and art in tasteful, colorful, and sometimes flamboyant arrangements. Included are discussions of such design considerations as elevation, focal points, connectors, harmony, and contrast. Color in the garden and effective use of space are examined in depth.



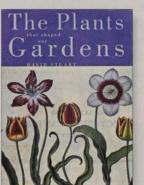
Meadows' colorful photographs highlight her exuberant style. Her use of art may have you looking at your landscape in a new light as you consider non-traditional uses of such everyday items as shovels, or the effect of combining a variety of paving materials into a single pathway. She

challenges you to think outside of the box when it comes to garden art and artistic garden design.

The Plants that Shaped Our Gardens.

David Stuart. Harvard University Press, Cambridge, Massachusetts, 2002. 208 pages. Publisher's price, hardcover: \$39.95.

DAVID STUART'S selective history of the plant movement focuses on plant explorers and the treasures they sought,



found, collected, and shared. It is also an account of how garden styles were influenced by the introduction of plants from foreign lands. Chapters cover such topics as "Treasures of the East," "The American Garden," and "From the Wilderness to the Rose Garden."

plantsmen were "networkers" who had contacts with botanists throughout the civilized world and

Stuart explains how certain

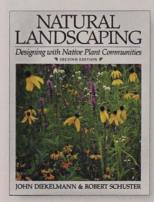
who were driving forces in the exchange of plants between the new world and the old.

By relating the amazing and sometimes harrowing details of how plants were collected and introduced into cultivation, this book offers an enriching perspective about the plants we grow.

Natural Landscaping:

Designing with Native Plant Communities.

John Diekelmann and Robert Schuster. University of Wisconsin Press, Madison, 2002. 301 pages. Publisher's price, softcover: \$24.95.



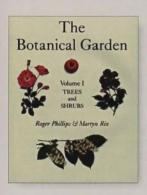
THIS REVISED edition of a popular reference, first published 20 years ago, has been updated and expanded to reflect changes in plant nomenclature, information technology, and environmental concerns such as invasive plant species. Also added is a chapter about a specific restoration project in central Wisconsin and its meaning to the community in terms of an expanded appreciation

of both the natural world and human history in the region.

Private, public, and commercial landscapes are addressed, and a step-by-step approach directs gardeners from site analysis through designing a plan for a variety of conditions. Both color and black and white photographs illustrate plants and plant communities. Extensive appendices list plants and places to observe natural plant communities.

The Botanical Garden, Volume I: Trees and Shrubs.

The Botanical Garden, Volume II: Perennials and Annuals. Roger Phillips and Martyn Rix. Firefly Books, Westport, Connecticut, 2002. Volume I: 492 pages; Volume II: 540 pages. Publisher's price, hardcover: \$75 per volume.



A RESOURCE FOR serious gardeners, horticultural students, and garden and landscape professionals, these two volumes include entries on over 1,000 genera of plants, with more than 4,000 color photographs.

Entries include botanical and common names, date of discovery, range, key recognition features, and evolutionary relationships. By supplying the month and day photographs were taken, readers can observe seasonal variability within each plant. Also included is information about plant explorers, history, ecology, and plant lore. Plants are classified by family and are listed in evolutionary order.

"Forget not Mee & My Garden...":

Selected Letters 1725-1768 of Peter Collinson, F.R.S.

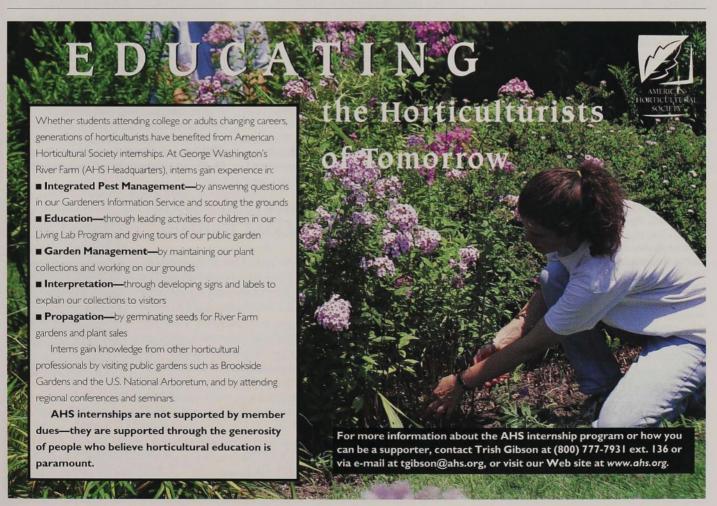
Alan W. Armstrong, editor. American Philosophical Society, Philadelphia, 2002. 300 pages. Publisher's price, hardcover: \$60.

PETER COLLINSON was a London cloth merchant in the 18th century who conducted a massive international business in plant im-



ports, particularly with his connections in the American colonies. His letters reveal a great deal about the gardening of his day, as well as history, geology, botany, and zoology. Among his correspondents were John and William Bartram, Benjamin Franklin, and Carl Linnaeus. Collinson's enthusiasm for the exchange of knowledge provides interesting and insightful reading for the garden history buff.

The book is illustrated in color with beautifully rendered historical prints of people, plants, animals, and places.



REGIONAL HAPPENINGS

Horticultural Events from Around the Country

NORTHEAST

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

JAN 16, FEB. 13, & MAR. 13. American Gardening Lecture Series: "Adoring the Exotic, Treasuring the Native." New York Botanical Garden. New York, New York. (718) 817-8747. www.nybg.org.

JAN. 21–FEB. 16. **Camellia Blooming Season.** Lyman Estate Greenhouses. Waltham, Massachusetts. (781) 891-4882 ext. 244. www.spnea.org.

JAN. 25. **Gardens Under Glass.** Workshop. Wave Hill. Bronx, New York. (718) 549-3200. Info@wavehill.org.

JAN. 28. **Plant-O-Rama.** Horticultural trade show and symposium. Brooklyn Botanic Garden. Brooklyn, New York. (718) 623-7241. www.bbg.org.

FEB 20–23. **Connecticut Flower and Garden Show.** Connecticut Expo Center. Hartford, Connecticut. (860) 529-2123. www.ctflowershow.com.

FEB 20–23. Rhode Island Spring Flower & Garden Show. Rhode Island Convention Center. Providence, Rhode Island. (401) 831-1430 ext. 342. www.flowershow.com.

FEB. 28–MAR. 1. **The Ecological Landscaping Winter Conference and Marketplace.** New England Wild Flower Society. Boxborough, Massachusetts. (617) 436-5838. www.newfs.org.

MAR. 1. **Garden Planning Symposium: Native American Plants.** Old Sturbridge Village. Sturbridge, Massachusetts. (508) 347-3362. *www.osv.org.*

MAR. 15–23. **New England Spring Flower Show.** Bayside Exposition Center. Bogton, Massachusetts. (617) 933-4982. www.masshort.org.

MID-ATLANTIC

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

JAN. 18–MAR. 16. **Orchid Exhibition.** Phipps Conservatory and Botanical Gardens. Pittsburgh, Pennsylvania. (412) 622-6914. www.phipps.conservatory.org.

JAN. 18-APR. 11. Longwood's Welcome Spring

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

Display. Longwood Gardens. Kennett Square, Pennsylvania. (610) 388-1000. www.longwoodgardens.org.

JAN. 22. Landscape Design: A Cultural and Architectural History. Lecture. United States Botanic Garden. Washington, D.C. (202) 226-4082. www.usbg.gov.

FEB. 1. Home Gardening with *Horticulture* Magazine. Lewis Ginter Botanical Garden. Richmond, Virginia. (804) 262-9887. www.lewisginter.org.

FEB. 22. **Pruning for the Homeowner.** Lecture. Green Spring Gardens Park. Alexandria, Virginia. (703) 642-5173. www.greenspring.org.

FEB. 24–26. Landscape Design Study Program, Course II. Sponsored by the National Capital Area Federation of Garden Clubs. Martin's Crosswinds. Greenbelt, Maryland. (301) 627-0491. www.ncafgardenclubs.org.

MAR. 6–9. **Washington Home & Garden Show.** Washington Convention Center. Washington,

D.C. (703) 823-7960. www.washington homeandgardenshow.com.

MAR. 15 & 16. Hagerstown Community College Alumni Association 9th Annual Flower & Garden Show. Hagerstown Community College, Hagerstown, Maryland. (301) 790-2800 ext. 346. www.hcc.cc.md.us.

SOUTHEAST

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

JAN. 17–19. **Virginia Flower & Garden Show.** Virginia Beach Pavilion. Virginia Beach, Virginia. (757) 853-0057. *www.vafgs.org.*

JAN. 25. **Herbal Tea Time.** Class. Daniel Stowe Botanical Garden. Belmont, North Carolina. (704) 825-4490. *www.dsdg.org*.

FEB. 1. "Big Ideas for Small Spaces." Perennial Gardening Symposium. The Atlanta Botanical Garden. Atlanta, Georgia. (404) 876-5859. www.atlantabotanicalgarden.org.

AHS FEB. 5–9. "Laughter in the Garden." Southeastern Flower Show. An AHS regional meeting will be held on the opening day of this show. Georgia World Congress Center. Atlanta, Georgia. (404) 888-5638. www.flowershow.org.

AHS FEB. 28. "Earth Connections: People, Plants, and Communities." Lecture given by

Garden Conservancy Issues 2003 Directory of West Coast Gardens

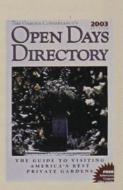
EACH YEAR, gardeners throughout the United States eagerly anticipate the release of the new *Open Days Directory* from The Garden Conservancy. This year, the Conservancy is publishing a special West Coast edition of the *Directory* that lists more than 100 gardens in Washington, Oregon, and California. These gardens are also included in the national edition for those who want the full listing of gardens throughout the United States.

The Open Days Program is the only national program that provides public access to America's very best, private gardens.

The mission of the Open Days Program is to increase public appreciation and enjoyment of America's gardens in all their regional diversity and to build an audience to support garden preservation in America.

To find out more about the program or to order this year's guide contact: The Garden Conservancy, P.O. Box 219, Cold Spring, NY 10516, or call (888) 842-2442. The *Directory* is also available at retail book stores.

—Eva Monheim, Editorial Intern



Arbor Day Poster Contest

SINCE THE early inception of Arbor Day back in 1872 by J. Sterling Morton of Nebraska, we celebrate this annual holiday by planting trees. Morton believed that educating the public about the importance of trees was a critical denominator in the success of Arbor Day; where better than in our nation's schools.



Over one billion trees have been planted since the first Arbor Day. To continue the momentum and to encourage the importance of trees within our environment, the National Arbor Day Foundation is encouraging fifth grade students to use their creative genius to design posters with the theme "Trees are Terrific...from acorn to oak." The winning poster and contestant will be announced on National Arbor Day, April 25, 2003. The student winner will receive a \$1,000 savings bond and a lifetime membership in the Foundation. The winning teacher will receive \$200 for classroom materials. Deadlines for entries vary by state.

For more details on how you or the child in your life can take part in this event, contact: The National Arbor Day Foundation, Poster Contest Coordinator, P.O. Box 85784, Lincoln, Nebraska 68502–5784 or visit www.arborday.org.

-Eva Monheim, Editorial Intern

AHS President Katy Moss Warner. Naples Botanical Garden. Naples, Florida. (239) 643-7275. www.naplesgarden.org.

FEB 20–23. **Maymont Flower and Garden Show.** Greater Richmond Convention Center. Richmond, Virginia. (803) 358-7166. www.maymont.org.

FEB. 20–23. Palm Beach Tropical Flower & Garden Show. Downtown/Waterfront. West Palm Beach, Florida. (561) 655-5522. www.palmbeachflowershow.org.

FEB. 22. "Good Gardening in Tough Times."
17th Annual Guilford Horticultural Society
Symposium. Guilford Agricultural Center.
Greensboro, North Carolina. (336) 375-5876.
www.ces.ncsu.edu/guilford.

FEB. 22-MAR. 2. **Southern Spring Show.** Charlotte Merchandise Mart. Charlotte, North Carolina. (704) 376-6594. www.southernspringshow.com.

FEB. 27–MAR. 2. "Sunny Days & Starry Nights." 2003 Nashville Lawn & Garden Show. Tennessee State Fairgrounds. Nashville, Tennessee. (615) 876-7680. www.nashvillelawnandgardenshow.com.

FEB. 28–MAR. 1. **11th Annual Hellebore Days.** Piccadilly Farm. Bishop, Georgia. (706) 769-6516.

FEB. 28–MAR. 1. **Tampa African Violet Society's 27th Annual Show and Sale.** Farm Bureau. Valrico, Florida. (813) 681-1910.

MAR. 3 & 4. Davidson Horticultural Symposium. Davidson College. Davidson, North Carolina. (704) 892-6281. Sugarden@aol.com.

MAR. 9, **Emily Whaley Memorial Garden Tour.** Tour of 10 gardens. The Citadel. Charleston, South Carolina. (843) 953-7691.

MAR. 13. **Tidewater Garden Symposium.** Norfolk Academy. Norfolk, Virginia. (757) 425-5421. omarbythesea@aol.com

NORTH CENTRAL

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

JAN. 18-MAR. 30. "In Search of Paradise: Centuries of Great Garden Design." Chicago Botanical Garden. Glencoe, Illinois. (847) 835-5440. www.chicagobotanic.org.

JAN. 20. The Garden Through the 20th Century, and Beyond. Indianapolis Museum of Art. Indianapolis, Indiana. (317) 923-1331. www.ima-art.org.

FEB 8–16. Cleveland Home & Garden Show. International Exposition Center, Cleveland, Ohio. (800) 600-0307. www.homeand flower.com.

FEB. 20. *Horticulture* Magazine Symposium. Olbrich Botanical Gardens. Madison, Wisconsin. (800) 395-1901. *www.olbrich.org.*

FEB 22–MAR. 2. Columbus Dispatch Charities Home & Garden Show. Ohio Expo Center. Columbus, Ohio. (614) 461-5257. www.dispatchcharities.com.

MAR. 1. **Tree Planting 101.** Indianapolis Museum of Art. Indianapolis, Indiana. (317) 923-1331. www.ima-art.org.

MAR. 1. Natural Landscaping Seminar for 2003. McHenry Country Defenders. McHenry County College. Crystal Lake, Illinois. (815) 338-0393. www.mcdef.org.

MAR. 8–16. Chicago Flower & Garden Show. Navy Pier's Festival Hall. Chicago, Illinois. (312) 321-0077. www.chicagoflower.com.

SOUTH CENTRAL

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

JAN. 30. Floral Design Demonstration: Texture and Color. Botanica—The Wichita Gardens. Wichita, Kansas. (316) 264-0448. www.botanica.org.

AHS JAN 30–FEB. 2. **Oklahoma Garden Festival.** An AHS regional meeting will be held on the opening day of this show. The Cox Business Services Convention Center. Oklahoma City, Oklahoma. (405) 528-2996. www.okgardenfestival.org.

FEB 1-MAR. 16. **Enchanted Forest.** Orchid Show. Missouri Botanical Garden. St. Louis, Missouri. (800) 642-8842. *www.mobot.org.*

FEB. 27. Robert F. Vicker's Landscape Design Lecture Series: Trees. Botanica—The Wichita Gardens. Wichita, Kansas. (316) 264-0448. www.botanica.org.

MAR. 1 & 2, 8 & 9. **Azalea Trail, 2003.** Private home tours. River Oaks Garden Club. Houston, Texas. (713) 523-2483. www.riveroaksgardenclub.org.

MAR. 5–9. **Wichita Garden Show.** Century II Civic Center. Wichita, Kansas. (316) 946-0883. *www.wichitagardenshow.com.*

MAR. 7 & 8. **Camden Daffodil Festival and Garden Tours.** Camden, Arkansas. (870) 836-6426. *www.camdenfestival.com*.

SOUTHWEST

AZ, NM, CO, UT

JAN. 29. **The Cloud Forest Tree.** Exhibition. Denver Botanic Gardens. (720) 865-3500. www.botanicgardens.org.

FEB. 4. How to Garden With Light and Color. Horticulture magazine symposium. Denver Botanic Gardens. Denver, Colorado. (877) 436-7764. www.hortmag.com.

FEB. 11. **13th Annual Nevada Landscape Association Trade Show & Conference.** Reno Hilton. Reno, Nevada. (800) 645-9794. www.nevadanla.com.

WEST COAST

CA, NV. HI

JAN. 22–25. **Ecological Farming Conference.** Asilomar Conference Center. Pacific Grove, California. (831) 763-2111. *www.eci-farm.org.*

FEB. 8. How to Garden With Light and Color. Horticulture magazine symposium. Strybing Arboretum and Botanical Gardens. San Francisco, California. (877) 436-7764. www.strvbing.org.

FEB. 25 & 26. Designing an Efficient Landscape Irrigation System. UC-Davis campus. Davis, California. (800) 752-0881 www.extension.ucdavis.edu/agriculture.

FEB. 16-MAR. 1. Permaculture Design Course. Occidental Arts and Ecology Center. Occidental, California. (707) 874-1557.

FEB. 18-22. Camellia Treasures: Teas to Trees, Friends of Filoli-National Trust, Filoli, Woodside, California. (650) 364-8300.

FEB. 20-23. "Gems of Nature." San Francisco Orchid Society. Fort Mason's Festival Pavilion. San Francisco, California. (415) 665-2468. www.orchidsanfrancisco.com.

FEB. 28-MAR. 2. Grow Biointensive Sustainable Mini-Farming Workshop. Ecology Action. Willits, California. (707) 459-0150. www.growbiointensive.org.

FEB. 20-MAR. 2. 2003 Peninsula Spring Home & Garden Show. San Mateo Expo Center. San Mateo, California. (650) 548-6700. www.peninsulahomeshow.com.

MAR. 20-24. San Francisco Flower and Garden Show. San Francisco, California. (800) 829-9751. www.gardenshow.com.

NORTHWEST

AK, ID, MT, OR, WA, WY

FEB. 1-15. Chinese New Year Celebration in the Garden. Portland Classical Chinese Garden. Portland, Oregon. (503) 228-8131. www.portlandchinesegarden.org.

FEB. 2-4. "The Urban-Ag Interface and the Future of Agriculture." Embassy Suites Hotel. San Luis Obispo, California. (707) 265-9349. www.aaie.net.

FEB. 19-23. Northwest Flower & Garden Show. Washington Convention Center. Seattle, Washington. (800) 229-6311. www.gardenshow.com.

CANADA

FEB. 22. Seedy Saturday. Celebration of heirloom plants and organic gardening. VanDusen Botanical Garden. Vancouver, British Columbia. (604) 878-9274. www.vandusengarden.org.

MAR. 8. Spring Garden Forum: The Urban Garden, Van Dusen Botanical Garden, Vancouver, British Columbia. (604) 878-9274.

MAR. 12-16. Canada Blooms: Flower and Garden Show. Metro Toronto Convention Centre. Toronto, Ontario. www.canadablooms.com. ..

GARDEN MARKET

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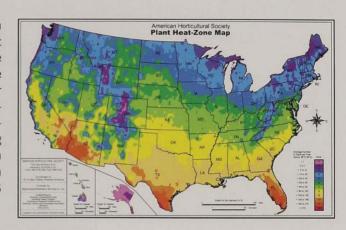


and the National Association of State Foresters.



PRONUNCIATIONS AND PLANTING ZONES

Most of the cultivated plants described in this issue are listed here with their pronunciations, USDA Plant-Hardiness Zones, and AHS Plant Heat Zones. These zones suggest a range of locations where temperatures are appropriate—both in winter and summer—for growing each plant. While the zones are a good place to start in determining plant adaptability in your region, factors such as exposure, moisture, snow cover, and humidity also play an important role in plant survival. The zones tend to be conservative; plants may grow outside the ranges indicated. A USDA zone rating of O means that the plant is a true annual and completes its life cycle in a year or less. Many plants that are perennial in warm climates are grown as annuals in cooler zones. To purchase a two-by-three-foot glossy AHS Plant Heat-Zone Map for \$9.95, call (800) 777-7931.



A-D

Abutilon pictum 'Thompsonii' uh-BYEW-tih-Ion PIK-tum (USDA 8-11, AHS 12-8)

Acalypha repens ah-kuh-LEE-fuh REP-enz (11, 12-6)

A. wilkesiana and cultivars A. wilkee-zee-AN-uh (11, 12-6)

Achillea millefolium 'Montrose Rose' ah-kih-LEE-uh mih-lih-FO-lee-um (4-9, 9-2)

Ajuga pyramidalis 'Metallica Crispa' uh-JOO-guh pih-rah-mih-DAL-iss (3-9, 9-1)

A. reptans A. REP-tans (3-9, 8-2) Alocasia odora al-o-KAY-see-uh

o-DOR-uh (11, 12-10) Alpinia zerumbet 'Variegata' al-PINee-uh zeh-RUM-bet (11, 12-10)

Alternanthera 'Hilo Beauty' al-tur-NAN-thur-uh (11, 12-1)

A. dentata 'Rubiginosa' A. den-TAYtuh (11, 12-1)

A. dentata 'Tricolor' (11, 12-1)

A. ficoidea cultivars A. fih-KOYdee-uh (11, 12-1)

Aquilegia caerulea ah-kwi-LEE-juh see-ROO-lee-uh (3-8, 8-1) Artemisia 'Huntington' ar-teh-MEEZ-

vuh (6-9, 9-6)

Asclepias tuberosa as-KLEE-pee-us too-bur-O-suh (3-9, 9-2) Callicarpa americana kal-lih-KAR-

puh uh-mair-ih-KAN-uh (7-9, 9-6) Calopogon tuberosus kah-luh-POgon too-bur-O-sus (3-11, 12-1)

Canna cultivars KAN-nuh (7-11, 12-1)

Colocasia esculenta 'Fontanesii' kol-o-KAY-see-uh es-kyew-LEN-tuh (10-11, 12-4)

Coreopsis verticillata kor-ee-OP-sis vur-tih-sih-LAY-tuh (4-9, 12-1) Cotinus coggygria 'Atropurpurea' KOtin-us ko-JEE-gree-uh (5-7, 7-5)

Cymbopogon citratus sim-bo-POgon sih-TRAY-tuss (10-11, 12-1) Cypripedium calceolus sip-rih-PEEdee-um kal-see-OH-lus (3-7, 7-1) Dianella tasmanica 'Yellow Stripe' dy-uh-NEL-uh taz-MAN-ih-kuh (8-11, 12-1)

Duranta erecta 'Aurea' dew-RANtuh eh-REK-tuh (11, 12-1)

E-L

Echinacea purpurea ek-ih-NAY-seeuh per-PER-ee-uh (3-9, 12-1) Ensete ventricosum en-SEH-tee ven-trih-KO-sum (10-11, 12-1) Gelsemium sempervirens jel-SEEme-um sem-pur-VY-renz (7-9, 9-4) Geranium psilostemon juh-RAY-neeum sy-LOS-teh-mon (5-8, 8-2) Gomphrena 'Lavender Lady' gom-FREE-nuh (11, 12-1) Hedychium coronarium heh-DEE-keeum kor-o-NAIR-ee-um (7-11, 12-7) Helianthus angustifolius hee-lee-AN-thus ang-gus-tih-FO-lee-us (6-9, 9-4)Hibiscus coccineus hy-BISS-kus kok-SIN-ee-us (6-11, 12-6) Jasminum beesianum jaz-MIN-um

bee-see-AN-um (10-11, 12-10) J. floridum J. FLOR-ih-dum (7-9, 9-4)

J. officinale var. grandiflorum J. ohfiss-ih-NAL-ee var. gran-dih-FLORum (9-11, 12-9)

J. humile J. HYEW-mih-lee (7-9, 9-7)

J. nitidum J. NIT-ih-dum (10-11, 12 - 7)

J. nudiflorum J. new-dih-FLOR-um (6-9, 9-6)

J. officinale J. oh-fiss-ih-NAL-ee article: (9-11, 12-8)

J. officinale var. affine J. oh-fiss-ih-NAL-ee var. uh-FEE-nay (9-11, 12-9) J. parkeri J. PAR-ker-eye (7-11, 12 - 7)

J. polyanthum J. pah-lee-AN-thum (8-10, 10-8)

J. rex J. REKS (11, 12-10)

J. sambac and cultivars J. SAM-bak (10-11, 12-9)

J. xstephanense J. stef-uh-NEN-see (8-11, 12-8)

Lantana cultivars lan-TAN-uh (9-11, 12-1)

L. montevidensis L. mon-teh-vih-DEN-siss (9-11, 12-1) L. trifolia L. try-FO-lee-uh (9-11, 12-1)

Lewisia rediviva loo-ISS-ee-uh rehdih-VY-vuh (4-8, 8-3)

Lilium philadelphicum LIL-ee-um fil-uh-DEL-fih-kum (2-6, 6-1) Lindernia grandiflora lin-DER-nee-uh gran-dih-FLOR-uh (7-10, 10-7)

M-R

Mandevilla laxa man-duh-VIL-luh LAKS-uh (10-11, 12-2)

Miscanthus sinensis 'Morning Light' miz-KAN-thus sy-NEN-siss (5-9, 9-3)

Musa basjoo MEW-suh BAS-joo (8-11, 12-1)

Pentas lanceolata PEN-tas lan-seeo-LAY-tuh (10-11, 12-1)

Petunia integrifolia peh-TOON-yuh in-teg-rih-FO-lee-uh (8-11, 12-3)

Philadelphus xvirginalis 'Minnesota Snowflake' fil-uh-DEL-fus vir-jin-AH-liss (3-7, 7-1)

Plectranthus argentatus plek-TRANthus ar-jen-TAY-tuss (11, 12-1) P. forsteri cultivars P. FOR-stur-eye (11, 12-1)

Rudbeckia triloba rood-BEK-ee-uh try-LO-buh (3-11, 12-1) Ruellia brittoniana roo-EL-ee-uh brit-tone-nee-AN-uh (11, 12-1)

S-Z

Salvia 'Waverly' SAL-vee-uh (4-10, 12-1)

S. coccinea cultivars S. kok-SINee-uh (11, 12-1)

S. greggii S. GREG-ee-eye (7-9, 9-7) S. involucrata S. in-vol-yew-KRAYtuh (9-11, 12-2)

S. leucantha S. loo-KAN-thuh (9-11, 12-4)

S. microphylla S. my-kro-FIL-luh (8-11, 12-4)

S. splendens 'Van Houttei' S. SPLEN-denz (9-11, 12-1)

Sedum makinoi 'Ogon' SEE-dum MAK-ih-noy (6-9, 9-1)

S. spurium 'Bronze Carpet' S. SPUR-ee-um (4-9, 9-4)

Solanum quitoense so-LAH-num kev-TOH-en-see (11, 12-1)

S. seaforthianum S. see-forth-ee-AN-um (11, 12-6)

Solenostemon scutellariodes so-len-O-steh-mon skoo-tuh-lair-

ee-OY-deez (11, 12-1) Stephanotis floribunda stef-uh-NO-

tis flor-ih-BUN-duh (11, 12-1) Strobilanthes dyerianus stro-bi-LANtheez die-ur-AN-us (11, 12-1)

Tibouchina grandifolia tih-boo-KY-nuh gran-dih-FO-lee-uh (11, 12-1)

Trachelospermum jasminoides tray-kell-o-SPUR-mum jaz-mih-NOY-deez (8-11, 12-8)

Trillium pusillum TRIL-ee-um pyew-SIL-um (5-8, 8-1)

T. sulcatum TRIL-ee-um sul-KAYtum (4-8, 8-1)

Verbena 'Abbeville' ver-BEE-nuh (4-7, 7-1)

V. 'Blue Princess' (7-11, 12-1) Yucca gloriosa YUK-uh glor-ee-Osuh (7-11, 12-7)

A Winter Tapestry of Bugleweed and Sedum

by Carole Ottesen

■ HE LAST LEAVES have long ago come down and been raked up; now they are moldering into next season's compost. Snug under the surface of the soil, the perennials are at rest. The landscape stands exposed in a somber palette of earth tones with occasional greens. This is the garden's spare season. It is a time when garden elements that were all but invisible during the growing months are catapulted into prominence. Evergreens dominate—from tall trees down to the diminutive plants that serve as the garden's fine-tuning-edgings, ground covers, underplantings.

The smallish plants that edge, fill gaps, and clothe bare soil, do so neatly and well, but most are green. Few indeed are the fine-tuners that can add welcome winter color into the process. One that does is a cultivar of upright bugleweed (Ajuga pyramidalis) called 'Metallica Crispa' (USDA Zones 3-9, AHS 9-1), which teams earthy color with celestial luminosity. Its foliage is a deep burgundy brown with a metallic sheen. When light glances off dark leaves that are as crimpled as spinach, it



■ Sedum spurium 'Bronze Carpet' Busse Gardens, Big Lake, MN 800) 544-3192.

www.bussegardens.com. Catalog \$3. Mellinger's, Inc., North Lima, OH. (330) 549-9861.

www.mellingers.com. Catalog free

■ Ajuga pyramidalis 'Metallica Crispa' Greer Gardens, Eugene, OR. (541) 686-8266.

www.greergardens.com. Catalog free. Joy Creek Nursery, Scappoose, OR. (503) 543-7474. www.joycreek.com. Catalog \$3.



flashes pearly silver as it might from a slick of oil on water.

The tight rosettes of Ajuga 'Metallica Crispa' grow about three to four inches tall, but in spring they send up six-inch flower spikes of violet-blue flowers. 'Metallica Crispa' is a somewhat slower-growing cultivar than the species and much slower than the rhizomatous common bugleweed (Ajuga reptans). Recommended spacing is six to eight inches apart.

'Metallica Crispa' is attractive enough to hold its own in a bed, but in the perennial garden at the American Horticultural Society's River Farm headquarters it has been paired with Sedum spurium 'Bronze Carpet' (Zones 4-9, 9-4). And this combination is far greater than the sum of its parts.

Cold weather blushes 'Bronze Carpet's leaves a rosy red that is both a clean contrast and a light, cheerful, tonal echo of the ajuga's deep, grave burgundy. The sedum's texture is regular and refined; its

effect is not unlike a carpet of tiny rosebuds. Compared to this, the ajuga's leaves resemble a topographic map of rough and rugged mountainous territory.

'Bronze Carpet' forms a tight mat of foliage that reaches two to three inches tall. In summer, star-shaped pink flowers appear on six-inch stems. It is only semievergreen, sometimes dropping the foliage toward the base of its stems in winter. For ground covering, plants should be spaced about six inches apart.

Together, these two plants form a complete miniature landscape, rich in color and contrasting textures. "They look attractive all winter," says Peggy Bowers, landscape gardener at River Farm. "They're also low maintenance. We haven't thinned them or cut them back and they've been in for two years with absolutely no pest problems."

Carole Ottesen is an associate editor of The American Gardener.

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