# The American GARDENER

The Magazine of the American Horticultural Society

January/February 2007

New Plants for 2007

Garden Path Primer

Container Gardening: Choosing the Right Pot

beautiful Winter Buds

### Protecting One of Your Most Valuable Assets





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Photograph by Susan A. Roth

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#### ON THE ROAD WITH AHS

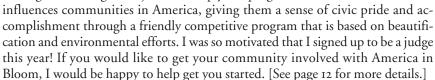
APPY NEW YEAR to each and every one of our AHS members! And what an exciting year we have in front of us, full of much activity, important partnerships, further developments at River Farm, and brand new leadership. Get ready, because this will be a year to remember!

As this issue went to press, we received late-breaking news from our search committee that Deane H. Hundley has been named the next president of the AHS. Deane's appointment is the culmination of an intensive national search that was launched to find the right person for the position at this particular point in the AHS's history. It is encouraging to know that the AHS will benefit from Deane's talent, experience, vision, and enthusiasm, and I am eagerly looking forward to

working with him as we continue to expand the relevance and mission of the AHS. You can read more about Deane on page 8.

Over the last couple of months, I have continued to travel the country making contact with our AHS members—renewing friendships as well as making new friends and forging new partnerships.

Recently I was in Columbus, Ohio, for a board meeting of America in Bloom, an important AHS partner. During the meeting, I saw just how deeply this program



Then, on a visit to my old stomping grounds in Orlando, Florida, I met with Ray Miller, the founder of YourOutDoors, Inc., one of our newest AHS Corporate Partners. Ray is the inventor of a clever and useful new garden tool kit called the Perfect Garden Tool System. We discussed the possibility of encouraging children to garden through the use of these kits. Again, partnerships are helping us connect people in America with plants and gardens so that their lives will be forever enriched.

Back home in New York, I had the opportunity to meet with Robin Karson, who is founder and executive director of the Library of American Landscape History, as well as the author of Fletcher Steele: Landscape Architect, which was named one of 75 Great American Garden Books by the AHS in 1997. We visited two historic gardens and the home of Fred Rich, an AHS member who has created a wonderful natural garden along the banks of the Hudson River. It is people like Robin who are keeping the history of our great country's horticulture and landscape architecture alive and showing us how it influences and informs our practices today.

And so I look at this New Year in front of us with great anticipation, hope, and joy. Please make a special effort this year to help the AHS in its mission—by encouraging your friends to be members, by helping us forge new partnerships, by supporting us generously. I hope to see you in my travels.

Happy New Year!

thy Mon Warner

-Katy Moss Warner, AHS President Emeritus

## MEMBERS' FORUM

#### **EDIBLE LANDSCAPING ORIGINS**

I wanted to draw your attention to an error of omission in the "One on One With..." interview with Rosalind Creasy published in the November/December issue.

In introducing Creasy, author Doreen Howard writes that Creasy's book *The Complete Book of Edible Landscaping*, published in 1982, is "considered the bible of her ground-breaking concept—edible landscaping." Yet, in 1974, some eight years earlier, I coauthored *The Edible Ornamental Garden* with Coralie Castle. The book went to three editions published by 101 Productions in San Francisco and was also republished by both Penguin and Pelican books.

In the preface to the first edition of the book we wrote: "Here we propose a unique approach: commonly known edible plants, lesser known for their decorative qualities, blended with ornamental flowers, bushes and trees...." If this is not edible landscaping, I don't know what is.

I question the assertion that Rosalind Creasy was the first to come up with this concept. By not mentioning other publications that have contributed to this area of horticulture, I feel you have done a disservice not only to Coralie Castle and me, but also to your readers.

John E. Bryan Sausalito, California

**Editor's response:** We did not intend to overlook other writers who contributed to the genre of edible landscaping, especially one of our own editorial advisors!

Rosalind Creasy notes that she referenced John Bryan and Coralie Castle's book in her own work, along with other writers and horticulturists who influenced

#### New Website Password

Effective February I, 2007, the password to access the members-only portion of the AHS website, *www.ahs.org*, will be **dogwood**.

#### We Want to Hear from You

There are exciting changes afoot at the American Horticultural Society. As our Board of Directors and staff begin charting the course for the AHS over the next few years, your feedback and participation will help guide our pro-

grams and advocacy efforts.



With that in mind, we intend to convert this page into a true forum for AHS members. Please send us your thoughts on the magazine as well as on other AHS membership benefits and programs. Let us know what we are doing well, and what could be improved.

We'd also like to hear how gardening inspires you, what plants have proven successful, gardening tips you'd like to share, how you are influencing the next generation of gardeners, and your opinions on the state of American horticulture. Let us know if you have seeds to share, or are looking for seeds of a particular plant. And please send us images of your garden and your favorite plants. In upcoming issues, we will feature pho-

tos of members' gardens and plants on this page.

Eventually we will expand the forum to our website so that AHS members can communicate directly with one another, sharing ideas, seeds, plants, photos, and a collective passion for gardening and stewardship of the earth.

You can reach us by sending e-mails to editor@ahs.org or by mail to: Members' Forum, *The American Gardener*, American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308. If you send image files by e-mail, please be sure to include "Members' Forum" or "Letter to the Editor" in the subject line so we don't mistake them for spam.

her interest in the topic. Bryan and Castle's book is, unfortunately, out of print, but is worth seeking out through used book stores and online book yendors.

#### EARTH-FRIENDLY MESSAGE PLEASES

In all the years that I have been an AHS member, I have not read a more exciting issue of the magazine than the September/October issue. The fact that the whole issue deals with care of the earth and keeping it healthy made it a joy to read.

I have always practiced natural, whole ways of growing. I hope that more people will get the message that indiscriminate use of synthetic pesticides can harm a wide variety of living things. Thank you for promoting positive ways of growing and helping shift peoples' thinking.

Peggy Rabishaw Cookstown, Ontario, Canada

#### FLOWER SHOWS DESERVE RESPECT

Congratulations on the November/December issue of *The American Gardener*. The diversity of subjects in that issue appeal to every gardening interest.

I particularly enjoyed Ray Rogers' article on flower shows ("Growing for Show"). It is a shame that the local flower shows seem to be falling out of vogue in the United States and England. I think they are a victim of the Internet and other forms of cyber-socialization.

Harry A. Rissetto AHS Board of Directors Falls Church, Virginia

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



Immerse yourself in the intricacies of gardening for evening enjoyment and the amazing world of plants at these exclusive AHS Garden School offerings.

Through a variety of presentations, demonstrations, and specially planned activities, participants will learn practical tips and techniques for creating landscapes for evening enjoyment and discovering the amazing world of plants. Avid garden enthusiasts and horticultural professionals alike will benefit from these inspirational and informative two-day workshops.

The AHS Garden Schools offer a truly unique environment for life-long learning: These intimate, in-depth workshops feature personal instruction from noted garden authorities, as well as opportunities for practical application and hands-on experiences in inspirational settings.

Visit *www.ahs.org* or call (703) 768-5700 ext. 137 for more information about how you can be part of these exciting events.

April 26 & 27, 2007

After Dark in the Garden: Creating Landscapes for Evening Enjoyment

AHS Headquarters at River Farm, Alexandria, Virginia



Discover how to optimize your garden for evening enjoyment through plant selection, garden design, and lighting with "After Dark in the Garden: Creating Landscapes for Evening Enjoyment" at a truly inspirational setting—the Society's River Farm headquarters overlooking the beautiful Potomac River.



October 4 & 5, 2007 The Amazing World of Plants Yew Dell Gardens, Crestwood, Kentucky

Learn about horticultural gems, noteworthy plants for the landscape, and garden design for the plant collector with "The Amazing World of Plants" among the remarkable plant collections of Yew Dell Gardens, the former estate of the late plantsman, Theodore Klein.

PROGRAMS • EVENTS • ANNOUNCEMENTS

#### Deane H. Hundley is New AHS President

AS THIS ISSUE OF the magazine went to press, the AHS Search Committee that was conducting the national search for a new president announced that **Deane H. Hundley** has been named the president and chief executive officer of the American Horticultural Society, effective January 1, 2007. In replacing **Katy Moss Warner**, who retired last summer after four years in the position, Deane becomes the 33rd president of AHS.

A native of Virginia, Deane currently resides in Jacksonville, Florida. He comes to the AHS with more than 25 years of experience in administration and fundraising for non-profits. Most recently he was a senior consultant with Ketchum, Inc. of Dallas, Texas, a fundraising firm that specializes in working with not-for-profit organizations.

Prior to that, Deane was chief operating officer for the Fairchild Tropical Botanic Garden in Coral Gables, Florida. At Fairchild he oversaw all financial and business operations for the 100-acre botanical garden. He also developed and implemented the garden's first organized fundraising program, and carried out a major feasibility study for Fairchild's first capital campaign, which raised more than \$13 million.

"The AHS is at a very exciting juncture in its history," says AHS Board Chair **Susie Usrey**. "With a great vision for the future established by the Board of Directors, a crown jewel in our River Farm headquarters, and a talented staff that has strengthened and expanded our programs, we are poised to do great things for America. Deane brings a unique blend of leadership and experience that will move us to the next level and help us turn our dreams into reality. We are delighted to welcome him to the AHS family."

Look for in-depth coverage of the AHS's new president in the next issue of the magazine.

#### Green Garage® at the Northwest Flower & Garden Show

THE AMERICAN HORTICULTURAL SOCIETY will take its award-winning Green Garage® exhibit to Seattle, Washington, for the Northwest Flower & Garden Show from February 14 to 18. The exhibit debuted at the Philadelphia Flower Show in 2006. The traveling exhibit features a garage structure replete with earth-friendly gardening tools and products.

In Seattle, the landscape surrounding the exhibit is designed to feature an attractive blend of low maintenance plants that are appropriate to the Pacific Northwest region. The design will incorporate plants that attract beneficial wildlife to the garden



The Green Garage, shown here at last year's Philadelphia Flower Show, will be at the Northwest Flower & Garden Show in Seattle this year.

**NEW WEBSITE PASSWORD** Effective February 1, the 2007 member password for *www.ahs.org* is **dogwood**. Members may use this password to enter the members-only section of the website, which includes access to a downloadable order form for the AHS Seed Exchange, discounts on gardening products, and the full text of articles from recent issues of *The American Gardener*.

and reflect the exhibit's overall commitment to earth stewardship. "We will use a combination of well-behaved non-natives and Northwest natives," says AHS Horticulturist **Peggy Bowers**. "This will be a do-able garden, one that homeowners can easily achieve without a lot of maintenance." The plants are being supplied by several companies, including AHS Corporate Partner **Monrovia** nursery.

Many individuals are helping to coordinate the Green Garage® in Seattle, including craftsman Frank Coleman, who is building a replica of the original exhibit currently on display at the AHS's headquarters at River Farm. Richie Steffen, coordinator of horticulture for the Elisabeth C. Miller Botanical Garden in Seattle, is designing several pots to accompany the garage. Peggy and AHS Events Manager Trish Gibson traveled to Seattle in November for a planning session with garden designer Lois Pendleton, who is the AHS's on-site project coordinator for the exhibit. While there they met with staff members from Lake Washington Technical College, who are conditioning some of the exhibit's plants so they will be in bloom for the February show.

For detailed information about the show, visit www.garden show.com, and for tickets call (800) 569-2832.

#### Allan Armitage Hosts New Online Seminars for AHS Members

THIS YEAR, the AHS is launching a new series of educational programs that will be broadcast live via the Internet. Well-known gardening author and speaker **Allan Armitage**, who is a horticulture professor at the University of Georgia and a member of the AHS Board of Directors, will host the three-part series, which is a new benefit available exclusively to AHS members.

These web seminars, or "webinars," make interactive programs accessible to an audience around the country and even the world. Program registrants will view the presentation on their computers while listening to Allan through speakers or headphones. After each 30-minute presentation, Allan will stay online to respond to questions from participants.

The webinar series begins on March 29 with "Perennials that Work," in which Allan will profile a variety of herbaceous perennials and grasses that are proven performers in American gardens. On May 10, Allan will cover exciting trends in annuals, foliage plants, and tropicals in "Annuals that Work." And on a date to be established in September, "Bulbs that Work" will profile exciting spring- and summer-flowering bulbs just in time for autumn planting season.

More details about the webinars and registration information will be available on the AHS website (www.ahs.org) starting in late January.

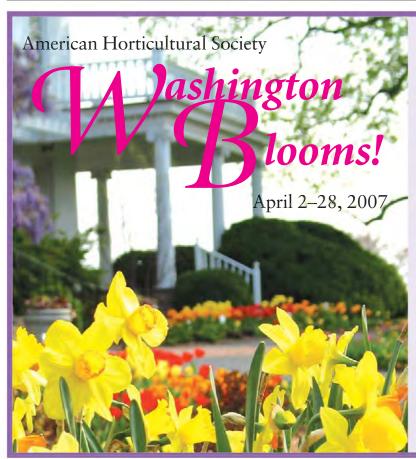
#### Dr. H. Marc Cathey Day

THE AHS CELEBRATED the second annual Dr. H. Marc Cathey Day on October 23, the birthday of the Society's now-retired president emeritus. To honor Dr. Cathey's lifetime contributions to American horticulture and the AHS, staff and volunteers held a work day in Beau Beau's Garden, a section of the children's garden at River Farm designed in honor of Dr. Cathey's beloved grandchildren.

The garden's wooden play structure and paths were cleaned and repaired. Overgrown plants were pruned or removed to make way for replacement plantings to be completed this spring.



AHS staff members and volunteers spruce up Beau Beau's Garden.



Join us this April for *Washington Blooms!* at River Farm. Nothing compares with the beauty of the early spring blooms in the National Capital area. Cherry blossoms, daffodils, and tulips herald the coming of spring in an explosion of color. Mark your calendar and plan to visit River Farm and the National Capital area this April—you'll find a variety of spring delights with something for every gardener and garden enthusiast, no matter what your passion!

Visit www.ahs.org or call (703) 768-5700 for more information.

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2007 Washington Blooms! Events at River Farm

April 7 • Spring Garden & Bulb Tour

April 14 • Spring Garden & Bulb Tour

April 20 • Members-Only Preview Night for

Friends of River Farm Plant Sale

April 21 • Friends of River Farm Plant Sale & 22

April 28 • Spring Garden & Bulb Tour

Ongoing for the month of April at River Farm

- Thousands of spring blooms!
- AHS Garden Shop
- · Botanical art exhibit

More reasons to visit the National Capital Area in April

- National Cherry Blossom Festival (March 31 April 15)
- Historic Garden Week in Virginia (April 21 28)



#### AHS NATIONAL EVENTS AND PROGRAMS

## CALENDAR

ark your calendar for these upcoming national events and programs that are sponsored or cosponsored by the American Horticultural Society.

- FEB. 14–18. AHS Green Garage® Exhibit at the 2007 Northwest Flower & Garden Show. Seattle, Washington.
- APR. 2-28. Washington Blooms! George Washington's River Farm, Alexandria, Virginia.
- APR. 9–12. AHS President's Council Trip. Charlotte, North Carolina.
- APR. 13-JUNE 3. Epcot International Flower & Garden Festival. Lake Buena Vista, Florida.
- APR. 21 & 22. Friends of River Farm Plant Sale. George Washington's River Farm, Alexandria, Virginia. (Please note: Member's-only preview sale is from 4 p.m. to 8 p.m. on April 20.)
- APR. 26 & 27. AHS Garden School. "After Dark in the Garden: Creating Landscapes for Evening Enjoyment." George Washington's River Farm, Alexandria, Virginia.
- APR. 29-MAY 2. Colonial Williamsburg Garden Symposium. Williamsburg, Virginia.
- MAY 4. Magic of Landscapes. Lake Buena Vista, Florida.
- MAY 20. Friends of River Farm Family Picnic. George Washington's River Farm. Alexandria, Virginia.
- MAY 31. Taste of River Farm. George Washington's River Farm. Alexandria, Virginia.
- JUNE 1. Great American Gardeners Award Ceremony and Banquet. George Washington's River Farm. Alexandria, Virginia.
- JULY 19-21. National Children & Youth Garden Symposium. Chaska, Minnesota. Hosted by the Minnesota Landscape Arboretum Public Policy Programs.
- SEPT. 20–22. Fashion in Bloom. George Washington's River Farm. Alexandria, Virginia.
- SEPT. 29. AHS Annual Gala. George Washington's River Farm. Alexandria, Virginia.
- OCT. 4 & 5. AHS Garden School. "The Amazing World of Plants." Yew Dell Gardens, Crestwood, Kentucky.
- OCT. 23. Dr. H. Marc Cathey Day. George Washington's River Farm. Alexandria, Virginia.
- DEC. 3-21. Holiday Trees Display. George Washington's River Farm. Alexandria, Virginia.

For more information about these events, call (800) 777-7931 or visit the AHS website (www.ahs.org).

#### TerraCycle Partners with the AHS

THE AHS is pleased to welcome a new corporate partner that shares the Society's commitment to earth-friendly and sustainable gardening practices. TerraCycle, Inc. is an innovative start-up company founded by Tom Szaky and Jon Beyer, who came up

with the concept while students at Princeton University in 2001.

Combining functionality with environmental responsibility, the company reuses plastic soda bottles to hold all-natural ready-mixed plant foods made from liquefied earthworm castings. Products launched thus far include an all-purpose plant food and spe-



TerraCycle founders Tom Szaky, left, and Jon Beyer sport their company's logo.

cific blends designed for African violets and orchids; these are available at many retailers, including Home Depot, Wal-Mart, CVS Pharmacies, and Whole Foods Market.

To ensure a steady supply of soda bottles, TerraCycle encourages organizations and individuals to establish collection sites. For every bottle collected, the company donates five cents to the site's charity of choice or protects ten square feet of rainforest through an agreement with the Nature Conservancy. To date, more than 1.2 million bottles have been saved from landfills.

To learn more about TerraCycle and find out how to get your community group or organization involved with bottle recycling, visit www.terracycle.net. If you do set up a collection site, please consider designating the AHS as your charity of choice.

#### Capturing the Garden Through Photography

THE THIRD AND final 2006 AHS Garden School, "The Art & Science of Garden Photography" was hosted by Lady Bird Johnson Wildflower Center on October 26 and 27 in Austin, Texas. Forty-three attendees from 17 states gathered to work side by side with the highly regarded garden photographers Alan and Linda Detrick, the naturist/photography team of Brian and Shirley Loflin, and guest horticulturist Robert Bowden of the Harry P. Leu Gardens in Orlando, Florida. Roger Foley, a garden photographer whose work has been featured in numerous books and magazines, gave a fascinating presentation on how to effectively capture light through photography.

"I really enjoyed the program, the attendees, and learning so many new things. The Garden School opened up a whole new world for me," says Gerdika Elberfeld, an avid gardener from Boulder, Colorado. Patti Spaght from Southport, Connecticut, was impressed by "the balance of technical camera detail with compositional information such as viewing and lighting, and the helpfulness of all the instructors."

The two-day workshop included a photography field study at the Wildflower Center and an early morning photo shoot



A garden school participant tries out her photography skills at the Lady Bird Johnson Wildflower Center during an early-morning field session.

where attendees had the opportunity to get hands-on advice about how to improve their photography in garden settings.

The 2007 AHS Garden Schools will be "After Dark in the Garden: Creating Landscapes for Evening Enjoyment" on April 26 and 27 at the AHS's River Farm headquarters in Alexandria, Virginia, and "The Amazing World of Plants" on October 4 and 5 at Yew Dell Gardens in Crestwood, Kentucky. To learn more, visit www.ahs.org or e-mail education@ahs.org.

#### 2007 National Children & Youth Garden Symposium

Join educators, garden designers, community leaders, and

children's gardening advocates for the AHS's 15th annual National Children & Youth Garden Symposium, "Widening the Circle," from July 19 to 21, hosted by the Minnesota Landscape Arboretum's Public Policy Programs in Chaska, Minnesota.

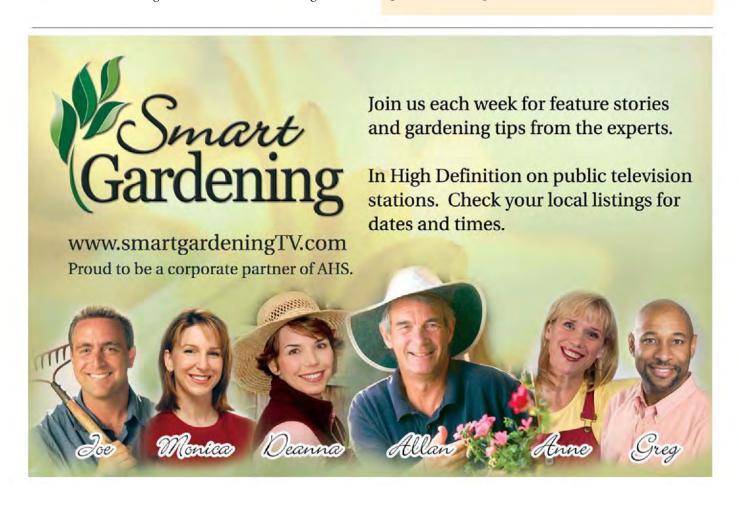
Hear from voices young and old as the circle widens to look at fresh approaches and expanded audiences for children's and youth programs. Gather inspiration from the symposium's diverse educational offerings,



At the 2005 symposium in Georgia, attendees explored the children's garden at the Atlanta Botanical Garden.

which range from innovative ideas for non-traditional classrooms to interdisciplinary studies, and new strategies for making a difference beyond the confines of classroom walls.

For more information or to be added to the mailing list, go to www.ahs.org or call (703) 768-5700 ext. 132.



#### AHS at "Gardens in Graveyards" **Symposium**

AHS VOLUNTEER COORDINATOR Kyle Marie Harpe is a member of the American Public Gardens Association's (APGA) Volunteer Committee, which planned and presented "Gardens in Graveyards" on November 2 at Green Spring Gardens in Alexandria, Virginia. The symposium, which raised money for the APGA, was a "rousing success," says Kyle. "The speakers contributed to a fascinating and eye-opening presentation on the presence of horticulture in cemeteries."

APGA President **David Barnett**, who is also vice president of operations and horticulture at Mount Auburn Cemetery near Boston, talked about the history and day-to-day maintenance of the cemetery, which was one of the first large-scale public garden in the United States (see pages 42 and 57 for more on Barnett and Mount Auburn).

Rosarian Stephen Scanniello discussed his work tracking down and documenting cemetery roses, many of which are rare or forgotten varieties that have survived with little or no care. Washington, D.C.-based sculptor Clift Seferlis presented a slide tour of significant cemetery monuments in the area, and forensic botanist Barney Lipscomb presented a "sound and light extravaganza" on poisonous plants.

News written by Editorial Intern Heather Robbins.

#### America in Bloom Registration

The deadline for registering your community in the 2007 America in Bloom (AIB) competition is February 28. AIB is a national contest intended to promote community in-



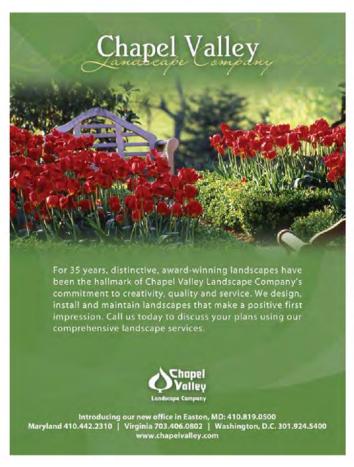
volvement and enhance public spaces through gardening. Winners are selected in population categories and for selected superlative awards, including the

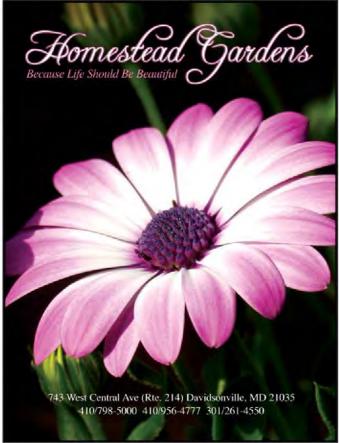
AHS-sponsored Community Involvement Award. Each year AIB holds an educational symposium and awards ceremony to announce winners.

Read more about this inspiring contest and download an application form at www.americainbloom.org.

#### Williamsburg Garden Symposium

Once again, the AHS will co-sponsor the Colonial Williamsburg Garden Symposium, scheduled for April 29 to May 2. The theme will be "English Influences on American Gardens." Speakers include John E. Elsley, Gordon Hayward, Nan Blake Sinton, and Holly H. Shimizu. For more information, visit www.colonialwilliamsburg.org/conted.









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# New Plants for 2007

Here is a sampling of some of the new plants coming your way this year.

BY ILENE STERNBERG

N THE SHORT days of winter, when cabin fever is at its peak and our resistance is at its lowest ebb, the garden industry is once again wooing us with a parade of plants to satisfy our insatiable lust for something new and different. But for some of us with limited time and progressively creaky joints, the lust seems to be lessening as time goes by. We're looking, now, for plants that are undemanding, give longterm value, and will stay in scale in less spacious gardens. Here are a few candidates with potential to do all that. Contact information for retail sources is listed on page 19.

#### **ALLURING ANNUALS**

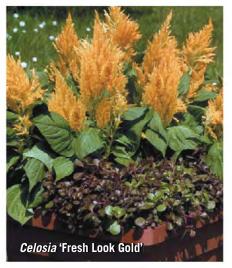
One of only four new garden plants chosen as All-America Selections (AAS) for 2007, based on superior performance in test gardens around the country, *Petunia* 'Opera Supreme Pink Morn' (USDA Zones 0–0, AHS Zones 12–1) from American Takii (*www.takii.com*) shows iridescent pink blossoms with a slight creamy white eye and yellow throat. Flowering freely from summer until frost on compact plants that spread or trail up to three feet, it's versatile for hanging baskets, window boxes, and planters, and its cheery blanket of blooms makes it a beautiful groundcover. Available from Jung Seed.

Two other AAS winners this year (you'll find the fourth one, a pepper, on page 18) are *Celosia* 'Fresh Look Gold' (Zones 0–0, 12–1), from Benary Seed (www.benary.com), named for the lasting fresh look of the compact, four-inch golden plumes on foot-tall plants; and Madagascar periwinkle 'Pacifica Burgundy Halo' (Zones 12–15, 12–1) from PanAmer-





ican Seed Co. (www.panamseed.com), the first bicolor Catharanthus with a burgundy halo surrounding a large white center on two-inch blooms. With good heat and drought tolerance, this sun-loving annual bedding plant reaches about a foot tall and wide when mature. The former is



available through Seedman; the latter through Harris Seeds.

Burpee's Zinnia 'White Wedding' (Zones 0–0, 12–1) is avowed to be the first and only pure white zinnia that retains its color all summer. Unusually mildew resistant in Burpee's trial gardens for several

years, it blooms profusely with large, fully double flowerheads. Try it in containers. Also, Burpee proclaims *Lathyrus* 'Perfume' (Zones 0–0, 12–1) to be "the most fragrant sweet pea ever cultivated." Its large, creamy blooms have lavender picotee edges.

Thompson & Morgan (T&M), however, stands behind its two newest sweet pea offerings: 'Elegant Ladies', an exclusive bicolored mixture of highly fragrant small-flowered heirloom types selected for their delicate pastel colors, many dating back to the 16th century; and 'America', an attractive small-flowered, strongly aromatic red-and-white-striped heirloom dating back to 1896. Both grow up to six feet and thrive in Zones 0–0, 12–1.

An 18-inch-tall, easy-to-grow annual, special to T&M this year is *Calendula* 'Sherbet Fizz' (Zones 0–0, 12–1), selected for its unusual buff-colored blooms with intriguing darker red undersides on several layers of tightly packed red-tipped petals. Sow in drifts directly into borders or as a showy cut flower.

#### PROMISING PERENNIALS

High Country Gardens (HCG) is offering cardinal beardtongue (*Penstemon cardinalis*, Zones 5–9, 9–5), a rare New Mexico native with a long bloomtime. Numerous deep red tubular flowers appear on two-foot spikes in midsummer and attract hummingbirds.

Another hummer magnet is 'Rosita' hummingbird mint (Zones 6–II, I2–I), a new form of *Agastache cana* from HCG that shows off about 50 percent more flowers per spike than the species. The profusion of dense, deep rose-pink flower spikes and extremely bushy semi-dwarf growth habit is striking and noticeable from a great distance. In well-drained garden soils, it grows two feettall and spreads to three feet.

An HGC exclusive is black caterpillar grass (Harpochloa falx 'Compact Black', Zones 6–8, 8–6). That's right—falx, not flax! —a new cultivar of an ornamental South African grass species that has dense, evergreen, compact foliage, 12 to 36 inches wide, and a profuse midsummer display of glossy three-inch black horizontal flowerheads (reminiscent of our native blue grama grass, only much larger).

From Jelitto comes 'Prairie Blues' (Zones 3–9, 9–1), a new selection of little



bluestem (Schizachyrium scoparium), a clump-forming grass native to North America. This two-foot-tall selection has blue-gray foliage that turns gold to red in fall, and silvery seedheads starting in late summer. Tolerant of drought and infertile soils, it's perfect for borders or naturalizing.

For shade gardeners, Jelitto offers two new selections of *Polemonium caeruleum*, 'Filagree Skies' and 'Filagree Clouds' (Zones 4–8, 8–3), that have been bred to exhibit foliage that is even more gracefully feathery than the species. Both plants have typical mounding habits decorated in midsummer by erect flowering stems; flowers are pale blue for 'Filagree Skies' and white for 'Filagree Clouds'.





Chicagoland Grows is introducing the first in a new line of hybrid baptisias, *Baptisia* Starlite Prairieblues™ ('Starlite', Zones 4–9, 9–1). Growing to three or four feet, this sun-loving, drought tolerant plant displays pale blue flowers in midsummer. Available from White Flower Farm.

Monrovia (www.monrovia.com) is coming out with the Heatwave Sage Series (Zones 6–9, 9–6), featuring four new Australian-bred salvias, crimson Heatwave Blaze™ ('Blaze'), candy pink Heatwave Sizzle™ ('Sizzle'), soft pink Heatwave Scorcher™ ('Scorcher'), and hot pink Heatwave Flare™ ('Flare'). Longer and repeat-blooming, these have been bred for



their rust resistance and compact rounded habit, reaching a little over two feet high and wide.

For daylily connoisseurs, Centerton Nursery (www.centertonnursery.com) offers Hemerocallis 'Variety is the Spice' (Zones 4–8, 8–1), a new reblooming daylily bred by Darrell Apps. The four-inch-wide, double, coral red flowers bloom prolifically from midsummer to fall on two-foot scapes.

Terra Nova Nurseries (www.terranova nurseries.com) wants you to splurge on its new spurge, Euphorbia 'Royal Velvet'. (Zones 6-10, 10-6), which has velvety evergreen leaves and a low habit (24 to 36 inches) with rich, deep red tones. Spring brings chartreuse colored "flowers" with dark maroon eyes.

Other eye-catching introductions from Terra Nova include two new corydalis: 'Canary Feathers' (Zones 6–9, 9–1), a clump-forming corydalis, has soft bluegreen feathery foliage and large, bright yel-



low flowers held above the leaves; and 'Berry Exciting' (Zones 5–9, 9–1) is a vigorous, rhizomatous groundcover, with gold ferny leaves and fragrant purple flowers. Both bloom over a long period of time. Available from Sooner Plant Farm and Wayside Gardens, respectively.

Also from Terra Nova are two new tickseeds: *Coreopsis* 'Pinwheel' (Zones 5–9, 9–5) with light yellow, flared, pinwheel-shaped flowers over lacy, bluish green foliage on a 32-inch mound; and 'Snowberry' (Zones 6–9, 9–5), which has



creamy white blossoms with dark red eyes. Available from Garden Crossings.

Coreopsis grandiflora 'Presto' (Zones 3–9, 9–3), a 2007 Fleuroselect Gold Medal winner, flowers the first year it's sown. This one has a short, bushy habit, forming a six- to eight-inch ball of golden double to semi-double flowers. Available as seed from Jung Seed.

Digitalis purpurea 'Candy Mountain' (Zones 4–8, 8–1), a hardy biennial, grows to five feet. According to T&M, it is the first upward facing foxglove from seed, enabling an easy glimpse of the lovely freckled throats inside the rose pink blooms.

Released through the Athens Select<sup>TM</sup> program of the University of Georgia (www.athenselect.com) is Hibiscus acetosella 'Panama Red' (Zones 8–II, 12–I), a four-foot hibiscus with feathery red foliage reminiscent of a Japanese maple. The foliage color stands up to hot, humid summers and the plant is equally at home as an accent in borders or in containers.

#### TEMPTING TREES AND SHRUBS

There is a trend toward replacing highmaintenance plantings with more woodies, using perennials, annuals, and bulbs to fill in the gaps between garden spaces and provide seasonal color. This has spawned a bevy of more compact forms suited to smaller gardens and containers.

Deutzia gracilis Chardonnay Pearls™ ('Seward', Zones 5–8, 8–5) from Proven Winners is one of them. From late May to early June, this easy-to-grow small shrub, about three to four feet high and wide, is

festooned with pearl-like buds which burst into starry flowers. Its golden yellow foliage make this plant a garden standout. Available from Song Sparrow Nursery.

From Chicagoland Grows comes Iroquois Beauty™, a new selection of black chokeberry (*Aronia melanocarpa* 'Morton', Zones 3–8, 8–1). This deciduous shrub was selected for its dwarf habit, abundant pure white flowers in late spring or early summer, attractive black fruit in summer, and reddish orange fall foliage. It grows to three feet tall and slightly broader with a multi-stemmed habit. Available at Digging Dog Nursery.

The recent severe epidemic of *Hydrangea macrophylla*-mania continues with the Cityline™ Series (Zones 5–9, 9–5) from Proven Winners® ColorChoice®. This new dwarf line boasts large pink or blue flowers on strong stems and dark, glossy, mildew-resistant foliage. With Cityline™ Berlin, Paris, Venice, and Vienna, gardeners are promised one- to three-foot dense, full plants without shearing. Available from Wayside Gardens.

Not to be outdone, Hines Horticulture (www.hineshort.com) has its Halo Hydrangea™ Collection (Zones 6–9, 9–6) of H. macrophylla with picotee and bi-colored flowers in a range of bold colors from blue-and-white to shades of pink-and-rose combos that will vary depending on soil pH. They grow to three by three feet, compact enough for container plantings. (To find a local retailer, visit www.halohydrangeas.com, and enter your zip code.)

Monrovia is coming out with the Gardener's Confidence Collection® of Royal Majestics™ hydrangeas. These include Queen of Pearls™, with green mopheads that turn white, then back to green, Midnight Duchess™, with purple-black stems and mauve lacecap sepals that turn green, and Princess Lace™, another lacecap. All thrive in Zones 6–9, 9–6 and are available from Cottage Farms.

Also getting into the hydrangea mix is Novalis (www.novalisinc.com) with Lemon Daddy™ (Zones 5–9, 9–5). This four-foot sport of H. macrophylla Big Daddy™ has lemon-yellow foliage and pink or blue flowers. Provide afternoon shade in warm regions. Available from White Flower Farm.

Usually beauty bushes are spectacular for the short time they're in bloom, but "just another shrub" the rest of the year. Proven Winners® *Kolkwitzia* Dream Catcher™ (*K. amabilis* 'Maradco', Zones 4–9, 9–4), though, has deep yellow foliage, which turns golden-orange in fall. Blooming in standard pink, it reaches a mature height of six to nine feet. Available from Nature Hills Nursery.

Proven Winners is also introducing *Forsythia* Show Off<sup>™</sup> ('Mindor', Zones 4–9, 9–4), a compact, rounded plant, three feet tall and up to six feet in diameter, with dark green foliage and a full display of large golden flowers from the ground up. Available from Nature Hills Nursery.

Another compact and colorful new shrub is *Abelia* 'Kaleidoscope' (Zones



6–9, 9–5), bred by Randy Lindsey of Panoramic Farm. Its spring foliage has bright yellow variegation against chartreuse, evolving to a golden creamy yellow edge around deeper green in summer. Autumn brings orange and red highlights. Stems are brilliant red. In late summer, dainty white tubular flowers emerge from pink buds. A low, spreading form makes this an excellent groundcover, growing at a moderate rate to less than three feet high and slightly wider. Available from Forestfarm.

The foliage on *Photinia* Pink Marble™ ('Cassini', Zones 6–9, 9–7) from Conard-Pyle (www.conard-pyle.com) emerges red and pink, changes to pink and green, and matures green with white margins and

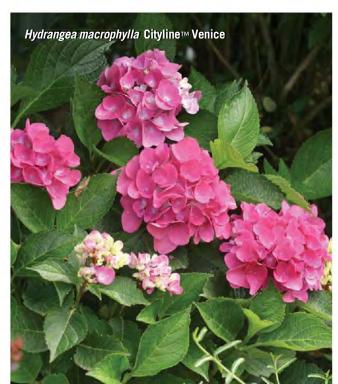
splashes. It reaches five to six feet tall in five years, eventually topping out at about 10 to 15 feet. It grows well in average soils (avoid wet feet), performs best in full sun, tolerates shearing, and can be used as a multi-stemmed small tree or a shrub. Available from RareFind Nursery.

Taxodium distichum 'Cascade Falls' (Zones 5–II, 12–5) is a rare weeping form of bald cypress, growing to 20 feet. It's a real showpiece for moist sunny sites bearing bright green needles that turn darker, then golden yellow in fall. Available from Forestfarm and PendulousPlants.com.

Squeezed for tree space? Try Monrovia's Crimson Pointe™ purple leaf plum (*Prunus cerasifera* 'Cipriozam', Zones 4–9, 9–1), the first columnar-shaped, purple-leafed, ornamental plum on the market. Growing 25 to 30 feet tall by 10 feet wide, it bears showy white flowers and has glossy bronze foliage that ages to maroon-green.

#### **RAVISHING ROSES**

From Anthony Tesselaar Plants (www.tesselaar.com) there's Flower Carpet® Scarlet (Zones 5–II, II–I) the latest in the popular Flower Carpet rose series. Trouble-free and disease-resistant, it's programmed to bear 2,000 vibrant double red blooms from late spring to autumn over dark glossy green foliage. Forming a low, dense bush, it's good for borders, mass plantings, and large containers. Available from Willow Creek Gardens.





Meilland Star® Roses (www.starroses. com) and Conard-Pyle are coming out with Rainbow Knock Out® ('Radcor', Zones 4–9, 12–1), one of the 2007 All-America Rose Selection (AARS) winners. This is the eighth descendant of breeder Bill Radler's now ubiquitous Knock Out® rose, combining the disease resistance that made its ancestor so popular with abundant single, yellow-centered coral-pink flowers. Available from Wayside Gardens.

Another 2007 AARS winner is Strike It Rich™ ('WEKbepmey', Zones 5–9, 12–1), a spice-scented grandiflora introduced by breeder Tom Carruth at Weeks Roses (www.weeksroses.com). Its clusters of five-inch double blossoms are "warm, deep golden yellow blushed with bits of ruby red." Available from Wayside Gardens.

From David Austin Roses (www.david austinroses.com/american) come five new repeat-flowering roses. Sister Elizabeth™ ('Auspalette') has lilac flowers tinged rosy pink and spicily perfumed on a low mounded plant ideal for containers and border fronts. At five feet tall and wide, Crown Princess Margareta™ ('Auswinter'), is ideal for the back of the border or trained



as a short climber; it has large apricot-orange rosettes fading to yellow, and should thrive under hot-weather conditions. Lady Emma Hamilton™ ('Ausbrother'), boasts red-orange buds opening to yellow-orange flowers with a strong fruity scent on upright four-foot-tall and three-foot-diameter shrubs of bronzy foliage aging deep green. The Shepherdess™ ('Austwist'), has open-cupped rich apricot-pink flowers with paler edges and lemony fragrance. At three feet tall and two feet wide, it is another for the front of the border or in a for-



mal rose bed. The deep pink Huntington Rose™ ('Ausjive') has a delicious fragrance, and forms a particularly tough and healthy four-by-three-foot rounded shrub. All will reliably thrive in Zones 5 to 9, 9 to 1.

#### ENTICING EDIBLES

Introduced by Seminis Vegetable Seeds (http://us.seminis.com), 'Holy Molé' pepper (Zones 0–0, 12–1), the fourth 2007 AAS winner, is a hybrid pasilla-type pepper—the pungent variety used to make mole sauce. 'Holy Molé' is earlier, more vigorous, virus-resistant, and higher yielding than its predecessors. The long, fingerlike peppers can be harvested green in about 85 days, but if allowed to fully ripen, they turn dark brown with a tangy, nutty, and not overly spicy flavor. Mature plants reach three feet tall. Available from Park Seed and Territorial Seed Company.

Jung Seed declares its exclusive 'Margaret's Pepper' (Zones 0–0, 12–1) the "sweetest, biggest, most beautiful sweet pepper you'll ever grow." Seven-inch green fruits ripen to burgundy and have a mild, sweet flavor. Early maturing plants (62 days) bear prolifically.

Also from Jung is 'Yellow Mini-Tiger' seedless watermelon (Zones 0–0, 12–1), which matures early (75 days), is sweet and flavorful, and a perfect single-serving size. The round melons grow on mid-length vines that can be planted closely, resulting in higher yields from a small space.

'Red Riding Hood' romaine lettuce (Zones 0–0, 12–1) has a deep wine color, rare among romaines. A vigorous grower, it has hardy outer leaves and crisp hearts. Available from the Cooks' Garden.

From the Cooks' Garden also comes a beautiful cream-colored 'White Satin' carrot (Zones 9–12, 10–1), which is reportedly sweeter and juicier than conventional carrrots, perfect for salads.

With a unique space-saving climbing habit, T&M's zucchini (or courgette) 'Black Forest' (Zones 0–0, 10–1) is best grown in containers on the patio. Heavy yields of dark green, smooth, cylindrical, six-inch fruits will continue from July until frost if picked regularly.

Also from T&M is *Coriandrum* sativum 'Confetti' (Zones 0–0, 10–1), a cilantro with ferny leaves exhibiting that distinctive cilantro taste but with increased



sweetness. This selection reportedly grows to a foot or more within a month, producing plenty of foliage that can be used as a 'cut-and-come again' herb or garnish.

And, of course, there are tomatoes. At Jung, they say their exclusive 'Grandaddy' (Zones 11–15, 12–1) produces "blue-ribbon, prize-winning, traffic-stopping smooth, globe-shaped, bright red flavorful 12 to 16 ounce whoppers!" Bred by Paul Thomas, who developed such classics as 'Early Girl' and 'Better Boy', 'Grandaddy' is resistant to wilts, matures in 72 days, and can yield huge fruits even in containers.

Grape tomato 'Lemon Drop' (Zones



II-15, I2-I), from the Cook's Garden, bears early and continues yielding sunny yellow fruits throughout the season. Full-bodied, sugary flavor and excellent texture make them irresistable.

Burpee's 'Napa' tomato (Zones II–I5, I2–I) was a consistent winner during taste tests at the company's gardens. Another of Burpee's high-yielding tomato exclusives, 'Golden Mama' (Zones II–I5, I2–I), is considered the first yellow paste tomato that keeps its color after cooking, making a brilliant, flavorful sauce.

#### HAPPY SHOPPING

Not all new plants live up to their pre-release fanfare, but each year at least a few will be worthy of joining the proven performers in your garden. My advice is to home in on those new treasures and don't waste time on hard-to-grow or finicky plants. Life is too short!

Each year garden writer Ilene Sternberg squeezes a few deserving new plants into her small garden in West Chester, Pennsylvania.

#### Retail Sources

W. Atlee Burpee & Company, Warminister, PA. (800) 888-1447. www.burpee.com.

**The Cooks Garden,** Warminster, PA. (800) 457-9703. www.cooksgarden.com.

Cottage Farms, Irvington, AL. (888) 593-3644. www.cottagefarmsdirect.com.

**Digging Dog Nursery,** Albion, CA. (707) 937-1130. www.digging dog.com.

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

**Garden Crossings,** Hudsonville, MI. (616) 875-6355. www.gardencrossings.com.

**Harris Seeds,** Rochester, NY. (800) 514-4441. *www.harrisseeds.com.* 

**High Country Gardens,** Santa Fe, NM. (800) 925-9387. www.highcountrygardens.com.

Jelitto Perennial Seeds, Louisville, KY. (502) 895-0807. www.jelitto.com.

Johnny's Selected Seeds, Winslow, ME. (877) 564-6697. www.johnnyseeds.com.

J.W. Jung Seed Co., Randolph, WI. (800) 247-5864. www.jungseed.com.

Nature Hills Nursery, Omaha, NE. (888) 864-7663. www.naturehills.com.

**Park Seed,** Greenwood, SC. (800) 213-0076. www.parkseed.com.

**PendulousPlants.com,** Horseshoe, NC. (828) 712-0482. *www.pendulousplants.com.* 

RareFind Nursery, Jackson, NJ. (732) 833-0613. www.rarefindnursery.com.

**Seedman,** Gautier, MS. www.seedman.com.

**Song Sparrow Farm & Nursery,** Avalon, WI. (800) 553-3715. *www.songsparrow.com.* 

**Sooner Plant Farm,** Park Hill, OK. (877) 683-2500. www.soonerplantfarm.com.

**Territorial Seed Company,** Cottage Grove, OR. (800) 626-0866. www.territorial-seed.com.

**Thompson & Morgan,** Jackson, NJ. (800) 274-7333. www.thompson-morgan.com.

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

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

Willow Creek Gardens, Oceanside, CA. (760) 877-5926. www.willowcreekgardens.com.

#### Wholesale Nurseries

The following nurseries supply plants to retail outlets only. Visit their websites to locate retail nursery sources in your area.

Hines Horticulture, www.hineshort.com.

Monrovia, www.monrovia.com.

**Terra Nova,** *www.terranovanurseries.com.* 



# Paths of Discovery



HETHER A small passageway or a primary walkway, paths do more than take you from one place to another. They are the journey by which you can experience your garden. When well-designed, a path attracts the eye with a sense of movement and adventure, drawing visitors into your garden and revealing a delightful story along the way.

Paths serve a practical purpose, as well. They contribute structure and cohesion that interconnects your outdoor environment and pulls the garden together. They provide direction—both literally and visually—whether leading down a side yard,

Well-conceived pathways can transform the way visitors experience your garden and ease maintenance.

BY KRIS WETHERBEE

wandering through a garden, or serving as the walkway that connects the front gate to the front door. What's more, paths help keep your feet clean and dry.

Winter, when many of us are forced to take a break from active gardening, is an ideal time to consider ways to improve the structure and flow of your garden.

At this time of the year you can see the "bones" of the garden more clearly, logical patterns of foot traffic that escaped your consideration in summer may be revealed. Take advantage of the minimized distractions and walk the current pathways through your garden now; think about how a new path—or changes to an existing path—might offer a better experience or make beds and borders more accessible for maintenance.

The journey and the mood a path creates can vary. However, the steps you take in conceptualizing and building a path are

Top: As visitors pass through this gate, the change in path materials from flagstone to bark mulch reinforces the transition to a new garden area. Left: Bordered by appealing plantings, this winding gravel path entices visitors to discover where it leads.



Above: A straight brick path is practical and in keeping with the style of this semi-formal urban garden. Right: A bench is an appealing destination along this winding stone path through drought-tolerant plantings.

much the same, whether your path is straight and formal or curves artistically.

#### PLANNING YOUR PATH

Some paths address practical needs and these largely determine their route. This is often the case with a primary path that leads to a destination like the front entry or garage. And it is convenient to have a maintenance path to access the interiors of a border or bed. But the routes of other paths can be planned according to aesthetics rather than efficiency. Such paths can transform an ordinary garden into an unfolding journey of discovery by directing visitors along the route you select.

For example, when planning a path that takes you through the garden to a focal point—such as a bench, birdbath, or sculpture—extend your stroll by creating curves that reveal an element of surprise around every corner. A winding path also gives pause to stop along the way and experience the garden from a new perspective. Create a sense of mystery about what lies beyond the bend by



including some element inside each curve to serve as a visual blockade, such as an ornamental shrub, evergreen wall, flowering vine clamboring over an arbor, or large pot of colorful annuals.

Straight paths may not have the same mystique as a winding path, but they do offer the shortest passage to a specific destination. Their formal appeal creates a sense of balance with a no-nonsense approach. Placing a visual focal point at the end of a straight path—such as a gate, a wall-mounted planter, or a water feature—will help heighten its charm.

#### PATH MATERIALS

The type of path material you choose can set the tone for your walking experience





In woodland or shade gardens, where the soil tends to stay moist, sturdy path materials such as the stepping stones, above left, and a wooden "boardwalk," above right, provide firm footing and reduce the risk of damage to delicate woodland ephemerals.

along with the character of the path. Pine needles or shredded bark may be good choices for a side path in a woodland garden, but not as the main path leading to a Mediterranean courtyard or Colonial-style brick house.

#### Resources

**Garden Paths: Inspiring Designs and** Practical Projects by Gordon Hayward. Firefly Books, New York, New York, 1997.

Paths and Walkways: Simple Projects, **Contemporary Designs** by Hazel White, Chronicle Books, San Francisco, California, 1998.

**Taylor's Master Guide to Landscaping** by Rita Buchanan. Houghton Mifflin Company, Boston, Massachusetts, 2000.

There are four things to keep in mind when deciding which material to use: accessibility of materials, how practical it is to the setting, safety issues (ceramic tile and slate get slick when wet or icy, making them poor choices for frequently traveled paths), and compatibility with your overall home and landscape design.

Options include brick, stone (such as flagstone and slate), tile, stamped concrete, concrete pavers, crushed rock and gravel, and wood planks or rounds. You can also use wood chips, shredded bark, grass—even crushed nut shells, sea shells, or tumbled glass. For added interest, use materials in combination with each other, such as a border of pebbles to soften concrete pavers.

#### PATH POINTERS

Once you've decided the direction your path will take, think about how that path will be used. Main garden paths and primary paths leading to entrance areas should be wide enough to allow two people to walk side by side: a minimum width of four feet is good; five feet is better. Plan on a width of three feet for walkways through the garden, landscape paths for general use, or any path on which a wheelbarrow will travel. You can go smaller on secondary or side paths, which are typically two feet wide. Be sure to factor in any plants that may crowd a path's edge. Fences, tall hedges, or a vinecovered trellis also can crowd a path. Placing paths at least two feet away from such structures will allow ample room for passersby.

A well-designed path adds charm to any garden. By planning and installing your path with care you can direct visitors' attention to the areas of your garden you want to highlight and vistas worthy of their notice, while providing them a comfortable and safe passage.

Freelance writer Kris Wetherbee writes regularly for The American Gardener. She lives in Oakland, Oregon.

# THIS PAGE: RICK WETHERBEE

#### **BUILDING A DRY-LAID GARDEN PATH**

Paths constructed of surface materials dry-laid over packed sand, or a combination of sand and crushed gravel, are easier to build than solid materials set in concrete or mortar. While loose materials such as bark or crushed gravel and stone can be placed directly on firm soil, installing a dry-laid path requires excavating the site and leveling the surface.

You'll need to dig out your path to a depth of five to eight inches, depending on the material chosen for the path and how well the soil drains. For areas where drainage is a problem, a deeper base is advisable. Ensure proper drainage by gently sloping the path away from foundations and other permanent structures—about a quarter inch of slope per foot of path width is recommended.

If you expect weeds to be an issue, line the excavated path with landscape fabric or weed barrier (not impermeable plastic sheeting, which will cause water to pool up in your path) then edge it to keep surface materials in place once laid. Edging options include strips of metal or wood, bricks, concrete, or stone. Next, fill the path with a minimum two-inch layer of crushed stone or gravel, topped by a two-inch layer of sand or stone dust raked smooth. Level each layer and pack it down using a drum roller or hand tamper.

Lay your pavers and firmly set them in place or tamp them down using a rubber mallet, then sweep sand between the pavers to fill in the small cracks. Larger cracks can be filled with decomposed granite, pebbles, or gravel. Moisten the path with a fine spray of water, allowing it to settle. If necessary, sweep more sand into the cracks.

−K.W.



1. Excavate path area to a depth of three to eight inches, depending on the surface material.



2. Dig the trench for the edging stones and set first edging stone in place. Continue placing the edging stones until the path is completely outlined.



3. Make sure your excavated surface is level. To ensure proper drainage, slope the path away from foundations or permanent structures by 1/4 inch for every foot of width.



**4.** As you put in foundation layers of gravel and/or sand, pack each layer down with any smooth heavy object that rolls. A drum roller or hand tamper works well.



5. Lay stone pavers in the pathway, keeping gaps between stones to a minimum. Fill gaps between pavers with sand or crushed granite.



6. Spaces between pavers can also be planted with resilient groundcovers such as creeping thyme or moss.

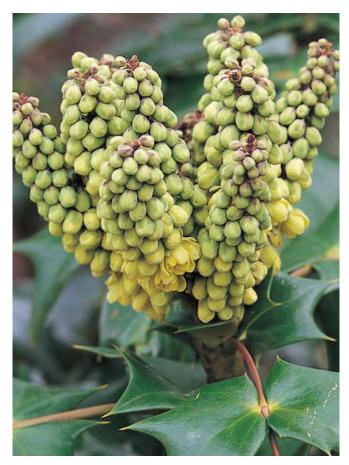
# Winter's Promise

Buds protect new growth and herald the coming spring while contributing a subtle charm to the winter landscape.

ARTICLE AND PHOTOGRAPHS BY KAREN BUSSOLINI



Mark Weathington, director of horticulture at Norfolk Botanical Garden in Virginia, says the hanging racemes of Stachyurus praecox are "like a bead curtain all winter long." The yellow buds open to pale yellow-green bell-shaped flowers in early spring. This shrub prefers to be sheltered from cold, drying winds-all the more reason to plant it close to the house, where it will be seen and enjoyed more easily.



Mahonia bealei (syn. Mahonia japonica Bealei group) displays substantial upright terminal clusters of round buds against a backdrop of dark glossy leaves with brilliant red leaf stems. Buds form early on top of the shrub, where they can be seen easily, making for a good show all winter long.



Buds of many viburnums, such as the Chinese snowball (Viburnum macrocephalum), are as beautiful in their own right as the flowers are, especially just before opening, and they often last longer. Other viburnums with interesting buds include V. carlesii, V. rhytidophyllum, and V. ×burkwoodii 'Conoy'.



The buds of Cercis canadensis 'Appalachian Red' are so beautiful, only their pollinators would care if they didn't open into flowers. Redbuds normally bloom on the previous year's wood, but often display adventitious flower buds growing out of their branches and trunk on older wood.

ARDENERS don't seem to weather dormancy as grace-fully as their plants do. In winter we miss that close connection to the natural world, the changes and daily surprises that reward our close attention. Gardeners in northerly regions, of course, are most affected by this; lacking the wealth of broadleaf evergreens and early growth southern gardeners enjoy, their gardens won't be truly green again until May. But even in January, the promise of spring's renewal is present, clear as day in the swelling buds of woody plants.



Bob McCartney of Woodlanders Nursery in Aiken, South Carolina, reports that the banana shrub (Michelia figo) "smells like a truckload of ripe bananas. They become really fragrant and look their best for the two weeks when they're just about to open, with yellow petals edged with a reddish tinge on the back just starting to show. They fall apart pretty fast once they're open."

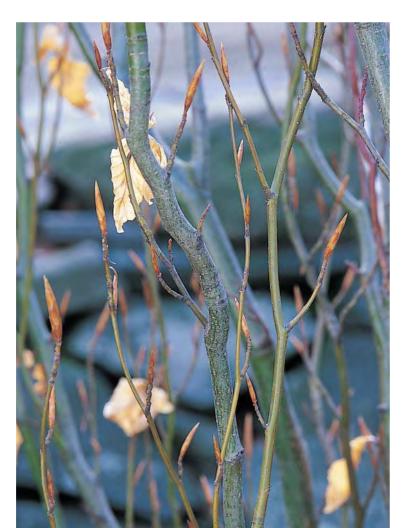
Stripped of leaves and flowers, the sculptural form and patterns of deciduous trees and shrubs are revealed in winter. I often envison buds as a form of punctuation that calls attention to and enhances this structure. Small, uniform woody nubs dot the slender lengths of weeping larch branches (Larix decidua 'Pendula') as though marking sentences. Buds of Magnolia kobus are well worth contemplating—and touching. Each fat flower bud is covered with long, very soft silky hairs that catch and reflect the light, so buds appear brown, gray, or warm silver depending on the angle at which they are viewed. For me, an old star magnolia (M. stellata) is one of the loveliest sights of winter. Gnarly branches give rise to even more gnarled branchlets and a profusion of twisted twigs, ending in enormous flower buds that resemble furry gray mice, growing ever larger as the season progresses.

New Hampshire gardener and author Penelope O'Sullivan is a connoisseur of buds. Among her favorites is golden European ash (Fraxinus excelsior 'Aurea'), which she says "steals the winter scene with hard velvet-black buds studding young yellow stems." She also admires the buds of Fagus sylvatica 'Tortuosa', which she describes as "brown and pointy like my other beeches, but bigger—fat one-inch cigars set at sharp angles along the twisted branches." Last winter I was captivated by two of O'Sullivan's favorite maples: snakebark (Acer capillipes), which has pairs of tiny red buds on maroon new growth glowing against the trunk's olive green-and-white-striped bark; and the native coral-stripe moosewood (A. pensylvanicum 'Erythrocladum') with vibrant coral buds and young twigs.

Northern gardeners do share a few impressively budded broadleaf evergreens with gardeners from warmer climes. Pieris buds, for instance, are almost as beautiful as the graceful drooping flowers that follow. Our native Pieris floribunda hangs its pale green buds from stiff upright racemes at branch tips, contrasting with the plant's burnished dark green leaves. P. japonica is draped with showy clusters of buds, distinctive even from a distance. Its cultivars, 'Valley Valentine' (deep maroon buds) and 'Dorothy Wyckoff' (dark red buds against wine-red winter foliage), and the hybrid 'Brouwer's Beauty' (deep rosy red buds) add welcome warm hues.



Ferocactus stainesii (syn. F. pilosus), the Mexican hairy barrel cactus, budding up in early March at Tohono Chul Park in Tucson, Arizona. Most cacti are edible, but spines like these effectively discourage browsing. Since flowers last only a day or two, buds and fruits provide interest throughout most of the year.



Slender buds of Fagus sylvatica 'Dawyck' on elegant weaving branches are covered with cinnamon colored papery sheaths. Terminal buds at the tips of twigs are larger than regular leaf buds, because they contain tissue that will cause the stem to extend. The slim, graceful buds give rise to equally slim and graceful new twigs.

#### THE INNER WORKINGS OF BUDS

"I think of buds as tiny microchips at the ends of the branches," says Scott Aker, gardens unit leader at the U.S. National Arboretum in Washington, D.C. "They're constantly sensing data—temperature regime, spectral distribution, and intensity of light—and programming the plant for what it needs to do and when."

A bud may contain a miniature leaf, leaf and stem, a flower, additional buds, or all of these structures. A specialized leaf called a bud scale seals in air and water and protects tender bud tissues from cold, excess moisture, and desiccation.

Several types of buds are commonly found on plants:

Apical (or terminal) buds are the largest, formed at the end of each woody twig in autumn as part of the process of dormancy. Clustered flowers such as rhododendrons have many buds packed within the larger terminal buds. If the terminal bud is a leaf bud, it will be larger than other leaf buds because it also contains tissues that will extend the twig.

Lateral (or subterminal) buds, at the base of a terminal bud, take over if the terminal bud is killed or removed. If the terminal bud is a flower bud, a lateral leaf bud will take over stem growth.

Axillary buds are formed in the axil where a leaf emerges from a twig. If the leaf is removed during the growing season, the axillary bud will sprout a replacement.

Adventitious buds are dormant buds on the main stem, trunk, roots, and even leaves. They may form shoots if the plant is injured or if another part of the plant is pruned.

Plants that bloom on new growth, such as panicled or peegee hydrangeas (Hydrangea paniculata) and crape myrtles, avoid the issue of protecting tender flower





Above left: Dogwood (Cornus florida) offers an example of terminal buds. Dogwoods are unusual in that flower buds are quite different from slender leaf buds formed along twigs. Above right: Opposite pairs of leaf buds along the stems of Hydrangea macrophylla are the previous season's axillary buds. A leaf scar, left by fallen leaves, is visible below each bud. Large, tender terminal flower buds are at branch tips.

buds over the winter by producing them after the weather warms. These plants can be cut way back before growth resumes without sacrificing flowers. Bigleaf hydrangeas (H. macrophylla), on the other hand, bloom on old wood from buds that need to overwinter. Cold weather or untimely pruning often does them in. Thus the recent introduction of reblooming (remontant) cultivars such as Endless Summer™ has been a boon for northern gardeners, because they bloom on both old and new growth.—K.B.

#### Resources

**Botany for Gardeners, An Introduction** and Guide by Brian Capon. Timber Press, Portland, Oregon, 2005.

Gardens in Winter by Elizabeth Lawrence. Clairot's Law Books and Publishing Division. Baton Rouge, Louisiana, 1973.

Winter Botany: An Identification Guide to Native Trees and Shrubs by William Trelease. Dover Publications, New York, New York, 1967.

Winter Buds by Bette J. Davis, Lothrop, Lee & Shepard Co., New York, New York, 1973.

At the Norfolk Botanical Garden in Virginia, Director of Horticulture Mark Weathington starts noticing buds in October. "The showiest bud in winter, bar none," he says, "is Edgeworthia chrysantha. Once the large white buds set at the end of each branch, it looks like somebody has hung on ornaments."

Scott Calhoun, a writer and garden designer in Tucson, points out that in the desert Southwest cactus buds are interesting much longer than the flowers. Clusters of saguaro buds (Carnegiea gigantea) "might be 20 feet up, but they're easy to spot, as they're each between the size of a golf ball and a tennis ball." He considers the flame-shaped buds of ocotillo (Fouqueria spp.), which start out green and turn fiery red, as pretty as the plant's tubular red blooms.

Buds, those exquisite treasure chests, packed with next year's growth in miniature form, don't shout to us the way a red hibiscus might in summer. But, with so many charming and interesting choices, it's worth gathering plants with our favorite buds nearby where they can be easily appreciated all winter long.

Karen Bussolini is a garden photographer, lecturer, and writer. She has spent the past two years studying buds while collaborating with Penelope O'Sullivan on The Homeowner's Complete Tree & Shrub Handbook (Storey Books, 2007).



One year after hurricanes Katrina and Rita, public and private gardens in the Gulf Coast region are slowly rebuilding.

BY SUSAN DAVIS PRICE

URING THE summer and fall of 2005, storm after storm slammed the southern United States coast. Devastating Hurricane Katrina cut a wide swath across Mississippi and Louisiana on August 29. Weeks later, Hurricane Rita hit Florida and Texas, followed by Hurricane Wilma in October. More than a year after the storms hit, residents are still displaced, some public services are compromised, and homes await repair.

Fortunately, there are bright spots in every community. Among the most encouraging are the stories of the rebuilding efforts at public gardens. The recovery of these lovely landscapes, including the Crosby Arboretum in Mississippi and the New Orleans Botanical Garden and Longue Vue House and Gardens in New

Orleans, is especially treasured now after so much was lost.

#### THE CROSBY ARBORETUM

The Native Plant Center of the Crosby Arboretum sits 40 miles north of the Gulf Coast along the banks of the Pearl River. At the arboretum, visitors can experience Mississippi the way it was before European settlers arrived. More than 300 species of native trees, shrubs, wildflowers, and grasses, many of them rare and endangered, thrive in the woods and bogs.

The premier plant conservancy in the southeastern United States, the arboretum's mission is education and preservation, explains Melinda Lyman, chief curator at the site. The stunning Pinecote Pavilion, where visitors learn the role of





Top: Longue Vue's Spanish Court shows significant recovery one year after the storms. Center: Shortly after the hurricane, an uprooted tree leans across the gardens near the Spanish Court. Bottom: The pre-Katrina court with water fountains.

COURTESY OF CROSBY ARBORETUM, BOTTOM: COURTESY OF NEW ORLEANS BOTANICAL GARDEN

plants in our environment, was designed by award-winning architect Fay Jones.

The eye of Hurricane Katrina passed over the arboretum, making a hazardous mess of the idyllic landscape. "We lost a lot of trees," says Lyman. "In one 100square-foot area, we lost 20."

One large tree fell through the roof of Pinecote Pavilion, breaking rafters. The wind caused bowing of the support beams. Rain poured into buildings, and the Pearl River overflowed its banks. The facility was without utilities for weeks; communication was limited for months. "But," Lyman adds "we were fortunate not to have the heavy flooding of New Orleans."

#### NEW ORLEANS BOTANICAL GARDEN

As many Americans learned all too graphically in fall 2005, New Orleans sits below sea level in a "bowl" surrounded by water—brackish Lake Ponchartrain to the north, the Mississippi River to the south, and the Gulf of Mexico to the east and south. New Orleans had weathered many hurricanes, but Hurricane Katrina, with its sustained 125-mile-an-hour winds, ravaged a wide area along the coast. The storm surge overtopped the floodwalls and breached the canals. Salt water flooded into the city, covering 80 percent of New Orleans with one to 10 feet of water.

The 14-acre New Orleans Botanical Garden is situated within sprawling City Park, a 1500-acre park resembling New York's Central Park. Originally built by the Works Progress Administration (WPA), it opened in 1936 as a municipal rose garden.



The Pinecote Pavilion at the Crosby Arboretum suffered significant damage caused by Hurricane Katrina's high winds and the falling of nearby trees.

Before the storm, the garden contained over 2,000 varieties of plants from all over the world, set in several theme gardens, including the Zemurray Azalea and Camellia Garden, the Parterre Rose Garden with its clipped yaupon holly (Ilex vomitoria 'Nana') hedges, the Tropical Rainforest, the Palm Court, and the Herb Gardens.

For 10 days following the storm, brackish water stood on the grounds, killing much of the vegetation, including the large, historic magnolias. It destroyed the electrical systems, damaged equipment, and ruined archives, the library, and computers. Hot weather and a fiveweek drought followed, killing many of the plants that had survived flooding. "The only thing that looked good in the

aerial photos," says garden Director Paul Soniat, "was the lily pond. The water was higher than the pond, but the lilies were in full bloom."

The storm's destruction was particularly devastating because the botanical garden was just completing a 25-year restoration and expansion.

#### **LONGUE VUE**

Longue Vue House and Gardens had also recently completed a 10-year restoration. The site's eight acres, designed by Ellen Biddle Shipman between 1934 and 1942, had been returned to their original luster, and the Discovery Garden, a popular hands-on educational garden area, was added in 1998. In





The Rose Garden at New Orleans Botanical Garden pre-Katrina (left) and post Katrina, after water had receded (right).

#### GARDENING PROVIDES LIFT TO AHS MEMBERS ON GULF COAST

Many AHS members living in the Gulf Coast region affected by hurricanes Katrina and Rita suffered losses. Gardens did not fare well under flooding and wind damage or, as several members pointed out, when heavy machinery arrived to begin

rebuilding. Though decades of plantings and rich soil disappeared, gardening continues to provide stress relief to many AHS members as well as a way to help heal their communities.

Stephanie Singer, a senior public affairs associate with the National Association of REALTORS®, focused her post-Katrina efforts on helping to restore public spaces such as New Orleans' City Park, one of the nation's oldest and largest urban parks. "Katrina swamped 90 percent of the 1,300-acre park with up to 10 feet of salty water," says Singer, "and winds toppled at least 1,000 of the park's 14,000 trees."

AHS member Margo Racca, who is mayor of Iowa, Louisiana, says that Hurricane Rita devastated her region in the southwestern part of the state. "Many of my citizens lost their homes," says Racca. "The playground lost two large oak trees that provided shade." In addition to wind and water damage to her house, the hurricane demolished Racca's orchid and bromeliad greenhouse. Like many residents, she is intensely focused on rebuilding, but it speaks strongly of her gardening in-

stincts that a new greenhouse went up before she had finished restoring her kitchen.

**Shirley Lane** of New Orleans had 15 inches of water throughout her property. The house needed to be completely

gutted to begin repair. "We waited a few months [to begin landscaping] to see if any of the trees and plants which appeared to be dead would show life. Most did not." Lane lost many shrubs and trees, including dwarf varieties of *Camellia* 

sasanqua, azaleas, pittosporums, a Japanese maple, and two magnolias, but tropical species such as bougainvillea, oleander, philodendron, and ruellia seemed better able to survive the flooding. Despite the damage, she found unanticipated joys. "The one bright spot in our bleak landscape in the early spring were the sunflowers blooming in unexpected places," she says. "It seems the storm carried the seeds from bird feeders and scattered them randomly."

After Katrina, garden educator Mary Hazen and her husband returned to a home with three feet of water and no garden. After taking stock of what they had left, the Hazens decided to stay; they have been living out of a Federal Emergency Management Agency (FEMA) trailer in their driveway. Mary replanted her garden around the trailer, only to have it partly demolished by construction equipment. However, gardening continues to provide relief from tight living quarters and other stresses. When Hazen noticed that others were personalizing their

trailers with garden design, she initiated a "Once-In-A-Lifetime Temporary Permanent-Housing Beautification Contest," which was covered in the *New Orleans Times-Picayune*.

—Heather Robbins, Editorial Intern





Top: Reconstructing her greenhouse was a top priority for AHS Member Margo Racca (far right), who is mayor of Iowa, Louisiana. Above: Mary Hazen is replanting her gardens while living in a FEMA trailer parked in the driveway.

June 2005, Longue Vue was designated a National Historic Landmark.

Longue Vue shared the same fate during Katrina and its aftermath as the New Orleans Botanical Garden. The 17th Street Canal was undermined and loosed a flood of toxic brine that stood in the garden for days. "We lost two-thirds of our plants from the flood water and the drought afterwards," says executive director Bonnie Goldblum. These included rare cultivars of Louisiana irises, 150 varieties of *Camellia japonica*, 800 boxwoods, and numerous

southern magnolias (Magnolia grandiflona). Much of the soil became saline and unsuitable for growing plants.

#### **RECOVERY EFFORTS**

Despite daunting circumstances, the Crosby Arboretum, the New Orleans Botanical Garden, and Longue Vue House and Gardens have all made robust strides towards recovery. They have cleaned their grounds, begun replanting, re-instituted programs, and opened to the public, thanks to the determination of staff and

volunteers and the generosity of donors.

In all cases, a small cadre of staff was able to return within the first few weeks to assess damage and begin to clear a path. "I was stuck in Hattiesburg 65 miles away for a week," says Melinda Lyman of Crosby, "because the Interstate was closed. Then I couldn't get down the service road." When Lyman returned, there was no electricity.

Lyman and the few others who could make it "spent weeks clearing limbs with chainsaws to make a service road pass-





Top: Volunteers at New Orleans Botanical Garden replant and tend the new rose garden. Left: National Guardsmen help plant podocarpus at the New Orleans Botanical Garden.

able," she says. With that open, they could bring in more equipment and volunteers.

At the New Orleans Botanical Garden, the National Guard cut a path through the fallen trees in City Park. Three weeks after the hurricane, Paul Soniat was able to get in and begin organizing the cleanup.

Soniat, with his staff and volunteers, walked through the buildings to find salvageable materials, then concentrated on making one building habitable as their headquarters. Following a survey of the grounds, Soniat and his crew pulled out dead shrubs, chopped branches, and bagged trash. Michael Liebart, managing director of the Azby Fund and a hands-on volunteer, says, "We had 15 people just bagging debris all day long for two weeks.

At Longue Vue, it was two weeks after the hurricane before its executive director, Bonnie Goldblum, was able to make her way inside the grounds. After draining the basement of the house where utilities were stored, she located generators and other equipment to begin debris cleanup.

According to Amy Graham, head gardener at Longue Vue, soil testing revealed extreme salinity in some areas. To reduce the salt level, Graham tilled in compost and horticultural gypsum, sowed seeds of horse oats, and watered consistently to encourage leaching. By February 2006, these measures had significantly reduced salt levels in most areas and the soil had become plantable again.

In the Discovery Garden, the soil was not compromised, so volunteers began to clean up and replant it in October, just two months after the hurricane. By December 2005, that area was once again open to the public.

#### A CALL FOR HELP

All the facilities put out calls for volunteers via radio, television, and the Internet, once those conduits were operable. Students, religious groups, and others heard the call and offered hours of labor.

Garden club members with or without previous ties to the gardens came to help in any way they could.

"The first couple of months we did have trouble getting volunteer help because all the volunteers live in the same area and had enormous personal destruction to handle," says Lyman. "After a while, they began to trickle in."

Once volunteers arrived at the Crosby Arboretum, they worked on dismantling and rebuilding the restrooms and Information Center. Both had been destroyed by fallen trees. Later, loggers arrived with their equipment and skills.

Longue Vue benefited from the American Public Garden Association's (APGA) call for volunteers. Numerous botanical gardens and gardening organizations responded, including the Atlanta Botanical Garden, the Holden Arboretum, the Rio Grande Botanical Garden, the Memphis Garden Club, Bayou Bend Botanical Garden, Chanticleer Garden near Philadelphia, the Garden Conservancy, and the Smithsonian. Some sent staff to assess and advise; others sent volunteers to help dig, rake, water, and plant.

"The horticultural groups that worked with us over these months have

been truly insightful, empathetic, and inspiring," reports Amy Graham. "The advice has been practical. I have been warned not to be sentimental and part with plants that will only continue to decline, even with care." Longue Vue has begun work with the Heritage Landscape and the Garden Conservancy to redevelop its historical tree canopy.

A major concern for each facility was money. All rely on visitors, rental fees, and classes. But after Katrina, there were no visitors and no hope of revenue for months to come. Fortunately, donors made essential contributions, workers



Horticulturists at Longue Vue planted horse oats to help reduce soil salinity enough for replanting to begin.

were rehired, and equipment was rented. Crosby received a grant from the Southeastern Museum Conference and money from the Nebraska Statewide Arboretum in Lincoln. "It was really heartening to see the donations come in," says Lyman. "Once the phones were working, offers poured in."

Longue Vue received a grant from the local Zemurray Foundation and from the Stern family, who originally owned the property. "With this, we could begin to support the garden staff and rehire workers," says Goldblum.

The New Orleans Botanical Garden used a generous grant from the Azby Fund, a major New Orleans foundation, to jump start its cleanup, re-employ staff, and begin the repair of buildings. A \$25,000 contribution from the Garden Club of Virginia is helping fund the repair of the Pelican Greenhouse, a propagation facility. The Federated Council of Garden Clubs of New Orleans financed the replanting of the rose garden; they gathered in February 2006 to dedicate the newly planted space.

And then there was the work. "For weeks and weeks on end we cleared fallen trees from trails and buildings," recalls

Lyman. The first concern was to make the place safe so visitors could return. "When we reopened in December, things were still a mess," says Lyman, "but the situation was not hazardous"

#### A HOPEFUL FUTURE

By fall 2006, all three facilities had become pleasant—if different places. In New Orleans, much of the mature landscape is gone, but bright new plantings have taken root. Most buildings have been repaired, and residual cleanup and hardscaping work continue. Crosby has not replanted, because, as Lyman explains, "We let nature take over. We've lost some canopy, but with that loss, new saplings have light to grow."

Visitation is still down at all three sites. Tourists have not returned in sufficient numbers,

nor have all the residents. "We need people back in the city," says Soniat. For over a year, the sites have been operating on the generosity of donors and the labor of volunteers. "This is going to be a longterm recovery," says Goldblum. "It's a slow process."

Still, all three directors are focusing on the positive. As Lyman noted, "We've seen things bloom that we haven't seen in years, because now they're getting more sun. We just say, 'Katrina had her own Master Plan.'"

Susan Davis Price is an author and historian based in St. Paul, Minnesota. She is working on a history of the Minnesota Landscape Arboretum that will be published in 2008.

#### Support the Gulf Coast Gardens

If you would like to help public gardens in the Gulf Coast recover from the hurricane damage, one of the best ways to do that is to visit the gardens.

Volunteers are also needed at many of the gardens, so if you live near a garden and have time to volunteer, contact the garden directly. And, of course, donations are welcome at all the gardens to help defray the cost of repairs and keep the gardens going until visitation levels return to pre-hurricane levels.

Crosby Arboretum, 370 Ridge Road, Picayune, MS 39466. www.crosbyarboretum.msstate.edu. ■ To volunteer, call (601) 799-2311, ext. 23.

#### Longue Vue House and Gardens,

Katrina Restoration Fund, 7 Bamboo Road, New Orleans, LA 70124. www.longuevue.com.

■ To volunteer, call (504) 488-5488.

#### New Orleans Botanical Garden,

City Park, 1 Palm Drive, New Orleans, LA 70124. www.neworleanscitypark.com.

■ To volunteer, or for more information, call (504) 483-9386. Contributions for the NOBG may be made to: New Orleans Botanical Garden Foundation, c/o Genevieve Trimble, P.O. Box 993, St. Francisville, LA 70775.

For a list of other hurricane-affected public gardens in the Gulf Coast, visit the AHS website (www.ahs.org). When selecting a container, take into account its shape and the material from which it is made.

# Pots for the Garden

BY RAY ROGERS

PHOTOGRAPHS BY RICHARD HARTLAGE

HAT IS THERE to choosing a pot? Pots are pots, aren't they? Not exactly. A world of choices exists out there, and it pays to do some thinking and research before selecting a container. I'm going to discuss a few considerations for you to ponder, and then give a brief overview of the choice of materials you face and the pros and cons of various container types.

In choosing a container, the most important consideration is, of course, the health of your plants. To keep roots healthy, choose a pot that allows for the movement of water and air within the potting mix. Semi-porous pot materials allow water and air to pass through them, promoting drainage but also accelerating water loss. Most plants grow best in a pot with a drainage hole; containers lacking one can be drilled to make one. If you want healthy plants but a more stylish look, plant in a plain terra cotta pot and camouflage that pot inside a more refined cachepot.

Match your plant to an appropriately sized pot. For obvious reasons, don't try to grow a big plant in a too-small

pot. But also avoid putting plants that stay small into a large volume of mix. The latter uses more mix than needed and the mix near the bottom may go sour if no roots penetrate it.

Consider the relative permanence of the pot material. Choose more durable materials for longer-lived plants, especially topiaries and large plants that may stay in the same container for years.

In selecting a pot, consider what freezing weather will do to it. Very porous materials, including unglazed clay and wood, absorb and retain water, which expands when it freezes, leading to cracking and flaking. To avoid this, bring these types of pots inside during winter.



Vividly hued glazed ceramic containers like these look stunning in the garden, but be sure to choose plants with bold foliage or flowers that can stand up to the color competition.

Weight is another consideration. Even pots made of relatively light materials get heavy once you add in the weight of moist potting mix and plants. Dollies and carts are helpful, but you still need to get plants in and out of them. If at all possible, place the heaviest pots in a permanent spot.

And, of course, consider cost. You could spend a few cents to a few thousand dollars on a pot. Over time, more expensive pots may save you money you would spend on replacing cheaper ones. Some less expensive materials, including reconstituted stone and fiberglass, convincingly resemble their far costlier stone, terra cotta, and lead counterparts.

This excerpt from Pots in the Garden: Expert Techniques for Container Planting, is reprinted with permission from Timber Press. The book, written by Ray Rogers, with photographs by Richard Hartlage, will be published in February 2007.

#### CHOICES OF MATERIALS

Here's an overview of the materials pots can be made of and the pros and cons of each to consider when you're shopping for one.

**CLAY.** Clay containers—ranging from everyday, inexpensive, machine-made pots to one-of-a-kind, pricey, handmade treasures—are probably the most popular choice for container gardeners. Look for the fairly thick-walled, darker-toned pots; those with thinner



An incised motif adds interest to this simple clay container.

walls and brighter coloration may be more apt to break from careless or rough handling and freezing winter conditions. Unglazed

clay allows water and air to pass through it, while glazed clay greatly restricts their movement. However, the huge range of colors and intriguing shapes of glazed pots opens up a world of creative possibilities, and the glaze usually provides greater resistance to winter damage. When in doubt about a container's weather resistance, cover or store it in a shed, garage, or basement during freezing weather.

TERRA COTTA. A terra cotta pot is made from essentially the same material as a clay pot, but terra cotta is fired in the kiln at higher temperatures. Being stronger and far more waterproof than regular clay, terra cotta provides much greater resistance to winter damage. Its coloration is usually less raw-looking (more subtle) than clay, and its often-present whitish coating when new and tendency to age attractively add to terra cotta's more refined appearance.

**WOOD.** Almost any kind of wood can be used to make simple homemade boxes, rustic-looking whiskey barrels, high-end Versailles planters, and one-of-a-kind organic shapes. All wood will rot

over time in the presence of water and soil microorganisms (not to mention carpenter ants and termites), but some hardwoods and chemically treated softwoods can last a remarkably long time if



The colors and unusual form of pitcher plants contrast sharply but attractively with the gray rectangular hypertufa container.



The muted silvery color and formal lines of this weathered teak box provide a pleasing contrast for the bright and dynamic composition of *Hebe* 'Variegata', *Scaevola aemula*, and *Ipomoea batatas* 'Blackie'.

properly maintained. Raise wooden containers off the soil or other surfaces on bricks, stones, or with pot feet; line them with plastic or metal; protect them from the ravages of winter (as with clay, water in wood expands as it freezes, often causing damage); and consider storing them empty during winter.

METAL. Metal vessels add a distinctive touch to any container planting. Iron rusts, so painting it can protect it from water. Stainless steel will not rust, and pieces made from it can be used as stylish, industrial-looking cachepot covers for less attractive pots. Alu-

minum weighs much less than most metals but will quickly develop a white surface coating, which is appealing to some and not to

A variety of weathered clay pots burst with colchicums, fall-blooming bulbs that are related to crocuses.

others. New and polished copper casts a warm glow, while aged (patinated) copper offers mellow shades of green and brown. Zinc can be cut into rather thin and lightweight sheets that can be shaped into useful cachepots; like most metals, it develops a surface character over time. Aristocratic lead containers conventionally decorate stately old country homes but can look equally appropriate in more modern settings. Be very careful with lead: its weight can crush a toe, and it deforms very easily when bumped.

PLASTIC. Don't let stereotypical notions of plastic prevent you from gardening with pots made from it. While most plastic pots are widely considered plain-looking or maybe even vulgar, some plastics closely copy the look of clay, terra cotta, wood, metal, and



This sturdy-looking ornate planter is paired with bold and equally ornate Aeonium arboreum 'Zwartkop', creating a study in textures.



stone and cost far less than their counterparts. You can always hide a less attractive plastic pot inside a more elegant cachepot. Some plants, especially those that like a moister potting mix, benefit from a plastic pot's ability to hold water longer.

**RESINS.** A catchall term for several plasticlike materials, resins look and behave much like many plastics, but generally hold up better in sunlight and take more physical abuse than plastics. Resins can be dyed to mimic other materials, as well.

**STONE.** Nothing looks as solid and ageless as stone, whether roughly hewn or highly polished. A stone container presents a visually exciting contrast to its organic contents and surroundings. Stone can be carved into simple shapes or highly ornamented pieces of sculpted elegance, and it withstands physical abuse and winter conditions far better than many other materials.

RECONSTITUTED STONE/COMPOSITES. Grind stone up and bind it together with cement, epoxy or similar glues, and a dye. The resulting reconstituted stone can be cast into shapes, avoiding the effort, time, and expense of carving an intact block of stone. Good-quality reconstituted stone closely mimics the appearance and weight of natural stone, but it may be less tolerant of physical abuse and weather conditions. It is certainly less expensive than the real thing.

**CONCRETE.** Similar to reconstituted stone in its versatility, appearance, and weight, concrete usually costs less than stone. Smooth-surfaced concrete planters combine beautifully with just about any plant, but keep a close eye on dark concrete pots located in full sun; the surface of the material can heat up enough to almost cook plant roots.





**HYPERTUFA.** Justly favored by rock gardeners, hypertufa combines the porosity of clay with the good looks of stone and the value of concrete, and you can construct hypertufa containers at home. Yet don't think that delicate and difficult alpine gems make the only worthy tenants of a hypertufa container. Moisture-loving plants as well as many trees and shrubs

look and grow beautifully in hypertufa, as do many cacti and

**FIBERGLASS.** Like some plastics, molded fiberglass convincingly masquerades as other materials, such as terra cotta, stone, and lead, but it weighs much less. Fiberglass pots hold up very well to the elements and do not chip or readily bend, though a sharp blow will crack them, particularly around the rim. Fiberglass is not cheap; think of it as a very satisfactory midpriced option with both light weight and good looks.

#### TYPES OF CONTAINER STYLES

other succulents.

Let's consider the pros and cons of some of the most commonly encountered pot styles.

**ROSE AND LONG TOM.** Rose pots (featuring an unusually tall, pronounced rim) and long toms (with little or no rim) are both much taller than they are wide. The high soil columns they contain provide excellent drainage, and their dramatic upward lines beautifully complement arching, trailing, and downward-hanging plants.

However, tall pots can be extremely top-heavy and may fall over with the slightest push from the wind or a bump from a fast-moving child or large dog. To counteract this potential problem, fill the base of the pot with a heavy ballast material (such as gravel, stones, or broken bricks), place it within a sturdy metal ring

The succulents in these long tom pots seem to explode outward because of the tall vase shape and vertical lines of the containers.

support, or group several tall pots together within a ring of shorter ones.

STANDARD. If you get out your tape measure or ruler, you will discover that these are about as tall as they are wide, even though they look taller. Like long toms and rose pots, they have a rather high soil column to provide good drainage, and they accentuate plants with linear qualities as well as those with rounded and expansive forms.

**AZALEA.** Just a little less tall than they are wide, azalea pots

appear and are, in fact, more stable than taller pots. Their low profile allows mounded and spreading plants to look their best in them, and even more-upright plants can interact nicely with them, provided the plants are not too tall.

However, plants requiring extremely good drainage may suffer in the relatively short soil column, and some taprooted plants may not grow well in them.

PAN. Also known as bulb pans, these are about half as tall as they are wide and as a result offer great stability (you cannot knock them over, even if you try). Very low-growing plants look great in them—little bulbs such as crocuses and irises, many low-statured succulents, and restrained trailers and spreaders will be displayed to their best advantage in a pan.

HANGING CONTAINERS. Hanging baskets and similar containers that are designed to be suspended display trailers, untrained climbers, sprawlers, and arching plants to best effect. Choose from classic wire, utilitarian plastic, lightweight compressed fiber, and even terra cotta and metal circular baskets, half baskets, mangers, and window boxes.

**STRAWBERRY JARS.** Usually rounded in outline and including several planting pockets distributed regularly around its surface, a strawberry jar makes an excellent choice for a collection of trailing, arching, and spreading plants or a mass of the same kind of plant. A well-planted and filled-in strawberry jar makes its own special statement of abundance and luxuriance.

Ray Rogers is a garden writer, photographer, and lecturer. He is currently working on a book on coleus that will be published this fall by Timber Press.

# **NATURAL CONNECTIONS**

# Flying Fossils: Intriguing Dragonflies are Welcome Garden Guests

by Kathryn Lund Johnson

A S A CHILD, I was terrified of dragonflies, with their unpredictable zig-zaggy flight patterns. "Darning needles" is what my friends and I called them, shuddering at the thought that one might wing in and sew our eyelids shut. Many years later, I learned that their abrupt flying movements are actually a demonstration of the dragonfly's remarkable proficiency in capturing prey. Dragonflies neither sting, bite, nor stitch... children or adults. In fact, they are quite remarkable creatures!

Dragonflies, along with the more diminutive damselflies, belong to Odonata, an insect order comprised of approximately 600 genera. More than 6,000 species have been identified worldwide and there are also some 430 species known in North America.

An adult of this order has two prominent compound eyes, a slender abdomen, four elongated wings, two short antennae, and mouthparts well-equipped for biting and chewing. By observing the wings at rest, dragonflies are easily distinguished from damselflies: Dragonfly wings are held perpendicular to their abdomens, while damselfly wings are parallel.

#### A PRE-DINOSAUR PAST

Dragonflies originated more than 300 million years ago during the Carboniferous period, predating dinosaurs by more than 100 million years and birds by 150 million years. The fossil of one species of dragonfly, discovered in France, displays a wingspan of almost 28 inches. Because dragonflies of today are structurally like



The typically prominent eyes of this Halloween pennant dragonfly provide the keen sight it requires to capture food and escape predators.

those early dragonflies, it's not a stretch to call them "flying fossils."

Prehistorically, all flying insects began with pairs of fore- and hind-wings that moved independently of each other.



The bright red markings on the abdomen of this calico pennant dragonfly indicate that it is male. Females display yellow markings.

While insects such as butterflies and bees continued their wing evolution, dragonflies have retained their basic wing structure to this day. Direct muscles located in the thorax power their two sets of wings, allowing the tilting of one pair at a time. This enables dragonflies to dart up and down, side to side and backward, and even to hover mid-air, while ensuring lift and forward propulsion with minimum drag.

The membranous network of veins and folds located at the wing bases supply strength for flight, and the insects' narrow abdomens contribute to their aerodynamic prowess. Balance during flight is accomplished by a tilting of the head, providing input to hairlike sensors on the neck to interpret the degree of the "roll"—equilibrium has been established when the head is perfectly centered.





Bulging compound eyes, which comprise almost half of the adult dragonfly's head, are responsible for its keen perception of movement, crucial to its ability to obtain food, avoid predators, and locate a mate. Each eye is made up of 10,000 to 50,000 six-sided facets that act as the lenses of a light-sensitive unit called an ommatidium. Since ommatidia surround the eyes, a dragonfly can see in many directions without moving its head. Additionally, three simple eyes called ocelli, located on the top and front of the head, respond to changes in light intensity.

#### LIFE CYCLE

The dragonfly larva, often called a nymph, is aquatic. Tracheal gills lining its muscular rectum absorb oxygen from water drawn in through the anus. Stale water, forcefully expelled through the anus, jet-propels the larva forward, positioning it advantageously for snaring prey or avoiding predators. Larvae are voracious and opportunistic feeders, consuming small fish, snails, tadpoles, insect larvae, and worms. It secures its prey using its long, pointed lower lip that is equipped with hooklike teeth.



Dragonfly larvae, such as the one shown at top left, undergo up to 15 molts before they emerge from their aquatic environment to climb a vertical surface, left, for their final molt. About a month after their final molt, dragonflies, like the white-faced meadowhawks above, are ready to mate.

Larvae undergo 12 to 15 aquatic molts, each resulting in an increase in size. When it's time for the final molt, the larva climbs out of the water onto a vertical surface—a rock, log, or piece of vegetation. There it begins to dry, ultimately splitting and shedding its skin. During this process, fluid is pumped through the body and into the wing-buds. Until the exoskeleton dries completely and hardens, and the wings are unfurled, the dragonfly is helpless, vulnerable to predators including birds and spiders.

About a month after becoming terrestrial, dragonflies reach sexual maturity. During this stage, which lasts for two to three weeks, the bold iridescent colors of the wings become noticeable. Adult males become aggressively territorial, using their acute vision and flying abilities to patrol their borders. They do not shy away from a confrontation with other males—the winner gains access to the territory and to the females located therein. James R. Curry, a professor of biology at Franklin College in Indiana and author of *Dragonflies of Indiana*, explains, "While male dragonflies do not

set up breeding territories in the manner that birds do, some will temporarily defend short stretches of shore or water, patrolling for females."

Dragonfly copulation is decidedly unique. The male uses genital claspers on the tip of his abdomen to hold the female by the back of her head in the "tandem position." The female responds by moving her body to form a position called a "wheel." The exchange of sperm is quick, but in some dragonfly species the pair returns to the tandem position so the male may engage in "contact guarding" of the female, protecting her from potential advances by other males. The male and female remain connected as she skims across the water surface, depositing fertilized eggs. In species that do not exhibit contact guarding, the sexes separate after mating, but the male continues to hover in the area, guarding the female against the intrusion of other males as she deposits her eggs in the water.

As with their larvae, adult dragonflies are opportunistic, carnivorous predators, preying on beetles, bees, moths, wasps, flies, and other species of dragonflies. In an amazing display of aerial acrobatics, a dragonfly swoops in and grabs its prey, using a "basket" formed by its spiny legs.

#### INDICATORS OF HEALTHY ECOSYSTEMS

Dragonflies play an important role in maintaining ecosystem stability by con-



The green clearwing dragonfly, also known as the eastern pondhawk, is a voracious predator, even of other dragonflies.



A dragonfly rests while its iridescent, dew-covered wings dry in the early morning sun.

trolling insect populations. They provide a major food source for spiders, birds, many aquatic species, and other insects. Their presence is an indicator of ecosystem quality, as their populations may wane with even subtle changes in their en-

vironments, particularly with respect to water movement and clarity and aquatic vegetation. Healthy water ecosystems support the greatest numbers of dragonflies.

"As is true with so many insects, our dragonfly populations are being compro-

#### Resources

Stokes Beginner's Guide to Dragonflies and Damselflies by Blair Nikula and Jackie Sones with Donald and Lillian Stokes, Little, Brown and Company, New York, 2002.

mised, and loss of habitat is a major reason," says Curry. "The destruction or altering of wetlands, lakes, and rivers affects the biodiversity necessary for dragonflies' survival." We can help by making our voices heard when development proposals and water quality issues arise, by creating ponds and rain gardens in our yards, and by refraining from using pesticides when possible. And we can teach our children about the wonders of the dragonfly so that these links to the prehistoric world continue to amaze future generations.

Kathryn Lund Johnson is a freelance writer and photographer. She lives in Middleville, Michigan.







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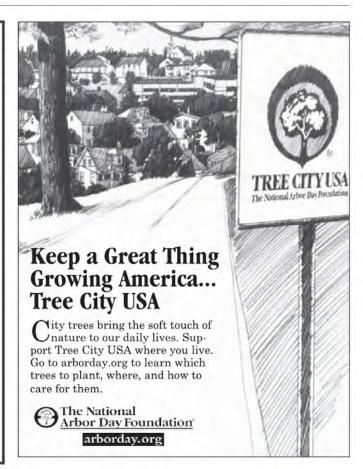
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# ONE ON ONE WITH...

# David Barnett, Advocate for Public Gardens and Natural Landscaping

by Doreen Howard

TN DAVID BARNETT'S OPINION, public gardens are like political big tents. There is room for every kind of garden, from university research institutions and community parks to zoos, historical landscapes, and amusement theme parks. "All teach the value and enjoyment of plants," he says. As president of the Amer-

> ican Public Garden Association (APGA) and vice president of operations and horticulture at Mount Auburn Cemetery in Cambridge, Massachusetts, he should know.

> Founded in 1940 as the American Association of Botanical Gardens and Arboreta, the APGA changed its name last year to broaden its reach. Barnett, who is preparing to host the annual APGA conference in June in Washington, D.C., was a key player in refining the definition of a public garden. Currently, the APGA has 500 member institutions throughout North America and abroad. Its mission is to promote and support the work of its members and facilitate the sharing of information.

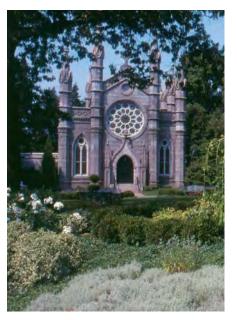
Barnett has also spent 13 years integrating ecologically friendly practices into the maintenance of Mount Auburn, the nation's first landscaped cemetery founded in 1831 and now a designated National Historic Landmark. The 175-acre cemetery features more than 5,000 species of trees and thousands of other plants, besides the graves of numerous historical figures including artist Winslow Homer and architect Buckminster Fuller. [The cemetery celebrates its 175th anniversary this year; see the sidebar on page 57.]

Barnett recently found some time in his hectic schedule to talk with Doreen Howard about the educational role of public gardens and the benefits of natural landscaping.

#### Doreen Howard: Mount Auburn Cemetery is a historic landmark and horticultural showcase. What are your favorite spots?

David Barnett: I love Consecration Dell. where the cemetery consecration ceremony was held on September 24, 1831. It is a wooded hollow-still very much how it must have looked 175 years ago. We recently removed exotic Norway maples from the area and planted native trees, shrubs, and groundcovers to restore it to its natural state.

Another favorite spot is Bigelow Chapel, built in the 1850s. We've restored the gardens in front of the chapel to reflect the Victorian period. A large European purple beech tree (Fagus sylvatica) planted near the chapel in 1860 by the visiting Prince of Wales—who later became England's King Edward VII—still remains.



Victorian-style gardens in front of Bigelow **Chapel at Mount Auburn Cemetery.** 

What can home gardeners learn from their local arboretum or public garden? Public gardens are great places to learn about what kinds of plants grow well in a region. Since plants typically are labeled, gardeners can walk around on their own and take note of plants that interest them and see how they perform. Most gardens also offer classes and workshops on a variety of horticultural topics as well as guided tours of their gardens and plant collections.

#### What type of information do public gardens maintain about their plants? Most public gardens keep extensive

records of their collections, including plant age, source, country of origin, location on the grounds, etc. Many of them use an integrated database designed for the biological field called BG-BASE $^{™}$ , which enables them to readily share all types of detailed information.

Tell us about how public gardens are using environmentally-sound practices that home gardeners can employ. Minimizing lawn care is something home gardeners can appreciate. At Mount

Auburn, we don't fertilize the grassy areas anymore. Instead of collecting fallen leaves, we use rotary mowers to pulverize them, returning organic matter and nutrients to the soil. We regularly test the soil, and its fertility has increased every year.

We also use dwarf fescue grasses in many areas instead of turfgrasses to achieve a naturalistic look and reduce mowing frequency. They don't grow tall and they tolerate drought, shade, and low soil fertility.

Also, we're planting groundcovers on steep slopes and inside fences to eliminate mowing those areas while adding interest and diversity.

#### Are there other advantages to ecofriendly gardening?

Absolutely. One of the biggest benefits is creating wildlife habitat. A good example is the vernal pool at the bottom of the slopes in Consecration Dell at Mount

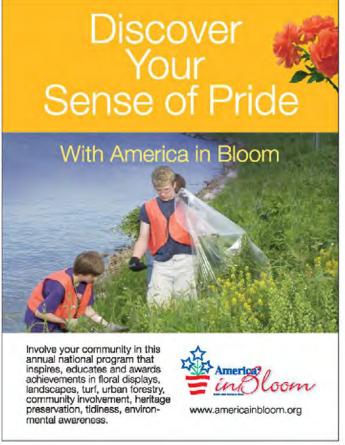


The vernal pool in Consecration Dell is a breeding ground for an endangered salamander. Vernal pools are seasonal habitats that fill with water from fall to spring and dry up in summer.

Auburn. In the spring, it is a breeding ground for the spotted salamander (Ambystoma maculatum), an endangered species in Massachusetts. Much of the pool dries up in summer, turning the area into mud flats, so we planted numerous herbaceous plants and shrubs that tolerate spring flooding and summer drought around the pool's perimeter to improve the aesthetics for visitors as well as preserve the salamander's habitat.

Doreen Howard, former garden editor at Woman's Day, gardens in Roscoe, Illinois.





# **CONSERVATIONIST'S CORNER**

# The Cypress Mulch Controversy

by Viveka Neveln

AST SPRING, when I needed mulch for some newly created beds, I headed over to the nearest big box store to see what they had. Overwhelmed by pallet after pallet of neatly stacked bags of mulch, I quickly glanced at the descriptions on the bags. The one that said it could repel termites and resist rot sounded good, so I walked out with several bags of cypress mulch.

Not long afterwards I learned that a coalition of environmental groups is trying to organize a boycott of cypress mulch because they believe harvesting of cypress trees for mulch is contributing to the destruction of Louisiana's fragile wetlands already under threat after the hurricane damage in 2005. Fearing I had become an unwitting accomplice to this process, I began to do some investigation. What I discovered was that this is a far more complex issue than it first appeared.

#### **OUESTIONS OF SUSTAINABILITY**

The two species of cypress trees used for mulch, bald cypress (Taxodium distichum) and pond cypress (T. distichum var. nutans), are slow-growing trees found mainly in freshwater swamps in the southeast. Several environmental and governmental organizations as well as scientists are concerned about the sustainability of logging these trees, particularly in Louisiana's coastal areas. What has everyone so worried is how well the area can regenerate new cypress trees after being clear cut.

In the early 1900s, most of Louisiana's old-growth cypress forests were logged extensively, and since then, many areas have regenerated. A report compiled by the Coastal Wetland Forest Conservation and Use Science Working Group, which was appointed by Louisiana Governor Kathleen Blanco in 2004, argues that "successful regeneration of this resource in the 1920s was due to fortuitous conditions existing at that time." Today, factors such as "increased depth and duration of flooding, saltwater intrusion, nutrient and sediment deprivation, herbivory, invasive species, and direct loss



Bald cypress is one of the few tree species that can grow in standing water.

due to conversion" of the land to other uses have made regeneration less likely.

Yet, according to the Louisiana Department of Agriculture and Forestry, trees are regenerating at three times the rate of harvesting and natural losses. "The Governor's Committee had limited time and only studied 15 forest plots in the state," says Robert LaGasse, executive director of the Virginia-based Mulch and Soil Council. "The latest report [from the Department of Forestry] included 4,000 plots and data just released from the U.S. Forest Service. We see the Governor's report as a study of 'what if' versus the Forestry report being a study of 'what is."

#### THE LONG ARM OF THE LAW

Since cypress trees grow in wetlands, certain federal and state regulations come into play, most notably Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Atchafalaya Basinkeeper, a conservation and advocacy organization in Louisiana, has documented and reported numerous occasions of illegal cypress harvesting under these laws. Because of these whistle-blowing efforts, the U.S. Army Corps of Engineers has halted cypress logging activity, citing its authority to require a permit under certain conditions.

The Louisiana Forestry Association, however, contends that the Corps's actions are "an expansion of regulatory authority with no purpose other than to disrupt and stop the flow of valuable forest resources." Buck Vandersteen, executive director of the association, says this has only occurred in the New Orleans area, "which indicated to us that it is the leadership in New Orleans that is placing a pseudo-environmental agenda ahead of sustainable forest management and economic development."

In response, the Louisiana Forestry Association supported Senator David Vitter's amendment to the Water Resources Development Act that would remove the Corps's authority to enforce Section 10. The Atchafalaya Basinkeeper and others rallied support to defeat the amendment last year. With the transition to a Democratic-controlled House and Senate, "Section 10 is safe for now," says Dean Wilson, executive director of Atchafalaya Basinkeeper. Wilson's organization is also working with the Environmental Protection Agency for stronger enforcement of Section 404 of the Clean Water Act.

#### THE MULCH CONNECTION

The Save Our Cypress Coalition, a group of Louisiana-based conservation and environmental organizations working to protect the trees from logging, contends that most of the cypress harvesting currently going on in Louisiana is for mulch. Since regenerating in the 1920s, "most of the cypress trees in Louisiana are still too small for lumber," explains Wilson, whose organization is part of the coalition. Private landowners, who own most of Louisiana's cypress forests, can still sell the trees for mulch. And, according to Wilson, this is certainly happening. "I have followed trucks from clear cuts to a facility that produces nothing but mulch," he says.

"Stopping the sale of cypress mulch will greatly reduce the pressure that is currently put on cypress forests," says Dan Favre, campaign organizer for the Gulf Restoration Network, part of the coalition, "and it will ensure that logging does not increase in the Gulf Coast's most vulnerable areas."

To achieve this goal, the Save Our Cypress Coalition recently asked Wal-Mart, Home Depot, and Lowe's to stop selling cypress mulch until a third-party certification program can be established to ensure the products are not coming from non-renewable areas. The three stores have so far declined the request, but there are indications the industry may take its own steps to allay consumer concern. "Landowner and logger certification requiring sustainable management and harvest practices appears to be the most positive movement and is a solution we would likely support," says LaGasse of the Mulch and Soil Council.

#### **OUESTIONS OF QUALITY**

Although cypress mulch is purported to resist termites and rot, several studies have indicated that it is the heartwood of mature trees that possesses these properties rather than the young trees used in the mulch available today. In any case, pine bark or needles, chipped hardwood, shredded leaves, and compost are all suitable alternatives, so the next time I need to buy mulch, I might just think twice about my options.

Viveka Neveln is assistant editor for The American Gardener.

#### Resources

**Coastal Forest Conservation and** Use Science Working Group,

Baton Rouge, LA. (225) 578-4087. www.coastalforestswg.lsu.edu.

#### **Gulf Restoration Network**,

New Orleans, LA. (504) 525-1528. www.healthygulf.org.

Louisiana Forestry Association,

Alexandria, LA. (318) 443-2558. www.laforestry.com.

Mulch and Soil Council, Manassas, VA. (703) 257-0111. www.mulchandsoilcouncil.org.

#### Save Our Cypress,

www.saveourcypress.org.

Waterkeeper Alliance, Irvington, NY. (914) 674-0622.

waterkeeper.org/cypress/white paper.pdf.



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# Horticultural News and Research Important to American Gardeners

#### THE GARDEN CRUSADER AWARDS

The Grand Prize winner of Gardener's Supply Company's Garden Crusader Awards, given each year to "honor individuals who are improving the world through gardening," is Marvin Dunn of Miami, Florida, who has been coordi-



Marvin Dunn, the Grand Prize winner of the 2006 Garden Crusader Award.

nating a community gardening effort to re-connect the Overtown area of the city.

Dunn, a recently retired professor, recounts the literal divide in the oncethriving African-American community after two expressways bisected it in the 1960s, but he decided to use the roads as the focal point for a gardening campaign. "We started planting gardens in the vacant land around the expressways as a way to beautify the community, feed the people, and provide jobs," he explains.

In the 12 years since Dunn began the project, one two-acre site has grown to 30 acres over eight sites, and up to 38 people have full or part-time employment. More than 300 volunteers, many of whom have been students from Dunn's course on community psychology at Florida International University, have also worked in the Overtown gardens.

The gardens create safe public green spaces—Dunn refuses to fence any of the

land—and while many families rely on the weekly harvests, Dunn emphasizes the employment opportunities the gardens provide. "We give [residents] a chance to learn some skills, make some money, and help their families and community," he says.

To ensure the continued financial stability and success of the Overtown Garden project, Dunn established the non-profit organization "Roots in the City," which receives private and government funding.

Since 2001, Garden Crusader Awards are given annually to nominees in various categories, including education, feeding the hungry, urban renewal, and restoration. For more information or to nominate a gardener for 2007, visit www.gardeners. com, e-mail crusader@gardeners.com, or call (888) 239-1553.

#### EARTHWORMS HELP TO PLANT SEEDS

Earthworms help to aerate and fertilize soil, so most gardeners gladly welcome them. Recently, researchers at Ohio State University (OSU) discovered that a certain species of earthworm also exhibits seed planting behavior. Lumbricus terrestris, the common nightcrawler introduced from Europe, appears to collect seeds too large to ingest and bury them in their burrows, though no one's exactlv sure whv.

This remarkable behavior was serendipitously discovered during a study of



A nightcrawler drags a ragweed seed back to its subterranean lair.

giant ragweed (Ambrosia trifida), a native annual weed found throughout most of the United States. Researchers trying to explain the greater than expected proliferation of this weed in crop fields noticed that nightcrawlers "forage abundantly for these seeds even when other organic debris is available," says Emilie Regnier, a weed scientist at OSU who discovered the seed burying behavior.

Mice or birds tend to eat most ragweed seeds that remain on the soil surface, explains Regnier, "so by burying seeds, the earthworms reduce their vulnerability to being detected and consumed by seed predators." While this may seem like a good thing for the ragweed seeds, the researchers found that sometimes the worms bury the seeds too deeply to emerge. "On the other hand, seeds that are buried deeply last a longer time in the soil so if there is disturbance of the soil in the future and they are brought to the surface, they can germinate," Regnier adds.

According to Regnier, gardeners need not fear that earthworms are contributing to their weed problems. "In garden situations, I am not sure whether this earthworm would be prevalent because it requires a lack of soil disturbance and plentiful organic matter," she says. More research is planned on the relationship between earthworms and seed survivability and dispersal.

#### ARBOR DAY POSTER CONTEST

The National Arbor Day Foundation's 16th annual poster contest will address the theme "Trees are Terrific...and forests are too!" The contest, sponsored by Toyota since 2001, is open to fifth grade classes across the country whose teachers sign up by February. Specifically designed Arbor Day lesson plans are available to incorporate tree appreciation and the forest ecosystem into the current science, geography, and art curriculum.



A teacher's guide with poster contest rules and lesson plans is available.

Each participating state will select a winner, followed by a national contest whose first, second, and third place winners will receive savings bonds and trees planted in their honor. Teachers will also receive a monetary prize. Statewide winners will be an-

nounced on National Arbor Day, which in 2007 will be April 27. The winners will be invited with their parents or guardians to an expenses-paid National Awards weekend in Nebraska in June.

National Arbor Day was founded by J. Sterling Morton in Nebraska in 1872 and occurs on the last Friday in April, though some states recognize an additional arbor day that is more regionally appropriate for planting. For more information about state deadlines, registration, and educational materials, visit www.arborday.org/postercontest.

#### PEOPLE and PLACES in the NEWS

#### **Author and Plant Pathologist Alex Shigo Dies**

Alex Shigo, widely regarded as the father of modern arboriculture, died on October 6, 2006, at the age of 76. After earning a master's degree in biology and



a doctorate in plant pathology from West Virginia University, he was hired by the U.S. Department of Agriculture Forest Service to study tree decay.

Over his 26 years with the Forest Service, Shigo became a well-respected expert on tree biology and developed many new theories about tree care that resulted in healthier pruning techniques. Upon retiring from the Forest Service in 1985, Shigo began writing and published several books on tree biology, care, and anatomy. He also continued to give popular lectures around the world.

#### National Arboretum Botanist Frederick Meyer Dies

On October 13, 2006, botanist Frederick G. Meyer died at the age of 88. He began his career at the Missouri Botanical Garden after earning a Ph.D. degree in botany from Washington University in St. Louis in 1949. Seven years later, he became a research botanist and taxonomist with the U.S. Department of Agriculture, then joined the U. S. National Arboretum in 1963. While there, he served as the director of the herbarium, helping it to double in size. He also contributed more than 23,000 specimens to the arboretum's plant collection. He retired in 1991 but continued to serve as a consultant for the arboretum for the next 10 years.

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#### THE GREAT BACKYARD BIRD COUNT

The 10th annual Great Backyard Bird Count will take place February 16 to 19. Sponsored by the National Audubon Society, Cornell Lab of Ornithology, and Wild Birds Unlimited, the count relies on residents across the United States and Canada to generate its results. Participating in the count doesn't require long hours huddled motionless in the cold; parents, teachers, children, and bird-enthusiasts are encouraged to spend just 15 minutes counting numbers of a given species.



Participants in the bird count might sight intriguing birds such the downy woodpecker.

Tally sheets are posted on the count's official website, www.birdsource.org/gbbc. The site includes details about how to participate, identification tips, comparisons with other areas in the country, and previous years' results. Several competitions are also included as part of the event, such as best photograph and most participation from a locality.

#### SAFELAWNS ADVOCATES NATURAL LAWN CARE

To help Americans achieve a green



**Paul Tukey** 

lawn—in both senses of the word-SafeLawns.org will publicly launch in March. Dedicated to promoting natural lawn care, this non-profit organization's mission is to "create a broadbased coalition of non- and for-profit organizations committed to educating society about the benefits of organic lawn care and gardening, and affecting a quantum change in consumer and industry behavior." This spring, it will begin a national campaign to create awareness of more environmentally friendly alternatives to traditional lawn care products, tools, and techniques.

Paul Tukey, founder and editor of People, Places & Plants magazine and host of an HGTV show of the same name, will serve as the national spokesperson for SafeLawns. In tandem with this role, Tukey has written The Organic Lawn Care Manual, which will be available mid-January from Storey Publishing.

Along with television, radio, print, and public appearances around the country, the campaign will include free educational videos downloadable from the organization's website. Visit www.safelawns.org for a complete list of SafeLawns events.

#### DODDER SNIFFS OUT VICTIMS

A life-sucking killer ranking among the Most-Wanted list's top 10 could be lurking in your backyard. Dodder, also known



A dense network of dodder strands cloaks this doomed privet bush.

as strangleweed, was the subject of a recent study at Pennsylvania State University.

Experiments with Cuscuta pentagona suggested the surprising result that the rootless, leafless plant seeks its victims based on scent. Researchers, led by Consuelo M. De Moraes, determined that the

parasitic plant can sense chemical compounds emitted from potential host plants, though the biological mechanisms involved are as yet unknown.

Within the first week after germination, dodder must locate a host plant to survive. Dodder germinated in the laboratory avoided wheat in favor of tomato plants, if given the choice. This could influence the direction of further research to control several varieties of the noxious weed, which can decimate food and ornamental crops indiscriminately.

Dodder is an annual, yet a single plant can produce several thousand seeds that remain viable for decades. Gardeners across the United States and Canada should be on the lookout for its thin, yellow-to-orange twining growth. To avoid possible spread of seeds, the British Columbia Ministry of Agriculture and Food recommends that all plants coming in contact with dodder be burned, and all clothing and equipment used in the cleanup should be thoroughly cleaned afterward.

#### PACIFIC NORTHWEST HORTICULTURAL CONSERVANCY TO PRESERVE HERONSWOOD NURSERY PROPERTY

The Pacific Northwest Horticultural Conservancy (PNHC), a nonprofit organization, was recently created "to acquire and preserve the internationally renowned botanical garden and plant collection at the former Heronswood Nursery property." The nursery's corporate owner, W. Atlee Burpee & Company, abruptly closed the Kingston, Washington, site last May, much to the dismay of gardeners everywhere.

"Although we have not yet made an offer on the property," says Ann DesJardien, marketing co-chair for the PNHC and a former Heronswood docent, "we have been in contact with Burpee and they are aware of our intent."

Endorsed by the Garden Conservancy, the PNHC is currently working to raise needed funds to buy the property in the hope of establishing a horticultural research and education center that will be open to the public. The organization's board consists of several former Heronswood staff and docents, garden writers, and members of plant societies in the Northwest region. For more information, visit www.weloveplants.org.





Winning roses include Moondance™, left, and Bonfire™, above.

#### **TOP ROSES FOR 2007**

Aficionados of America's floral emblem will want to take note of some of the newest award-winning roses.

The All-America Rose Selections 2007 winners are:

Rainbow Knock Out<sup>TM</sup>. Hybridized by William Radler and introduced by the Conard Pyle Company, this rose has the disease resistance and continuous bloom of the original Knock Out, also created

by Radler. Its single pink blooms have yellow and coral centers.

Strike It Rich™. Featuring long-lasting, fragrant, double gold-, orange-, and red-swirled flowers and high disease resistance, this grandiflora rose was hybridized by Tom Carruth and introduced by Weeks Roses.

Moondance™. This upright, diseaseresistant floribunda, hybridized by Keith Zary and introduced by Jackson & Perkins, produces creamy white flowers with a spicy fragrance.

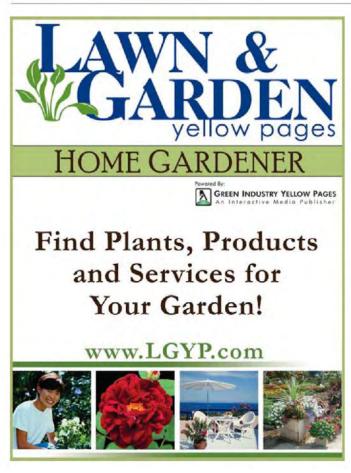
Also of note are the three 2007 winners of the American Rose Society's Award of Excellence, "given to new miniature and Mini-Flora rose varieties of superior quality and marked distinction as determined by their performance in official test gardens."

Saluda™ is a creamy orange miniature with an upright, compact habit that was hybridized by Michael Williams and introduced by Bridges Roses.

Bonfire™ is a vigorous, red blend miniature hybridized by Frank Benardella and introduced by Nor'east Miniature

**Leading Lady™** is a disease-resistant Mini-Flora that produces white flowers with pale pink shading. Hybridized by Frank Benardella, it will be introduced by Nor'east Miniature Roses.

For more national and regional award winning plants for 2007, see the online news special linked from this issue's table of contents on the American Horticultural Society website (www.ahs.org).





herry Lake Tree Farm is pleased to announce its corporate partnership with the American Horticultural Society and is committed to helping fulfill the AHS mission by promoting the importance of large trees in the landscape.



#### A BILLION TREES

The United Nations Environment Programme (UNEP) has launched a cam-



paign to plant a billion trees worldwide in 2007. The project is inspired by the work of 2004 Nobel Peace Prize Laureate Wan-

gari Maathi of Kenya, who founded the Green Belt Movement in 1977. Since then, Maathi's organization has planted 30 million trees in 12 African countries.

"Globally, forest cover is at least onethird less than what it once was," says UNEP Executive Director Achim Steiner. "It is time to reverse the trends." The UNEP has guidelines for planting indigenous and climate-appropriate trees for global locations, though the planting itself is left up to participants.

The "Plant for the Planet: Billion Trees Campaign" encourages individuals, groups, and governments to make a pledge to plant at the UNEP website, www.unep.org/billiontreecampaign.

Written by Assistant Editor Viveka Neveln and Editorial Intern Heather Robbins.

#### HORTICULTURAL HISTORY: A LOOK BACK

Fifty years ago, the National Horticultural Magazine, a forerunner to The American Gardener, published a special January issue dedicated to hollies, a genus that currently encompasses more than 400 species of evergreen and deciduous trees, shrubs, and vines. In a section titled "Adventuring with Hollies," author Ray R. Hirt wrote:

Until recent years, hollies have been thought of as mild-climate plants, and only the most adventurous gardener experimented with them in the vigorously cold inland climate of the New England States and central New York. As southern holly growers cultured and named their more winter-hardy selections, interest in growing hollies gradually spread northward. Attempting to grow hollies in Zones 4 and 5 is still a venture with some selections. In those zones, it is advisable to recognize in advance that the pleasure derived from watching hollies grow may be terminated during any winter season by the loss of the plants due to freezing. Every gardener has such experiences with choice annuals and biennials, and it is not an uncommon experience for rose growers. Hence, holly hobbyists should not be discouraged by similar experiences.

While growing hollies in "vigorously cold" climates is still a challenge, several species and hybrids will survive in Zone 5—usually with protection—such as blue holly cultivars (*Ilex*×*meserveae*). There are just a few hybrids that will grow in Zone 4, such as 'China Girl' (female) and 'China Boy' (male), which are crosses between evergreen Asian species I. cornuta and I. rugosa. For more information, visit the Holly Society of America's website at www.hollysocam.org.

—Heather Robbins, Editorial Intern

# equeies assume many forms



Whether making estate plans, considering year-end giving, honoring a loved one or planting a tree, the legacies of tomorrow are created today.

Please remember the American Horticultural Society when making your estate and charitable giving plans. Together we can leave a legacy of a greener, healthier, more beautiful America.

For more information on including the AHS in your estate planning and charitable giving, or to make a gift to honor or remember a loved one, please contact Barry Goodinson at (703) 768-5700 ext. 125.







# Let's Get Organized

by Rita Pelczar

WHAT BETTER way to start the new year than with a resolution to clean out and organize your green garage? After all, organization is the key to efficiency (and safety). There are lots of ideas and techniques to help you keep your garden tools in order, so let's get to it!

Gardening tools and supplies—from trowels, potting soil, and pots to lawn mowers, hoses, and wheelbarrows—tend to consume a lot of space, particularly if your system of storage is one of more or less controlled chaos. If you find yourself spending more time sorting through clutter to locate the tools you need for a job than actually doing the job, it's time to get organized.

#### ORGANIZATIONAL STRATEGY

Whether your green garage is a closet in your apartment, a dedicated garden shed, or a multi-bay structure you share with the family cars and sports equipment, the basic strategy to developing an efficient storage system applies. The following tips should help you get started:

- Start by grouping your supplies and tools into categories such as seed-starting supplies, soil and soil amendments, containers, hand tools, long-handled tools, power tools, and so on. If you share storage space with non-gardening items, establish categories for these, too, but locate them apart from the gardening supplies if you can.
- Eliminate duplicates and broken tools. If you are not likely to fix a tool, you might as well donate it to someone who will. And if you only need one, why keep two?
- Place the items you use most often in easy reach. If you grab your pruners and a



Organized tools and gardening supplies on display in the Green Garage exhibit at River Farm.

pair of gloves every time you head to the garden, keep them handy and return them to the same spot when you're done. Your bulb planter, on the other hand, which you use once or twice a year, can be stored further back. For items on shelves, place those most frequently used at waist height and store those used less often on high or low shelves.

- Store replacement parts near the appropriate tool. That way you'll know where to look when you need them.
- Get as many of your tools off the floor as possible. Many can be hung while others are better stored on shelves. This saves floor space and makes cleanup much easier. Arranging tools conspicuously on a wall also helps you locate them quickly when you need them. For safety, face the sharp edges of shovels, rakes, pitch forks, and hoes toward the wall.
- Follow the manufacturer's weight limit recommendations for all hooks or hanging supports.

■ Store pesticides and dangerous tools in locked cabinets or on an elevated shelf to keep them out of children's reach.

#### SIMPLE STORAGE SYSTEMS

Garage storage systems range from simple braces, nails, and hooks to complete prefabricated garage wall systems; all aim to reduce garden tool clutter. The style and details of your storage system will depend on how much you have to store, how much space you have to store it, and how much money you want to spend.

"Garden tool caddies and organizers are great for storing and carrying tools to every project in the yard," says Deborah Wandner Shearer, vice president of marketing for Organize.com. Tool caddies and free-standing tool bins with or without wheels are available in a variety of sizes suitable for both hand tools and long-handled tools.

Hanging up tools makes good use of wall space and keeps the tools off the floor





Above left: For small tools and small spaces, the Space Logic™ tool organizer is ideal. Above right: Ladders can be mounted on sturdy wall brackets like this one. Right: Hanging tools can be firmly secured with the Ultra Hold Yard Tool Rack from Organize-It.

for easy cleanup. The most basic style, which works well for unfinished garage spaces where the studs are exposed, is to drive sturdy nails into studs from which tools are hung. For long-handled tools, use a single nail; for hand tools, a short length of a one-by-two-inch furring strip can be nailed horizontally between studs, with short nails or hooks spaced along the strip that will provide a hold for several tools. If the tools lack holes in their handles, you may need to drill them.

Another simple storage technique for unfinished garages is to nail a horizontal brace to the outer edge of exposed studs two to three feet above the floor or foundation. Tools can be stored upright in the space behind the brace.

If your space is tight and your tools few, the Space Logic™ tool organizers created by Case Logic might just fill the bill. They come in a variety of sizes that will suit indoor gardeners in particular as well as those with limited garage



space. The polyester organizer mounts with screws to any surface, and holds hand tools, seeds, and other small gardening supplies. A slightly larger option, for indoor and outdoor tools, is the compact Heavy Duty Lawn and Garden Rack from Organize-It. It has space for a few long-handled tools, a small shelf, a removable basket, and an arm to hold a garden hose or extension cord, and is only 23 inches wide.

If you have finished walls in your garage, or you prefer a more refined look, consider one of the devices designed specifically for tool storage. The versatile Wall Racks from Duluth Trading Company are simple and sturdy; they consist of one or two spokes that extend from a flat plate that is secured to the wall. Four sizes are available, providing storage for long- and short-handled tools as well as hoses and extension cords.

The Sure Lock Hang-All Organizers from TidyGarage consist of spring-held grips that are ideal for holding longhandled tools, with steel hooks between each to hold even more. The 20-inch organizer has five grippers and six hooks for lots of storage in less than two feet of

## Sources

Dan Lipman & Associates, Locust Valley, NY. (888) 634-7752. www.tool-organizer.com.

**Duluth Trading Co.**, Belleville, WI. (800) 505-8888. www.duluthtrading.com.

GarageTek, Syosset, NY. (866) 664-2724. www.garagetek.com.

Organize.com, Riverside, CA. (800) 600-9817. www.organize.com.

Organize-It, Shelby Township, MI. (800) 210-7712. www.organizes-it.com.

PremierGarage, Phoenix, AZ. (480) 483-3030. www.PremierGarage.com.

**Shulte Corp.,** Cincinnati, OH. (800) 669-3225. www.schultestorage.com.

TidyGarage, Windsor, Ontario, Canada. (888) 442-7243. www.tidygarage.com.

wall space. The Ultra Hold Yard Tool Rack from Organize-It is similar in design, but is 36 inches long with eight clamps and no hooks.

There are always a few things you will need to store on the floor, but even they can be kept orderly. "Don't forget boot and utility trays. They are great for storing wet boots, but can also be used to transport plants, flowers, or messy items," says Shearer.

#### **MULTI-TASKING WALL SYSTEMS**

A peg board with removable hooks has long been standard garage fare for hanging hand tools. This is a versatile and inexpensive option. If your garage is unfinished, a pegboard can be screwed directly to the studs. If the studs are not exposed, you will need to provide a spacer for room to insert the hooks. Several one-by-two-inch furring strips nailed at intervals along the wall behind the board will suffice.

Or you can opt for an updated version of the peg board called the Tool Organizer from Dan Lipman & Associates. This heavy-duty, 24-by-30-inch board is made of high-impact styrene, so it is weather proof, and it can be mounted flush against the wall with no need for spacers. Add an optional hanging bracket and it is removable. Hooks in various shapes and sizes accommodate a variety of tools.

Other flexible systems are Shulte's Activity Organizers and Premier Garage's Gridwall. Both consist of steel grid panels that are screwed directly to the wall and an assortment of hooks, baskets, and other accessories that attach to the grid to hold tools, seeds, gloves, and other gardening supplies, eliminating the need for additional drilling.

If you have the wall space and are interested in a total garage storage re-do, you might consider a garage slatwall system like the one offered by GarageTek. These systems have been used for many years for displays in department stores, but they have more recently been adapted for garage storage. The system consists of grooved panels that are durable, lightweight, and weatherproof. They are attached directly to the garage wall. Accessories designed for holding specific tools as well as more generic storage, including various sizes and styles of hooks, cabinets, shelves, bins, and racks slide

into the grooves. The accessories can be moved or rearranged as needed.

#### **SHELVES AND CABINETS**

Not all of your tools and supplies may lend themselves to hanging from a hook. It's useful to have a shelf or two for bulky items, garden gloves, boots, bags, cans, and bottles. With open shelving your supplies are visible and easily accessible. Don't make



Tool organizers such as this Dan Lipman model help to keep small tools within easy reach.

shelves too deep or things in the back can get lost. A depth of 12 to 16 inches is sufficient for most gardening supplies. Heavy items should be placed low so they don't cause injury if they fall.

Built-in shelving can be very sturdy but freestanding shelving units are more flexible; you can move them if needed. Adjustable shelves also offer greater flexibility. The lowest shelf should be raised off the floor by at least a few inches so that items stored there remain dry.

By establishing order in your green garage—developing a workable storage system—you can accommodate a lot more tools and supplies in the same space, your tools will last longer because they are less likely to get broken, and they will be easily located when you need them. Additionally, a well organized storage area is a safer and more pleasant environment for those who use it.

Rita Pelczar is contributing editor for The American Gardener.



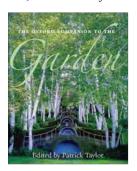


# Recommendations for Your Gardening Library

#### The Oxford Companion to the Garden

Edited by Patrick Taylor. Oxford University Press Inc., New York, New York, 2006. 554 pages. Publisher's price, hardcover: \$65.

PATRICK TAYLOR and his distinguished team of advisory editors and contributors have brought this book, first published in 1986 as The Oxford Companion to Gardens, into the 21st cen-



tury. Their objective is to "give a clear idea of the sort of gardens made in those countries in which gardening has been a significant ingredient of the culture, and to cover those in which it looms less large but is nonetheless of great interest."

While the book concentrates heavily on the gardens of Britain, France, and Italy, coverage of American gardens is also extensive—quadruple

what it was in the first edition. Countries such as Hungary and Bulgaria that were once behind the Iron Curtain, or those such as China and Iran that used to be considered outside the reach of the average traveler, are now well covered.

Though most entries are either about gardens, garden history, or people who created gardens, there is also practical garden information ranging from the layout of kitchen gardens to the making of compost, as well as discussion of aesthetic terms such as feng shui and treillage. The book also includes information about environmental and ecological issues—climate change, for example—and their effect on gardens around the world.

Those people who did not read through encyclopedias from A to Z when they were children might wonder whether this book's alphabetic format makes for interesting browsing, but in fact the book is very readable. The style is clear, concise, and engaging, and there is a helpful thematic index.

Although there are more than 100 color photographs of excellent quality, they seem like an afterthought. They are clustered together rather than integrated into the text, and the few historic engravings that are within the text have such a light line weight that they are hard to read.

On a practical note, gardens that are open to the public are marked by a flower symbol, and each country has a general entry. This makes a perfect combination for planning or dreaming about a future trip.

—Elin Haaga

Elin Haaga studied history at Oxford University and now teaches History of the Landscape at George Washington University. She also has a landscape design firm in Bethesda, Maryland.

#### **Native Alternatives to Invasive Plants**

C. Colston Burrell; Edited by Janet Marinelli and Bonnie Harper-Lore. Brooklyn Botanic Garden, Brooklyn, New York, 2006. 239 pages. Publisher's price, softcover: \$9.95.

INVASIVE PLANTS are an increasingly serious threat to the preservation of native species and habitat. They out-compete



natives for resources, change soil chemistry, and disrupt food webs. Unfortunately, we initially invited the majority of these wildlands invaders into our gardens. They have jumped the garden gates through seeds dispersed by wind or birds or through rhizomes tossed into greenbelts or washed downstream in floods.

This book takes a national approach to this issue by offering suggestions for North

American native plants that can be used to replace invasive nonnative species. Following a brief introduction to this complex topic, the bulk of the book consists of an encyclopedic section describing native plants that can be used as alternatives for 100 invasive species.

Small, color photographs of the invaders are provided for each entry along with larger ones for the alternatives. In some cases, only one alternative is suggested; in others, several options are given. Little information is given about the invader, but each alternative includes extensive information as well as growing tips. A small sidebar of "Attributes at a Glance" provides a quick summary of the alternative plants. Coupled with the photos, this makes it very easy to see the benefits of each recommendation.

It is difficult to write a book recommending native plants on a national level—I don't know of any other published examples and this book illustrates some of the reasons why. For instance, the editorial team suggest bush lupine (Lupinus arboreus) as an alternative for Scotch broom (Cytisus scoparius). This Californian lupine is invasive in the same parts of the Pacific Northwest as Scotch broom. The editors do note at the end of the entry that the lupine can be invasive, but a less careful reader may not get beyond the attractive photo and description.

All the same, this book is a good introduction to some of the common garden plants that should be discouraged in many parts of the country and will encourage gardeners to think about what they could plant instead.

—Sarah Reichard

Sarah Reichard is an associate professor at the University of Washington and co-editor of Invasive Species in the Pacific Northwest (University of Washington Press, 2006).

Seascape Gardening: From New England to the Carolinas Anne Halpin, photographs by Roger Foley. Storey Publishing, North Adams, Massachusetts, 2006. 224 pages. Publisher's price, softcover: \$19.95.

#### Gardening at the Shore

Frances Tenenbaum, photographs by Jerry Pavia. Timber Press, Portland, Oregon, 2006. 176 pages. Publisher's price, hardcover: \$29.95.

WE ARE DRAWN to water—to vacation, play, and frolic, or to live there and garden. These two well-written, beautiful books will

help seashore gardeners deal with the special challenges of coastal conditions and enjoy the rewards.

Anne Halpin lives and designs gardens on Long Island Sound, and Frances Tenenbaum has lived on Martha's Vineyard for decades. Both authors know the special problems of gardening by the sea: fierce sun, salt spray, wind, squalls,



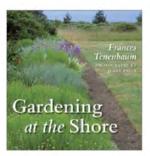
hurricanes, tidal surges, and sand. Yet calm mornings bring damp air, and the special softness of dew-drenched flowers, glowing foliage, and colors unlike any others.

In *Gardening at the Shore*, Tenenbaum describes various conditions on both the west and east coasts of the United States. Halpin's *Seascape Gardening* concentrates on the area from New

England to the Carolinas, and also delineates differences between bays, estuaries, salt marshes, etc. Each book describes ways to shelter gardens from harsh natural conditions, particularly wind.

Both books feature sections of proven and tough plants for the seashore, with the caveat to be aware of subtle and significant differences that could make them unsuitable for your garden. Halpin describes 100 plants, almost all with photographs. She also has some useful charts of plants for specific uses, such as "Plants for Windbreaks." Tenenbaum lists slightly more plants but with shorter descriptions. The authors and I agree on some solid performers: *Amelanchier canadensis*, *Clethra alnifolia*, *Baptisia aus-*

tralis, and Perovskia atriplicifolia.



Halpin profiles II mostly professionally designed and inspiring east coast gardens, with exquisite photographs by Roger Foley. Tenenbaum includes IO gardens photographed by Jerry Pavia that show a range of seaside conditions from both coasts. She also includes a unique chapter, "Advice from

Seashore Gardeners," which gives some other experienced gardeners a chance to add suggestions of their own.

—Darrell Trout

Darrell Trout is a writer, lecturer, and photographer who has gardened on Shelter Island, New York, for 18 years.

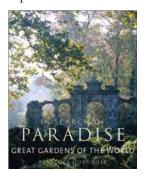


# **GARDENER'S BOOKS**

## Gardens Around the World

HEN MY GARDEN is in the icy grip of winter and summer's lushness seems like a half-remembered dream, I often enjoy paging through books with large, colorful photographs of gardens. All that exuberant, chlorophyll-laden eye candy helps to ease my winter blues and gives me ideas for the coming season. And if the books are about faraway, exotic gardens, it can feel like a little vacation. If you'd like to give it a try, these recently published titles will transport you to some of the planet's most beautiful gardens—without ever having to leave your armchair.

"Although garden design principles are global," writes Penelope Hobhouse in her latest book, *In Search of Paradise: Great* 



Gardens of the World (Frances Lincoln, in association with the Chicago Botanic Garden, 2006, \$60), "most successful modern gardens give high priority to their regional settings and the needs and habits of native plants." To prove her point, Hobhouse takes readers on a tour of stunning public and private gardens in Asia, North America, England, and other parts of Europe. She also in-

cludes thematic designs such as desert gardens, tropical gardens, ecological gardens, and urban gardens. As the adage goes, a picture is worth a thousand words, so Hobhouse lets the 200 sumptuous illustrations do most of the "talking," along with pithy captions and a smattering of brief, explanatory paragraphs.

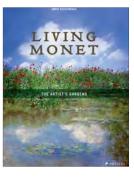
New Brazilian Gardens: the Legacy of Burle Marx (Thames & Hudson, 2006, \$50) offers a fascinating foray into



South America. "Like a continuous act of cannibalism," writes author Roberto Silva, "practitioners have been able to absorb, digest, adapt, and translate the diversity of different garden traditions to create something distinctively Brazilian." The book features more than 30 of the country's finest contemporary gardens by designers who were influ-

enced and inspired by Brazilian-born Roberto Burle Marx, one of the 20th century's most important landscape architects. Each garden is described in detail and is accompanied by sketches, design plans, plant lists, and numerous color photographs.

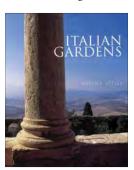
For a look at one particularly famous man's gardens—not to mention his art—there's *Living Monet: The Artist's Gardens* by Doris Kutschbach (Prestel, 2006, \$35). While Giverny near Paris may be Claude Monet's best-known garden, it was not "the first place to awake Monet's love of gardens and plants,"



writes Kutschbach. She describes the painter's various other gardens before Giverny and the integral role all of these gardens played in his work. One section of the book examines some of Monet's favorite flowers, such as irises and poppies, and how he carefully planted them to achieve just the right blends of hues and contrasts for his paintings. Reproductions of pieces that span

Monet's career as well as color and black-and-white photographs of Giverny supplement the insightful text.

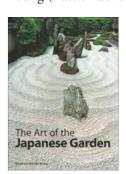
Another book that illustrates the strong connection between art and the garden is *Italian Gardens* by Helena Attlee



(Frances Lincoln, 2006, \$60). Through the centuries, the Italian garden "satisfied the senses with the beauty of its structure, the sound of birdsong and falling water and the scent of flowers, and it engaged the mind with the iconography of its statues and fountains," explains Attlee, who chronicles the development of gardens in Italy from the early Renaissance to present day. Color pho-

tographs and reproductions of paintings illustrate that during each epoch, gardens served as a backdrop and as subject matter for Italian sculpture, paintings, and architecture as well as plays, poetry, and philosophy.

The Art of the Japanese Garden by David and Michiko Young (Tuttle Publishing, 2005, \$40), one of the American



Horticultural Society's 2006 Book Award recipients, will whisk you off to the serene and sublime landscapes of the Far East. The book begins with a section on the basic elements and principles of Japanese gardens, such as the use of rocks, sand, ponds, and paths. The bulk of the book profiles well-known, publicly accessible gardens found in Japan that exemplify the different types of traditional gardens from

Zen temple gardens to stroll gardens, illustrated with color photographs and diagrams. A few more recently built gardens, which "integrate indigenous and foreign elements," and Japanese gardens outside of Japan "where the historical and cultural context is different" are also included.

—Viveka Neveln, Assistant Editor

# **REGIONAL HAPPENINGS**

# Horticultural Events from Around the Country

#### **NORTHEAST**

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

FEB. 5-MAR. 3. **Camellia Blooming Days.** Lyman Estate. Waltham, Massachusetts. (781) 891-4882. *www.HistoricNew England.org.* 

**RAP** FEB. 10. Lunar New Year Celebration and Flower Market. Brooklyn Botanic Garden. Brooklyn, New York. (718) 623-7200. www.bbg.org.

**AHS** FEB. 22–25. **Rhode Island Spring Flower & Garden Show.** Providence, Rhode Island. (401) 272-0980. www.flowershow.com.

**RAP** FEB. 28. **Defiant Gardens: Making Gardens in Wartime.** Lecture. Wave Hill. Bronx, New York. (718) 549-3200. www.wavehill.org.

#### Looking ahead

MAR. 15–18. **GardenScape: Drama in the Garden.** Flower and garden show. Garden-Scape Professionals Association. Rochester, New York. (585) 265-9018. www.gardenscapepros.com. Events sponsored by or including official participation by AHS or AHS staff members are identified with the *AHS* symbol.

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

#### MID-ATLANTIC

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

JAN. 20–MAR. 31. **Welcome Spring.** Greenhouse display. Longwood Gardens. Kennett Square, Pennsylvania. (610) 388-1000. www.longwoodgardens.org.

JAN. 27. **2nd Annual Washington Seed Exchange.** *Washington Gardener* magazine and U.S. National Arboretum. (202) 245-2726. *www.usna.usda.gov.* 

JAN. 28–FEB. 2. **Mid-Atlantic Horticultural Short Course.** Virginia Horticultural Foundation. Virginia Beach, Virginia. (757) 523-4734. *www.mahsc.org.* 

FEB. 3. **C.L. Morton Lecture: Raising Dahlias.** Monticello. Charlottesville, Virginia. (434) 984-7500. *www.monticello.org.* 

FEB. 8. Flower Confidential: The Good, the Bad, and the Beautiful in the Business of Flowers. Lecture. United States Botanic Garden. Washington, D.C. (202) 225-1116. www.usbg.gov.

FEB. 9. **Conifer Identification.** Workshop. Scott Arboretum, Swarthmore College. Swarthmore, Pennsylvania. (610) 328-8023. *www.scottarboretum.org.* 

**RAP** FEB. 23. **Green Matters Symposium:** Trees, Urban-ReLeaf. Brookside Gardens. Wheaton, Maryland. (301) 962-1400. www.brooksidegardens.org.

**RAP** FEB. 24. EcoSavvy Gardening Symposium: Techniques for Keeping Our Planet Healthy. Green Spring Master Gardeners. Alexandria, Virginia.

# Mount Auburn Turns 175

MOUNT AUBURN CEMETERY, which was founded in 1831 as America's first "rural" landscaped cemetery, is celebrating its 175th anniversary through September 2007. A wide range of special events will commemorate this extraordinary arboretum, museum, and active cemetery, which is a designated National Historic Landmark. From guided tours and musical recitals to historical and educational lectures, the year-long program is expected to draw far more than the average 200,000 visitors per year. Many of the events relate to notable persons buried or memorialized within the grounds, such as botanist Asa Gray and poet Henry Wadsworth Longfellow.



A view of Consecration Dell at Mount Auburn Cemetery

The cemetery, located just outside Boston, opened in order to provide a serene location for interments and solace to families of the departed as well as establish a setting of landscaping and horticultural significance. Within the 175 acres of grounds is an arboretum that includes 5,300 trees representing 630 varieties. The grounds are open every day of the year, so visitors can experience the beauty of New England's distinctive seasonal changes in the carefully managed yet naturalistic landscape. (For more on the cemetery, turn to page 42 for the Q & A with David Barnett, Mount Auburn's vice president of horticulture and operations).

While the entire celebration is sponsored by the Friends of Mount Auburn, additional anniversary-related events are also taking place at the Boston Public Library, Harvard University, and Vose Galleries on Newbury Street. For a complete list of events, registration, and more information, call (617) 547-7105 or visit www.mountauburn.org.

—Heather Robbins, Editorial Intern

(703) 642-5173. www.greenspring.org.

Looking ahead

AHS MAR. 4-11. Philadelphia Flower Show: "Legends of Ireland." Pennsylvania Horticultural Society. Philadelphia, Pennsylvania. (215) 988-8800. www.theflowershow.com.

AHS MAR. 8-11. Washington Home & Garden Show. Washington, D.C. (703) 823-7960. www.washingtonhomeandgarden show.com.

MAR. 9. Longwood Graduate Program Annual Symposium: Technology's Influence on the Interpretive Experience. Longwood Gardens. Kennett Square, Pennsylvania. (302) 831-2517. www.udel.edu/longwood.

MAR. 10. Mosses and Liverworts. Class. Brookside Gardens. Wheaton, Maryland. (301) 962-1400. www.brooksidegardens.org.

MAR. 10. Residential Landscape Workshop. Master Gardeners of Charles County. LaPlata, Maryland. (301) 934-5403 or (301) 753-8195.

#### SOUTHEAST

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

AHS JAN. 25–28. Atlanta Garden & Patio **Show.** Atlanta, Georgia. (770) 798-1987. www.atlantahomeshow.com.

FEB. 1-3. Gulf States Horticultural Expo. Alabama Nursery & Landscape Association and Mississippi Nursery & Landscape Association, Inc. Mobile, Alabama. (334) 502-7777. www.gshe.org.

**RAP** FEB. 3. Perennial Plant Symposium and Silent Auction. Atlanta Botanical Garden. Atlanta, Georgia. (404) 876-5859. www.atlantabotanicalgarden.org.

AHS FEB. 7–11. Southeastern Flower Show. Atlanta, Georgia. (404) 351-1074. www.flowershow.org.

FEB. 10. Camellia Show & Plant Sale. Lakeland Camellia Society. Lakeland, Florida. (863) 640-3381.

**RAP** FEB. 17. Arbor Day Celebration. Crosby Arboretum. Picayune, Mississippi. (601) 799-2311. www.crosbyarboretum. mssatate.edu.

FEB. 23 & 24. A Violet Paradise: Annual Show and Sale. Tampa African Violet Society. Valrico, Florida. (813) 989-2934 or (813) 681-1910.

**RAP** FEB. 24. Winter Pruning Workshop. State Botanical Garden of Georgia. Athens, Georgia. (706) 542-1244. www.uga.edu/botgarden.

#### Winter Garden Classes

THIS IS THE time of year when gardeners get restless: We have eagerly perused the seed catalogs, stocked up on garden materials, and are ticking off every minute as longer days reach toward spring. To quell the impatience—and gather a few good ideas for the new season—why not take a horticultural class? Check www.ahs.org for the list of Reciprocal Admissions Program participants and updates on events near you. Here are samples of classes to choose from:

The Horticulture Department at Cornell University in Ithaca, New York, will be running a series of innovative online courses for the sixth year. "Plant Propagation" will run March 5 to April 29 and "Organic Gardening" is scheduled for May 1 to June 24. The courses incorporate instruction, labs, and discussion while emphasizing the importance of hands-on gardening for participants. Courses are appropriate to gardeners of all skill levels from anywhere in the country. A certificate of completion is granted at the end of the instruction period. To register, visit www.cce.cornell.edu/hortdl. For more information, call (607) 255-9911.

The Minnesota Landscape Arboretum in Chaska features a variety of classes on horticultural themes in its Arboretum Gardening School. Each seasonally appropriate series runs for four consecutive Saturdays. Attendees receive Professional Development Hours,



A variety of classes are offered year round at the Minnesota Landscape Arboretum.

which may be applied toward a certificate of completion, though classes are geared toward gardeners of all experience and involvement. The Gardening School's March series is on planning a garden and will include classes on basic garden designs, ornamental grasses, perennials, and gardening in the shade. To view the schedule of 2007 classes or register, call (952) 443-1422 or visit www.arboretum.umn.edu.

Tucson Botanical Gardens offers classes on a monthly basis as well as one-time special topics. Monthly classes include "Gardening for the Newcomer," "Xeriscape Doesn't Mean Zeroscape," and "Successful Plants for

Tucson Gardens." The class "Container Gardening 101: Science" will occur on February 17, followed by "Container Gardening 201: Art" on February 24. Other classes cover issues relating to conservation, wildlife, flower arranging, and crafts. To register, call (520) 326-9686. For more information, visit www.tucsonbotanical.org.

—Heather Robbins, Editorial Intern

#### Looking ahead

MAR. 1-4. Nashville Lawn & Garden Show. Nashville, Tennessee. (615) 876-7680. www.nashvillelawnandgardenshow.com.

MAR. 2 & 3. Hellebore Days. Piccadilly Farm. Watkinsville, Georgia. (706) 769-6516.

MAR. 2-4. Miami International Orchid Show. South Florida Orchid Society. Miami, Florida. (305) 255-3656. www.southflorida orchidsociety.org.

MAR. 5 & 6. Davidson Horticultural Symposium. Davidson. North Carolina. (704) 892-6281. www.davidson symposium.org.

MAR. 9-11. Antique and Garden Show.

Blue Grass Trust for Historic Preservation. Lexington, Kentucky. (859) 253-0362. www.bluegrasstrust.org.

MAR. 14-16. World Floral Expo. Miami, Florida. (305) 969-3301. www.worldfloralexpo.com.

#### NORTH CENTRAL

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

**RAP** THROUGH MAR. 18. Living Glass. Conservatory exhibit. Olbrich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. www.olbrich.org.

JAN. 27 & 28. Orchid Show. Grand Valley Orchid Society. Frederik Meijer Gardens & Sculpture Park. Grand Rapids, Michigan. (888) 957-1580. www.meijergardens.org.

FEB. 3–11. National City Home & Garden Show: "The Beauty of Ireland" and "The Green Building Movement." Cleveland, Ohio. (800) 600-0307. www.homeand flower.com.

**RAP** FEB. 23. Woody Plant Symposium: What's Happening Underground? Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. www.chicagobotanic.org.

#### Looking ahead

AHS MAR. 10–18. Indiana Flower & Patio Show: "Gardens Gone Wild!" Indianapolis, Indiana. (317) 927-7500. www.indiana statefair.com.

MAR. 31 & APR. 28. School Garden Symposium 2007: Sowing the Seeds of Success. Cleveland Botanical Garden, Cleveland. (216) 721-1600 ext. 143. www.cbgarden.org.

#### **SOUTH CENTRAL**

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

FEB. 17. Lawn & Garden Seminar and Show. Jefferson County Master Gardeners. Pine Bluff, Arkansas. (870) 534-1033.

**AHS** FEB. 28–MAR. 4. **Wichita Garden Show.** Wichita, Kansas. (316) 946-0883. *www.wichitagardenshow.com.* 

**RAP** MAR. 3 & 4. **Bonsai and Daffodil Shows.** Bonsai Society of Dallas and Texas Daffodil Society. Dallas Arboretum. Dallas, Texas. (214) 515-6700. *www.dallas arboretum.org.* 

**AHS** MAR. 3–5. **Arkansas Flower & Garden Show.** Little Rock, Arkansas. (800) 459-SHOW. *www.arflowerandgardenshow.org.* 

#### Looking ahead

MAR. 17–31. **Nacogdoches Azalea Trail.** Symposium, exhibit, plant sale, and blooms. Nacogdoches, Texas. (888) OLDEST-TOWN. *www.visitnacogdoches.org.* 

#### SOUTHWEST

AZ, NM, CO, UT

**RAP** FEB. 20. Botanical Discovery in the Age of Exploration: How Linnaeus Shaped the World's View of Plants. Lecture. Denver Botanic Gardens. Denver, Colorado. (720) 865-3500. www.botanicgardens.org.

#### Looking ahead

MAR. 8. Scents and Senses: Gardens of Fragrance. Lecture. Denver Botanic Gardens. Denver, Colorado. (720) 865-3500. www.botanicgardens.org.

MAR. 8 & 9. **Xeriscape Conference.** Xeriscape Council of New Mexico. Albuquerque, New Mexico. (505) 468-1021. www.xeriscapenm.com.

#### **WEST COAST**

CA. NV. HI

**RAP** JAN. 27 & 28. Southern California Camellia Society Show/Sale. Descanso Gardens. La Cañada Flintridge, California. (818) 949-7984. www.DescansoGardens.org.

AHS FEB. 23–25. Peninsula Spring Home & Garden Show. San Mateo, California. (800) 321-1215. www.peninsulahomeshow.com.

#### Looking ahead

MAR. 5–9. **Sudden Oak Death Symposium III.** USDA Forest Service, California Oak Mortality Task Force, UC Integrated Hardwood Range Management Program. Santa Rosa, California. (510) 559-6472. http://nature.berkeley.edu/comtf/sodsymposium.

MAR. 14. Attracting Birds and Butterflies. Lecture. The Urban Garden at Walt Disney Concert Hall. Los Angeles, California. (213) 972-3335. www.musiccenter.org.

MAR. 16–18. **Santa Barbara International Orchid Show.** Santa Barbara, California. (805) 886.0390. *www.sborchidshow.com.* 

AHS MAR. 21–25. San Francisco Flower & Garden Show. San Francisco, California. (415) 771-6909. www.gardenshow.com/sf.

#### NORTHWEST

AK, ID, MT, OR, WA, WY

**AHS** JAN. 31–FEB. 4. **Tacoma Home & Garden Show.** Tacoma, Washington. (253) 751-2121. www.tacomahomeandgarden show.com.

**AHS** FEB. 14–18. **Northwest Flower & Garden Show.** Seattle, Washington. (206) 789-5333. *www.gardenshownw.com.* 

FEB. 21–25. **Portland Home & Garden Show.** Portland, Oregon. (503) 246-8291. *www.oloughlintradeshows.com.* 

#### Looking ahead

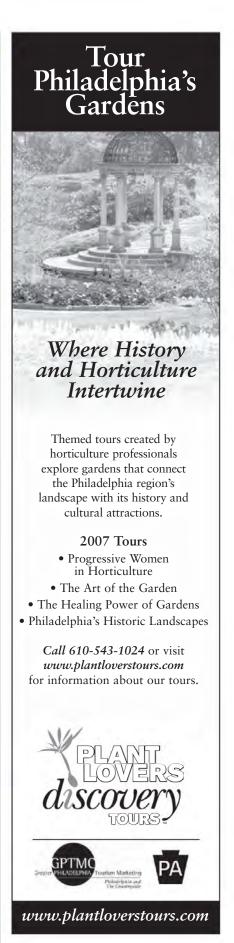
MAR. 14. **The Plant Hunter's Garden.** Lecture. Northwest Horticultural Society. Seattle, Washington. (206) 527-1794. www.northwesthort.org.

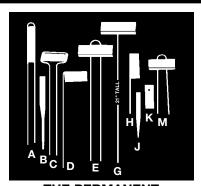
#### CANADA

FEB. 15. **Growing Perennials from Seed.** Class. The Arboretum, University of Guelph. Guelph, Ontario. (519) 824-4120. www.uoguelph.ca/arboretum.

MAR. 8. **An Ecological Vegetable Garden.**Class. The Arboretum, University of Guelph.
Guelph, Ontario. (519) 824-4120.

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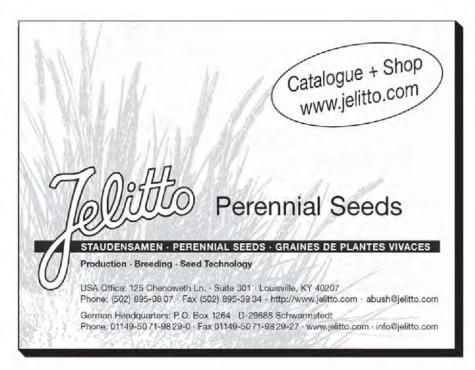
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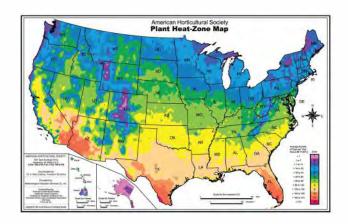


#### PRONUNCIATIONS AND PLANTING ZONES

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

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

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



#### A-C

Acer capillipes AY-ser kuh-PIL-ih-pees (USDA 5-7, AHS 7-5)

Acer pensylvanicum AY-ser pen-sil-VAN-ihkum (3-7, 7-1)

Aeonium arboreum ee-O-nee-um ar-BOR-eeum (9-11, 12-7)

Agastache cana ah-guh-STAH-she KAN-uh (6-11, 12-1)

Amelanchier canadensis am-eh-LANG-kee-ur kan-uh-DEN-siss (3-7, 7-1)

Aronia melanocarpa uh-RO-nee-uh mel-an-o-KAR-puh (3-8, 8-1)

Baptisia australis bap-TIZ-yuh aw-STRAY-liss (3-9, 9-1)

Camellia japonica kuh-MEEL-yuh jah-PONih-kuh (7–8, 8–7)

Camellia sasanqua kuh-MEEL-yuh sah-SAHNG-kwuh (7-9, 9-6)

Carnegiea gigantea kar-NAY-gee-uh jy-gan-TEE-uh (11,12–10)

Cercis canadensis SUR-siss kan-uh-DENsiss (4-9, 9-2)

Clethra alnifolia KLETH-ruh al-nih-FO-lee-uh (3-9, 9-1)

Coreopsis grandiflora kor-ee-OP-sis gran-dih-FLOR-uh (3-9, 9-3)

Coriandrum sativum kor-ee-AN-drum sah-TY-vum (0-0, 10-1)

Cornus florida KOR-nus FLOR-ih-duh (5-8, 8-3)

#### D-K

Deutzia gracilis DOYT-see-uh GRUH-sih-liss (5-8, 8-5)

Digitalis purpurea dih-jih-TAL-iss pur-PURee-uh (4-8, 8-1)

Edgeworthia chrysantha edj-WORTH-ee-uh krih-SAN-thuh (7-9, 11-3)

Fagus sylvatica FAY-gus sil-VAT-ih-kuh (4-7, 9-4)

Ferocactus stainesii fer-o-KAK-tus STAINS-ee-eye (8-11, 12-7)

Fraxinus excelsior frak-SIH-nus ek-SEL-seeor (5-8, 8-5)

Harpochloa falx har-po-KLO-uh FALX (6-8, 8-6)

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

Hydrangea macrophylla hy-DRAN-juh mak-ro-FIL-luh (6-9, 9-6)

Hydrangea paniculata hy-DRAN-juh pan-ik-vew-LAY-tuh (3-8, 8-1)

Ilex aquifolium EYE-leks ah-kwi-FO-lee-um (7-9, 9-7)

Ilex vomitoria EYE-leks vom-ih-TOR-ee-uh (7-11, 12-7)

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

Kolkwitzia amabilis kol-KWIT-zee-uh uh-MAB-uh-liss (4-9, 9-4)

#### L-S

Larix decidua LAY-riks deh-SID-yew-uh (3-7, 7-1)

Lithocarpus densiflorus lih-tho-KAR-pus dens-ih-FLOR-us (8-10, 10-8)

Lupinus arboreus Ioo-PYE-nus ar-BOR-ee-us (8-9, 9-8)

Magnolia grandiflora mag-NOLE-yuh gran-dih-FLOR-uh (7-9, 10-7)

Magnolia kobus mag-NOLE-yuh KO-bus (5-9, 9-5)

Magnolia stellata mag-NOLE-yuh stel-LAY-tuh (4-9, 9-1)

Mahonia bealei mah-HO-nee-uh BEEL-eeeve (5-8, 8-3)

Michelia figo my-KEE-lee-uh FEE-go (10-11, 12-10)

Penstemon cardinalis PEN-steh-mon kar-dih-NAL-iss (5-9, 9-5)

Perovskia atriplicifolia peh-ROF-skee-uh at-rih-plih-sih-FO-lee-uh (5-9, 9-2)

Pieris floribunda PY-er-iss flor-ih-BUN-duh (5-8, 8-4)

Pieris japonica PY-er-iss jah-PON-ih-kuh (5-8, 9-6)

Polemonium caeruleum pahl-eh-MO-nee-um see-ROO-lee-um (4-8, 8-3)

Prunus cerasifera PREW-nus sair-uh-SIF-uruh (4-9, 9-1)

Scaevola aemula SKEE-vo-luh EE-mew-luh (11, 12-1)

Schizachyrium scoparium skits-ah-KEER-eeum sko-PAR-ee-um (3-9, 9-1)

Stachyurus praecox stah-kee-YEW-rus PREE-cox (7–9, 9–7)

#### T-Z

Taxodium distichum taks-O-dee-um DIS-tih-kum (5-11, 12-5)

Taxodium distichum var. nutans

taks-O-dee-um DIS-tih-kum var. NOO-tanz (5-11, 12-5)

Viburnum × burkwoodii vy-BER-num burk-WOOD-ee-eye (5-8, 8-1)

Viburnum carlesii vy-BER-num kar-LEEZ-ee-eye (5-8, 8-5)

Viburnum macrocephalum vy-BER-num mak-ro-SEF-uh-lum (7-9, 9-7)

Viburnum rhytidophyllum vy-BER-num ry-tih-doh-FIL-um (6-8, 8-6)



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