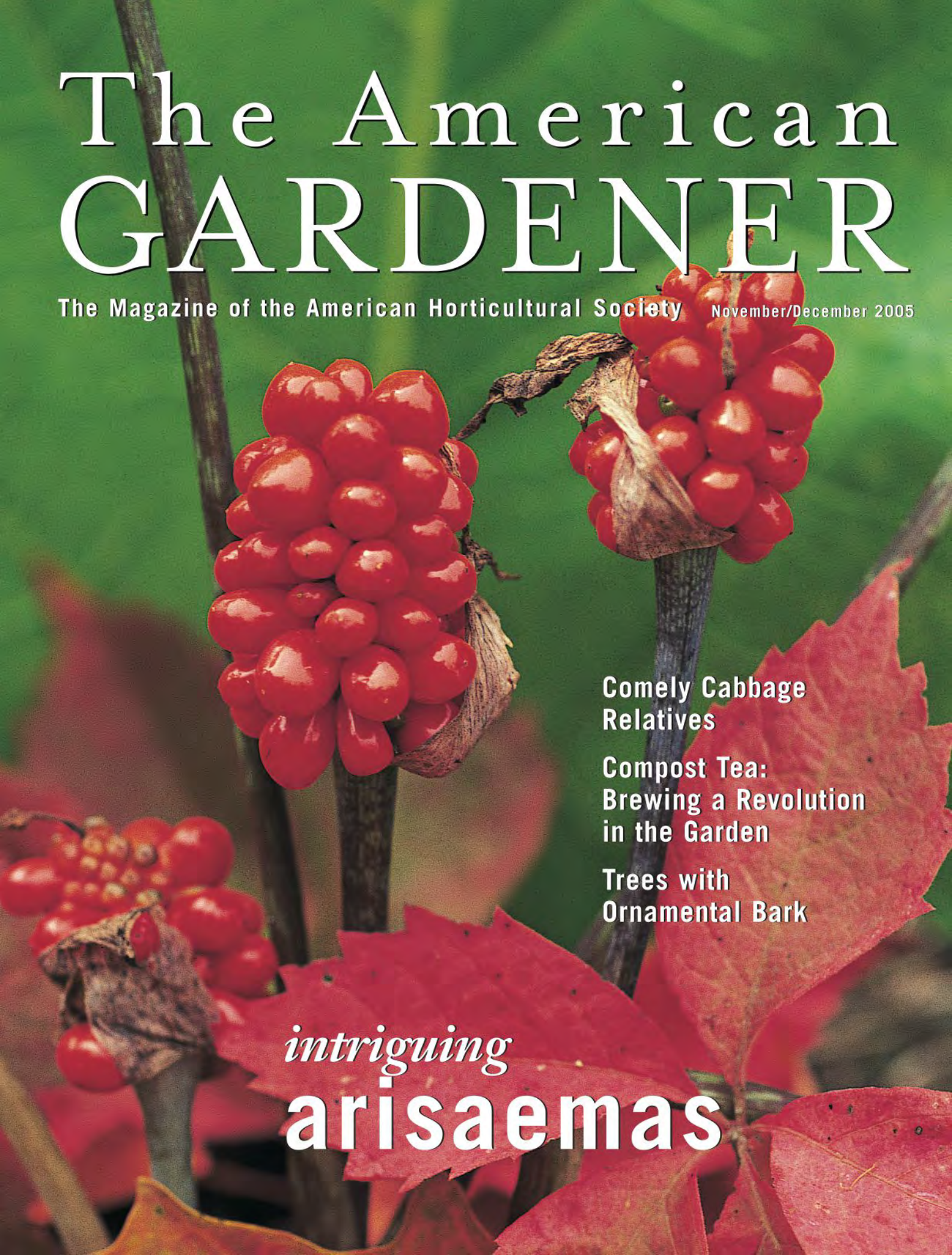

The American GARDENER

The Magazine of the American Horticultural Society November/December 2005

Comely Cabbage Relatives

Compost Tea: Brewing a Revolution in the Garden

Trees with Ornamental Bark

intriguing
arisaemas

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contents

Volume 84, Number 6 · November / December 2005

FEATURES

ON THE COVER: The bright red fruits of common Jack in the pulpit *(Arisaema triphyllum)* provide interest in the fall and winter garden. Photograph by David Cavagnaro

LEFT: MARK TURNER; RIGHT: COURTESY OF AMERICA IN BLOOM

DEPARTMENTS

AMERICAN HORTICULTURAL SOCIETY

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Making America a Nation of Gardeners, a Land of Gardens

The 2005 member passwood for the AHS Web site *(www.ahs.org)* is **blooms**.

The American
GARDENER

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NOTES FROM RIVER FARM

As we wind down this year and look to the next, I took a little time to reflect on the many challenges faced, tasks well met, and plans for the future.

It has been a tough year overall. Nationally, we faced tragedy from Hurricane Katrina, and each of us in our own way reached out to help. Globally, we continued to see suffering from the ravages of both war and natural disasters, and, again, we sought individual ways to make a difference. Personally, I experienced great sadness this year with the loss of my father. It was sometimes difficult to find a silver lining among the dark clouds.

And then I reflect on what we are doing at the American Horticultural Society. When Dr. Marc Cathey retired this past summer, he left the AHS with a significant legacy relating to the power of plants in our lives. He frequently reminded us, "Green is the color of hope." I often come back to this very simple and inspirational thought. And I am encouraged that the work we do at the AHS to educate and inspire people of all ages to garden, to appreciate plants, to grow food, to value big trees, to cherish natural environments, and add beauty in their communities, is critically important, especially in tough times.

And so, at the AHS, we continue to strengthen our educational programs nationally, expand our partnerships with those who help gardeners be successful, and inspire our AHS members to treasure all that is green. In addition, we continue to ask AHS members to support gardening programs for youth and help us preserve the national treasure that is George Washington's River Farm.

Our many successes this year are encouraging harbingers for the future. Through the National Children & Youth Garden Symposium, the River Farm Intern Program, and *The Growing Connection* we have established strong programs to support the connections between young people and plants. The AHS Garden Schools, Reciprocal Admissions Program to public gardens, and the AHS Awards Program shine a spotlight on horticultural excellence and offer every one of us an opportunity to participate in great gardening and expand our knowledge.

And the Eastern Performance Trials, held for the first time this year, provided a chance for AHS to work closely with the American green industry. The displays of new introductions at River Farm and five other Mid-Atlantic sites showcased the companies that bring us exciting new plants each year so that we will continue to find pleasure and solace in gardening. (See page 14 for more about EPT.)

Over this past year, I have become acutely aware of the importance in my life of flowers and house plants, trees, and beautiful gardens. So with renewed energy I ask each of you to join me in supporting the power of plants and gardens to make the world a better place. Together, through the AHS, we can truly show that green is the color of hope!

My very best wishes to all for a joyful holiday season!

—Katy Moss Warner, *AHS President*

MEMBERS' FORUM

COMPOSTING CONCERN

I would like to share a few observations regarding your "One on One" interview with Elaine Ingham (July/August 2005).

Composting facilities across the country have increased in number and are serving as an important influence on the general public to use compost instead of the "chemical way" to promote growth of plants, modify tired or dead soil, and repair construction damage to soil structure around new housing developments.

However, commercial composters—especially in urban areas of the Northeast—are usually limited to grass clippings and leaves in their choice of organic materials. To produce compost, most facilities rely on the "windrow technique," which is not an exact science. Limited choices of organic materials and equipment constrain facilities from producing the standard of compost described in the interview.

Many of the ingredients used to create the compost teas Ingham recommends are also not readily available to the average homeowner. A more practical approach is to encourage homeowners to use the more limited resources they have at hand to put Ingham's scientific knowledge into practice.

Robert H. Cooper, Jr.
Horticultural Consultant
Williamstown, New Jersey

MORE WANTED ON FALL CLEANUP

The article "Fall Cleanup Reconsidered" (September/October 2005) is one of the most significant articles that you have published. It not only provides new and thought-provoking ideas for garden maintenance, it shows a whole new way of thinking. I have followed the technique of using mower-chopped leaves in beds for years, with the remainder going in the compost pile for later use in the vegetable garden. I also share the author's disdain of leaf blowers.

However, it begs for a follow-up article from the same author covering more details on just how much to cut back certain perennials in the fall, and when they should be cut to the ground.

David Messer
Royersford, Pennsylvania

CORRECTION

In the YGS 2005 article in the September/October issue, Atlanta Botanical Garden Executive Director Mary Pat Matheson's name was incorrectly spelled. We apologize for the error.

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

AMERICAN HORTICULTURAL SOCIETY

Immerse yourself in the intricacies of gardening with native plants, color in the garden, and garden photography at these three exclusive AHS Garden School offerings.

the AHS Garden Schools *for* 2006

Through a variety of presentations, demonstrations, and specially planned activities, participants will learn practical tips and techniques for mastering the effective use of native plants, color in the landscape, or the art of capturing the garden through photography. Avid garden enthusiasts and horticultural professionals alike will benefit from these inspirational and informative two-day program workshops.

The AHS Garden Schools offer a truly unique environment for life-long learning—intimate, in-depth workshops featuring personal instruction from noted garden authorities; opportunities for practical application and hands-on experiences; and outstanding settings.

Visit *www.ahs.org* or call (703) 768-5700 ext. 121 for more information on these exciting events.

Franklin Park Conservatory in Columbus, Ohio, site for "The Art & Science of Color in the Garden" workshop, May 11 and 12, 2006

April 6 & 7, 2006

Gardening with Native Plants

AHS Headquarters at River Farm, Alexandria, Virginia

Discover new plants, awaken your creativity, and surround yourself in the rich world of native plants with "Gardening with Native Plants" at a truly inspirational setting —the Society's River Farm headquarters overlooking the beautiful Potomac River.

Featuring guest horticulturist **Carole Ottesen,** author of the *Native Plant Primer: Trees, Shrubs and Wildflowers for Natural Gardens,* and a special evening with **Rick Darke,** author of *The American Woodland Garden.*

CAROLE OTTESEN

May 11 & 12, 2006

The Art & Science of Color in the Garden

Franklin Park Conservatory, Columbus, Ohio

Sharpen your skills, recharge your creativity, and immerse yourself in the intricacies of color in the garden with "The Art & Science of Color in the Garden" at Franklin Park Conservatory, one of North America's notable glass conservatories.

Featuring guest horticulturist **Heather Will-Browne** of the Walt Disney World Resort in Florida and a special evening with **Julie Moir Messervy,** landscape designer.

HEATHER WILL-BROWNE

October 26 & 27, 2006

The Art & Science of Garden Photography

Lady Bird Johnson Wildflower Center, Austin, Texas

Look at the garden through a new lens, heighten your ability to capture the garden and gain a greater appreciation for the surrounding landscape with "The Art & Science of Garden Photography" amid the stunning landscape of the Lady Bird Johnson Wildflower Center.

Featuring guest horticulturist **Robert Bowden** of Orlando's Harry P. Leu Gardens and a special evening with **Van Chaplin,** garden photographer at *Southern Living* magazine.

ROBERT BOWDEN

News *from AHS*

PROGRAMS • EVENTS • ANNOUNCEMENTS

September/October 2005

A Successful and Colorful 2005 AHS Gala

THE AHS HOSTED its annual gala on Saturday, September 24, a day that coincided with the finale of the weeklong Eastern Performance Trials (EPT). (For more about the trials at River Farm, see the article beginning on page 14.) Guests were welcomed to River Farm first by the AHS's restored White House gates, which were featured prominently near the estate house, and next by the redesigned pathway in front of the house, colorfully accented by the annuals, perennials, and shrubs in the Proven Winners display.

The gardens behind the house attracted further attention as guests enjoyed a pleasant stroll between borders, beds, and displays filled with beautiful plants from EPT participants Goldsmith Seeds, Centerton Nursery, and Saunders Brothers.

Left: Gala Chairman Skipp Calvert and AHS President Katy Moss Warner, right, greet arriving guests. Above: Later in the evening, Gala Honorary Chairperson Susan Allen helps with the live auction.

"We were delighted to share our own colorful garden and the featured display gardens of the companies from the EPT with distinguished guests and friends of the Society," says AHS President **Katy Moss Warner.** "We hope that River Farm will be a destination for festive gardens and festive gardeners year round."

In keeping with the gala's theme, *Festa di Colori e Giardini,* Gala Chairman **Skipp Calvert** made his opening remarks in Italian before transitioning into his thanks to everyone who made the event such a success. These included Gala Honorary Host **Sergio Vento,** the Italian Ambassador to the United States, who was unable to attend but was represented by Embassy Official **Stephanie Stefanini** and her husband Stefani.

Later, Skipp successfully auctioned the purple vest and bow tie that **Dr. H. Marc Cathey** had worn to the gala, eliciting enthusiastic cheers and laughter from the guests. Gala Honorary Chairperson **Susan Allen,** wife of Virginia Senator **George Allen,** also took a turn as auctioneer, and bidding for many other live and silent auction items rounded out the beautiful fall evening.

New AHS Board Members

THREE NEW MEMBERS have been elected to the AHS Board of Directors: **J. Landon Reeve IV, Carole Hofley,** and **Daryl Williams.** All three share a common commitment to and passion for gardening, and have championed such causes as conservation, holding the green industry to a higher standard, and providing superior horticultural products and services.

J. Landon Reeve of Woodbine, Maryland, founded Chapel Valley Landscape Company in 1968. A full-service landscape services company operating primarily in the Washington, D.C., and Baltimore, Maryland, metropolitan region, Chapel Valley's many high-profile projects have included the Inner Harbor Complex in Baltimore and the Vietnam Veteran's Memorial in Washington, D.C.

Carole Hofley of Wilson, Wyoming, is a dedicated conservationist with 10 years volunteer experience with such groups as the Jackson Hole Land Trust Board, the Murie Center, and the Jackson Hole Historical Society and Museum Board. She is an active partner in the Wyoming Wetlands Society for the protection of the trumpeter swan in the Greater Yellowstone Ecosystem.

Daryl Williams runs DD Construction Services, Inc., near Orlando, Florida, with his son Darand. Together, Daryl and Darand match their high-quality landscape designs with uniquely personalized service. DD Construction has been involved with many major landscaping projects, including currently the renovation of Cypress Gardens in Moncks Corner, South Carolina.

COURTESY OF KASSIE BAKER (2)

In Memoriam: Lauralee Peters

Lauralee Peters, a long-time AHS member and volunteer at River Farm, passed away in August. "She was a great friend to the AHS in many ways and will be dearly missed," says AHS President **Katy Moss Warner.** "She generously gave us her late husband's pickup truck for our horticulture staff to use around the grounds, and she helped us reinvent our garden shop at River Farm, among several other projects."

Professionally, Lauralee was a member of the U.S. Foreign Service who held various positions in Pakistan, Vietnam, and Thailand. She also served at the White House on the National Security Staff for Latin America, worked at the State Department on Middle Eastern Affairs, and was appointed the ambassador to Sierra Leone for three years.

Homestead Gardens is New Corporate Partner

THE AHS is pleased to announce a new corporate partnership with Homestead Gardens. Owned by **Don Riddle,** second vice chair of the AHS Board of Directors, Homestead is an independent garden center based in Davidsonville, Maryland.

Homestead offers a wide selection of plants from annuals to trees as well as garden accessories, landscaping services, and floral design. Over the last few years, Homestead had regularly donated thousands of bedding plants for River Farm's gardens, as well as supplying new and unusual varieties of poinsettias for the December holidays, and table decorations for the annual gala. To learn more about Homestead, visit *www.homesteadgardens.com.*

Girl Scouts Revitalize River Farm's Children's Gardens

WHILE RIVER FARM geared up for the Eastern Performance Trials, two Alexandria area Girl Scouts pursued quieter yet equally determined projects to improve two areas of the AHS's Children's Gardens.

Katie Staples, working for her Gold Award, made improvements to the Bat Cave, a garden where children can crawl

Girl Scout Katie Staples adds new plants around the Bat Cave at River Farm.

TOP: DAVID ELLIS; BOTTOM: WILLIAM CLATTENBURG

AHS NATIONAL EVENTS AND PROGRAMS

2005–2006 CALENDAR

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

• DEC. 8. **Friends of River Farm Holiday Reception,** George Washington's River Farm, Alexandria, Virginia.

2006

• MAR. 5–12. **Philadelphia Flower Show.** Pennsylvania Convention Center, Philadelphia, Pennsylvania.

• MAR. 13–15. **AHS President's Council Trip.** Palm Springs, California.

• APRIL 1–29. ***Washington Blooms!*** George Washington's River Farm, Alexandria, Virginia.

• APRIL 6 & 7. **AHS Garden School: Gardening with Native Plants.** George Washington's River Farm, Alexandria, Virginia.

• APRIL 21 & 22. **Friends of River Farm Plant Sale.** George Washington's River Farm, Alexandria, Virginia. (Members-only preview sale starts at 5 p.m. on the evening of April 20th).

• APRIL 21–JUNE 11. **Epcot International Flower & Garden Festival.** Orlando, Florida.

• APRIL 30–MAY 3. **Colonial Williamsburg Garden Symposium.** Williamsburg, Virginia.

• MAY 5. **Magic of Landscaping Conference.** Orlando, Florida.

• MAY 11 & 12. **AHS Garden School: The Art & Science of Color in the Garden.** Franklin Park Conservatory, Columbus, Ohio.

• MAY 21. **Friends of River Farm Family Picnic.** George Washington's River Farm, Alexandria, Virginia.

• JUNE 1. **Taste of River Farm.** George Washington's River Farm. Alexandria, Virginia.

• JUNE 2. **Great American Gardeners Award Ceremony and Banquet.** George Washington's River Farm, Alexandria, Virginia.

• JULY 27–29. **National Children & Youth Garden Symposium.** St. Louis, Missouri. Hosted by the Missouri Botanical Garden.

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

Girl Scout Milica Wren, above right, with the help of her father Michael, above left, built and installed this playhouse in the children's garden.

into a cool and secretive replica of a cave. Katie and her family set to work on the cave's roof layer, which had partly washed away from rain. "We replaced the wood around the top so the dirt will actually stay on," Katie explains.

AHS Horticulturist **Peggy Bowers** helped Katie select new plants to use around the cave. "Before, the only plants were butterfly bushes and river oats, and they were taking over everything," says Katie. "We replaced them with plants that are fun and decorative."

Located diagonally across from the Bat Cave, the Little House on the Prairie Garden received a major boost when Girl Scout **Milica Wren** and her father, **Michael Wren,** collaborated to build a new cedar-shingled playhouse. "I started working on the new house after we had the hurricane [Isabelle] that ruined the old house," says Milica, who was also working on her Gold Award. When the new house was completed this summer, Milica, her family, and friends all helped to install it at River Farm.

Gifts for Gardeners at *www.ahs.org*

When you're looking for the perfect gift for your gardening friends or maybe a special treat for yourself, just go to the AHS Web site at *www.ahs.org* and click on the link to the AHS Marketplace. Here you'll find everything from tools and books to birdhouses and plants. Through affiliations with businesses such as **Gardener's Supply Company** and **Garden Artisans,** the AHS can offer one-stop shopping for a gardener's every need. A part of the proceeds go to support our national educational programs and, best of all, AHS members may receive special discounts. Log on to the Members Only area to see available offers.

VIVEKA NEVELN

Nancy Hill Retires After 30 Years

THIS PAST OCTOBER, the AHS staff bid farewell to **Nancy Hill,** one of our membership services representatives, as she retired after more than 30 years at the AHS. Over the years, Nancy interacted with thousands of members on the phone and by mail and e-mail. She introduced new members to the benefits of joining the AHS, helped existing members with questions about the organization, and quietly played an important behind-the-scenes role in the membership department. "There were a few people who would call me every year to renew their membership," says Nancy. "They would ask for me specifically, and I'm glad I could be there for them all those years."

"Nancy was so great at making our members feel welcome and taken care of," says AHS President **Katy Moss Warner.** "She also was a treasure trove of historical information about the AHS."

Nancy started work at River Farm in 1974, just after the Enid Haupt Foundation generously donated the site to the AHS for its headquarters. Although she has seen many improvements to the grounds and offices since then, she says, "I still miss my typewriter!" In addition to member services, Nancy has worked in almost every department and building at River Farm as her role at the AHS changed over the years.

In addition to traveling and spending time with family and friends, Nancy plans to return to River Farm on occasion as a volunteer.

News written by Assistant Editor Viveka Neveln and Editorial Intern William Clattenburg.

Wildlife at River Farm in New Book

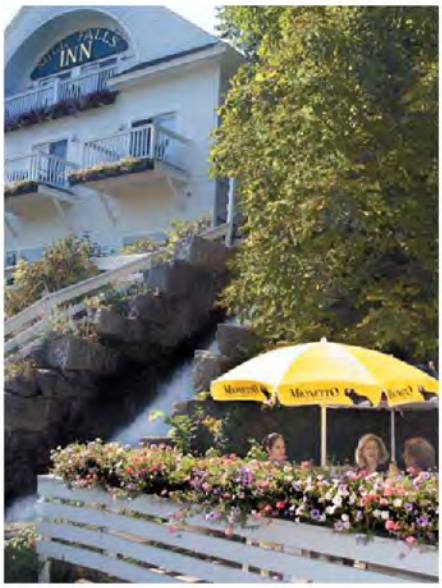
A fox kit at River Farm appears in a new wildlife book.

A variety of wildlife call River Farm home, such as colorful butterflies, a family of foxes, many songbirds, a turkey, and even a few bald eagles. You can meet some of these creatures in *Wild Washington: Amazing Wildlife In and Around Our Nation's Capital,* a new book by photographer **Don Chernoff**. "Many people think they have to travel to faraway places to see wildlife," says Don, "but this book shows that nature is really all around us—even in big cities like Washington."

Copies are available for $19.95 and may be ordered by calling (703) 849-1492 or through Don's Web site at *www.dcwild.com.* Many of the 172 photographs in the book are available as prints as well.

AHS NEWS SPECIAL: America In Bloom's 2005 Award Winners

by William Clattenburg



This year's award-winning communities include, left to right: Meredith, New Hampshire; Logan, Ohio; and Riverside, California.

CATAPULTING OFF last year's success, **America in Bloom** (AIB), a non-profit organization and an AHS horticultural partner, honored nearly 50 of America's greenest, most revitalized communities. This year's AIB Symposium and Awards Progam was held in Cleveland but hosted by all of northern Ohio from September 8 to 10. The hard work of AIB judges helped to single out 16 communities for particular achievement grounded on the eight criteria of AIB: floral displays, urban forestry, landscaped areas, turf and ground cover, tidiness, environmental awareness, heritage conservation, and community involvement.

For Meredith, New Hampshire, the road to success began a year ago when **Jodie Herbert** of Meredith in Bloom contacted **Jeanie Forrester,** executive director of the Greater Meredith Program, to tell her about AIB's exciting challenge. Because Meredith already had a substantial improvement program in place, the major task was to synchronize the greening projects. Their efforts paid off, as Meredith won for the 5,001 to 10,000 population category (see sidebar for full list of winners). Jeanie says, "We learned from the evaluation the things we can improve upon—one of which is getting more children involved."

Community members in Logan, Ohio, this year's recipient of the American Horticultural Society Community Involvement award, also benefited from the competition as they worked to make their town into a tidier, more vibrant place. "I've never seen a town so committed," says **Evelyn Allemani,** an AIB judge and symposium speaker. "Last year we gave them a lengthy evaluation and they did everything we said, and the town was transformed." Together, Logan residents accumulated 129,500 hours of community involvement.

Interested communities can register now to enter AIB's 2006 competition by logging onto *www.americainbloom.org* or calling (614) 487-1117.

William Clattenburg is an editorial intern for The American Gardener.

POPULATION CATEGORY AWARD WINNERS

■ 5,000 or less	Lewes, Delaware
■ 5,001–10,000	Meredith, New Hampshire
■ 10,001–15,000	Loveland, Ohio
■ 15,001–20,000	Newburyport, Massachusetts
■ 20,001–50,000	Hudson, Ohio
■ 50,001–100,000	Kettering, Ohio
■ 100,001–300,000	Rockford, Illinois
■ 300,001 and greater	Grand Central Partnership—New York City
■ University Campus	Brigham Young University, Provo, Utah

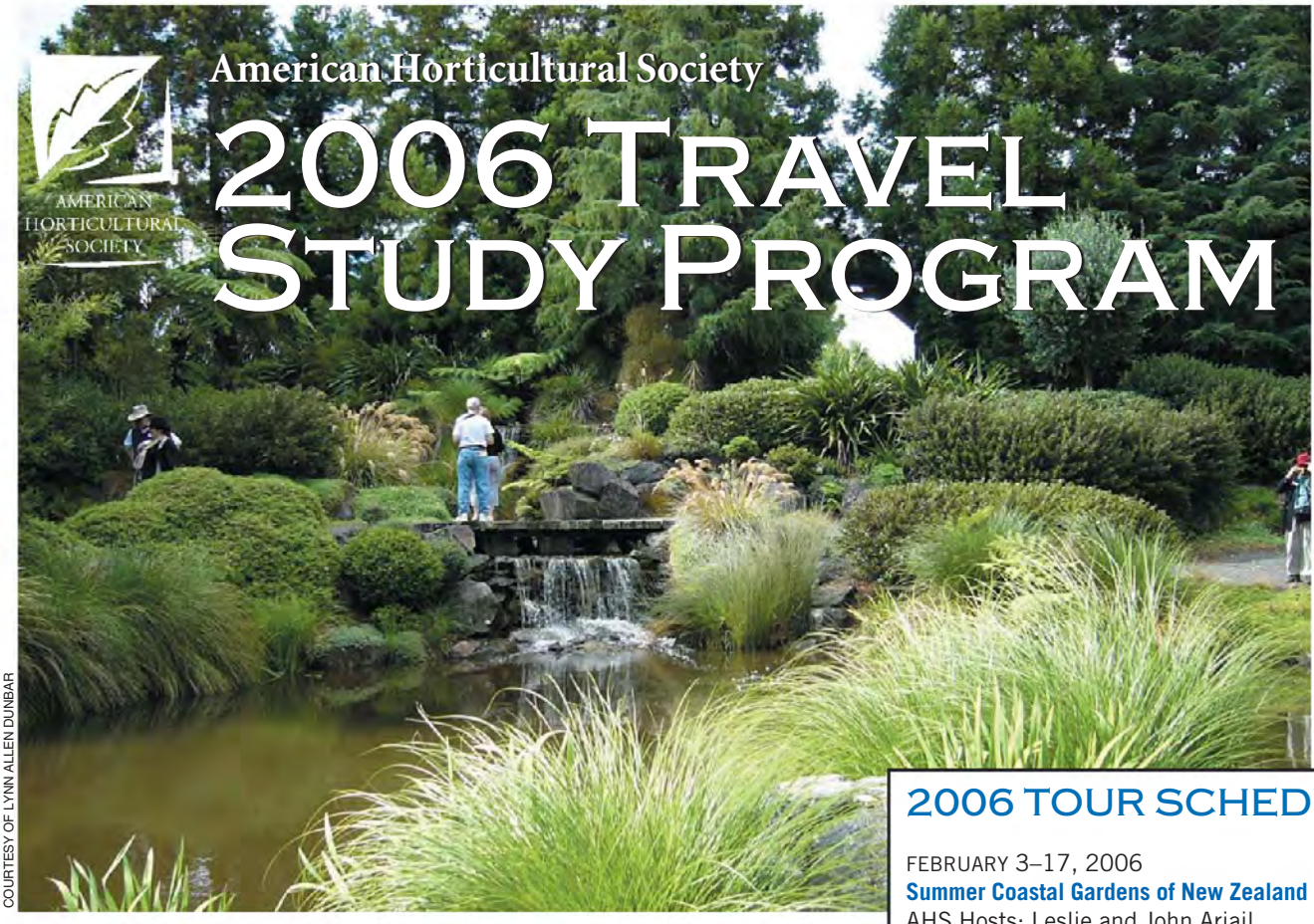
SPECIAL AWARD WINNERS

- Ball Horticultural Co. Floral Displays Award *University of Arkansas at Fort Smith*
- Yoder Brothers Heritage Preservation Award *Eureka Springs, Arkansas*
- Project Evergreen Landscaped Areas Award *Westlake, Ohio*
- American Horticultural Society Community Involvement Award *Logan, Ohio*
- The Scotts Co. Turf & Groundcover Areas Award *Ocala, Florida*
- Gardens Alive! Environmental Awareness Award *St. Paul, Minnesota*
- Planting Pride Magazine Tidiness Award *Bartlett, Tennessee*
- Urban Forestry Award *Riverside, California*

LEFT TO RIGHT: COURTESY OF THE INNS AND SPA AT MILL FALLS; COURTESY OF EVELYN ALEMANNI; COURTESY OF AIB

American Horticultural Society

2006 Travel Study Program



COURTESY OF LYNN ALLEN DUNBAR

Journey with America's premier travel team—AHS and the Leonard Haertter Travel Company—to some of the world's most beautiful destinations. Since 1985, we have offered extraordinary travel study programs to exceptional private and public gardens led by knowledgeable and experienced guides. Exciting opportunities await you this year!

COURTESY OF JESSIE KEITH

2006 TOUR SCHEDULE

FEBRUARY 3–17, 2006
Summer Coastal Gardens of New Zealand
AHS Hosts: Leslie and John Ariail, Susie and Bruce Usrey

MARCH 2–13 **Gardens and Monuments of Sicily**
AHS Host: Kurt Bluemel

MARCH 28–APRIL 11 **Gardens of Chile and Argentina and the Wilderness of Patagonia**
AHS Host: Arabella Dane

MAY 14–23 **Gardens of the Veneto**
AHS Host: Christine Perdue

MAY 19–26 **The Great Gardens of England and the Royal Chelsea Flower Show**
AHS Host: Katy Moss Warner

SEPTEMBER 16–27
Gardens of Bohemia and Moravia
AHS Host: Bill Barrick

OCTOBER 17–22 **Gardens of Charleston**
AHS Host: TBD

OCTOBER 25–NOVEMBER 8
Spring Gardens of Australia
AHS Host: Mac Plant

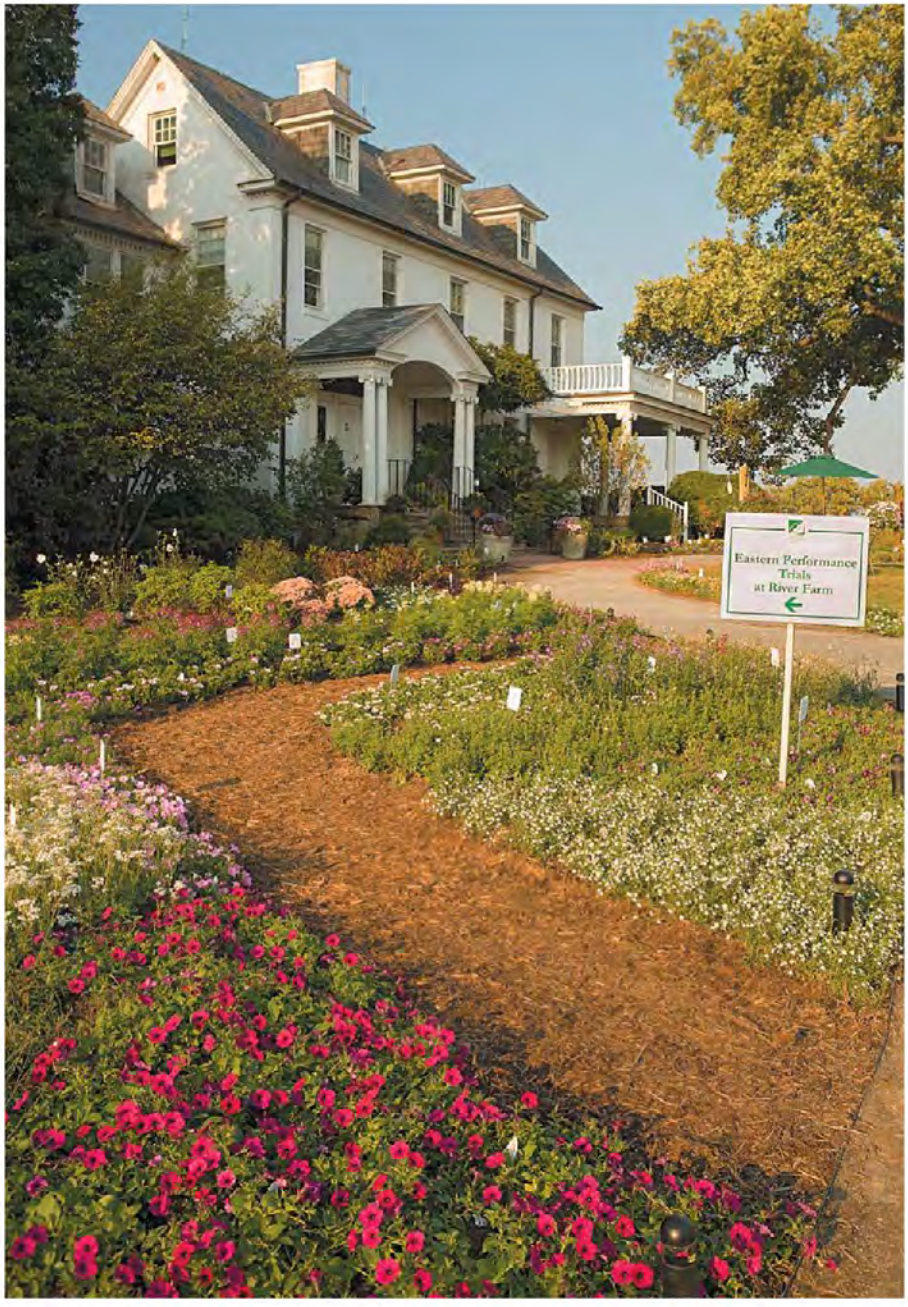
For detailed tour information, tour brochures, or to make a tour reservation, call the Leonard Haertter Travel Company at (800) 942-6666.

No member dues are used to support the Travel Study Program

2005 Eastern

In September, visitors converged at River Farm and five other sites to preview the hottest new plant introductions for 2006.

BY AHS STAFF



FOR SIX DAYS at six sites, 25 plant companies and over 100,000 plants attracted nearly 1,000 visitors to the first Eastern Performance Trials (EPT), held from September 19 to September 24.

Modelled after the California Pack Trials, a long-running industry event hosted each spring by dozens of West Coast plant and seed companies, the EPT lived up to its billing as a showcase for the plant industry's most exciting introductions for 2006.

"It was an incredible week for horticulture," says **Don Riddle**, chairman of the EPT advisory committee. "This event brought together so many different parts of the green industry, many of which haven't really worked closely together before—woody plant people, perennial people, and annual people, retailers and wholesalers, landscape designers and growers."

Riddle's **Homestead Growers,** a division of **Homestead Gardens** in Davidsonville, Maryland, was—along with River Farm—one of the six host sites in the Mid-Atlantic for the debut of the plant trials, which were coordinated by the **Garden Centers of America**, a nonprofit group that supports independent retail garden centers. **Conard-Pyle Company** in West Grove, Pennsylvania; **Virginia Growers** in Montpelier, Virginia; **White's Nursery and Greenhouses** in Chesapeake, Virginia; and

Color abounded throughout the grounds at River Farm during the EPT. Above: A vivid assortment of plants from Centerton Nurseries. Right: New beds in front of the Estate House showcase plants that will be introduced un 2006 by Proven Winners.

LEFT: DAVID ELLIS; RIGHT: ALAN AND LINDA DETRICK

Performance Trials

The EPT exhibits at River Farm began, above left, with a new pathway flanked by large trees from Cherry Lake and containers from Campania filled with plants from the EPT partners. The recently refurbished White House gates linked the pathway to the EPT displays. Above: An EPT attendee, right, chats with Proven Winners representative Sharon Gravitt about the company's summer collection. Left: Visitors enjoy the colorful display of annual bedding plants by Goldsmith Seeds.

DAVID ELLIS (3)

McDonald Garden Center in Virginia Beach, Virginia, also hosted the event. In addition to the hundreds of registered green industry members who visited one or more trial sites, members of the public attended special open days at each site. Many AHS members took advantage of the open day at River Farm on September 22 to get a first-hand look at the transformation of the gardens.

"Each location took a totally different approach with their displays," says **Delilah Onofrey,** who visited all six sites while covering the EPT for Meister Media Worldwide, which publishes several horticultural trade publications. "It was nice to see the spirit of cooperation and creativity among companies that don't often work together," says Onofrey. "Everyone worked very hard to make it succeed and this first year was a great start to get the concept across."

RIVER FARM SPARKLES

River Farm, decked out in newly created garden walks and vibrant floral displays, exemplified how the EPT modeled the glamour of New York's Fashion Week,

Above: Purple and white petunias and sweet potato vines create a timely display in Goldsmith Seeds' floral clock. Right: Centerton Nursery's "Performance Hi Way" is paved with a dark-leaved oxalis and other plants. Bottom right: A statue of Pan from Campania provides a fitting focal point for Saunders Brothers' boxwood allée.

from which it took inspiration. The gardens around River Farm's estate house were manicured to perfection, setting off the displays of the five participating plant companies. During EPT week, several staff members from each company were on site to answer questions and talk with visitors about the new plants and displays.

As visitors entered the exhibit area they first walked along a curving pathway flanked by large trees from **Cherry Lake Tree Farm** and mixed floral plantings in containers from **Campania International's Longwood Gardens Collection**. Passing through the AHS's White House gates, the next exhibit area featured **Proven Winners** plants in newly designed beds in front of the Estate House. Visitors then experienced the spectacular view of the meadow and Potomac River as they walked around the side of the house to the **Goldsmith Seeds** display, distinguished by red umbrellas and a floral clock. Moving toward the AHS Children's Gardens, the display for **Saunders Brothers** featured an elegant allée of boxwoods. Nearby, **Centerton Nursery** showed off its plants with a "roadway" of oxalis flanked by colorful perennials, grasses, shrubs, ground covers, and roses.

AHS President Katy Moss Warner and Green Industry Yellow Pages founder Steve Cissel tour the EPT displays at River Farm.

A PROMISING START

"For the AHS, this was a wonderful opportunity to collaborate with the green industry and draw attention to our River Farm headquarters," says AHS President **Katy Moss Warner**. "I'm so proud of the effort all the participating companies and our staff put in to make this event such a big success. Thanks to all the important contributions from so many people—including our AHS Board members—River Farm has never looked better."

To see photographs from the other EPT sites, as well as images of some of the new plants that were displayed, visit *www.easternperformancetrials.org* . Many of the plants displayed at River Farm will also be featured in an article on 2006 plant introductions in the January/February issue of *The American Gardener.*

TOP LEFT, TOP RIGHT, AND BOTTOM: DAVID ELLIS; CENTER: CHARLOTTE ALBERS

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Beautiful Brassicas

A diverse array of charming ornamentals are kissing cousins to cabbages and broccoli.

BY RAND LEE

IF YOU WERE traumatized in childhood by too many servings of overcooked broccoli or Brussels sprouts, you may find it difficult to credit any member of the mustard or cabbage family as being delicious, much less ravishing.

Yet, among the 375 genera and 3,000-odd species recognized in Brassicaceae, there dwell not only such wholesome fare as the aforementioned broccoli, cabbage, and several other vitamin-rich, methane-producing vegetables, but also a number of charming annual, biennial, and perennial ornamentals.

All possess the four-petaled blooms characteristic of the family (hence the former family designation of Cruciferae—"cross-bearing") and many bear inflated or elongated seed pods termed, respectively, siliciles and siliques. Family members are predominantly native to temperate and cold regions of the Northern Hemisphere.

Here are a few of my favorites; you'll find more choices in the chart on page 21.

The delicate white blooms of evergreen candytuft *(Iberis sempervirens)* combine well with purple aubretia and spring bulbs.

MARK TURNER

All bloom for a fair length of time—the taller sorts are great for cutting—and some of them have wonderfully fragrant flowers.

THE ALYSSUMS

Alyssums fall into three genera: *Alyssum* and *Aurinia,* which contain the most commonly grown perennial species, and *Lobularia,* which includes the annual sweet alyssum. *Alyssum* comes from two Greek roots meaning "not insane"—the plants were once thought to heal madness, which explains their old common name, "madwort."

The first madwort to bloom for me in the spring is basket-of-gold or gold-dust alyssum *(Aurinia saxatilis,* USDA Hardiness Zones 4–8, AHS Heat Zones 8–1). This native of central and southeastern Europe is at its best on stony or well-drained ground, where it makes a rapid-spreading, hairy gray mat covered in late spring to early summer with panicles of scentless, pale yellow flowers. *A. saxatilis* grows eight inches tall by about 20 inches wide, but the dwarf variety 'Goldkugel', also sold as 'Gold Ball', grows only six inches tall and its blooms are darker yellow than those of the species. *A. saxatilis* 'Dudley Nevill Variegated' bears gray and white leaves and yellow blossoms tinged apricot.

Alyssum montanum (Zones 4–9, 9–1) looks much like *Aurinia saxatilis.* Both form similar dense, gray-green pools of foliage, and flower at about the same time in spring and early summer. The bright yellow flowers of *A. montanum,* however, are quite noticeably fragrant. A cultivar, 'Berggold', often offered in the trade as 'Mountain Gold', is widely available; it grows six inches tall by 20 inches wide.

The aptly named basket-of-gold *(Aurinia saxatilis)* weaves its way among early tulips and white rock cress *(Arabis procurrens)* in this spring garden.

Another, 'Luna', blooms a refreshing lemon yellow.

Both aurinias and alyssums are prone to fungal diseases and need well-drained soil, particularly in winter. They are ideal for planting between paving stones or atop low stone walls. They also look terrific planted among the dark green leaves and long-blooming, sky blue spring flowers of creeping Turkish speedwell *(Veronica liwanensis).*

Annual sweet alyssum *(Lobularia maritima,* Zones 0–0, 12–1), is native to Mediterranean Europe and the Canary Islands. A terrific edger and filler for borders and container plantings, it grows from two to 12 inches tall and eight to 12 inches wide, producing narrow, light green leaves and (usually) fragrant flowers that are held in rounded clusters in summer and autumn. The scent brings to mind baby powder mixed with new mown hay.

Sweet alyssums come in a range of colors, including white, lavender, rose-red, violet-blue, coppery pink, and palest lemon.

Once their first flush of bloom has passed, shear the plants back by a third to half their height. Within three weeks, they will have budded out again and, if this treatment is continued, they will bloom until frost.

CANDYTUFT

Of the three species of candytuft *(Iberis* spp.) best known to American gardeners, two are annuals and the third is a shrubby evergreen perennial. All possess narrow, alternate green leaves and hold their tiny four-petaled flowers in flattened, conelike, or globular clusters. The common name "candytuft" derives from *Candia*, an old English name for the island of Cyprus, to which several species are native.

The annual rocket candytuft *(Iberis amara,* Zones 0–0, 12–1)—particularly the cultivar 'Giant Hyacinth-Flowered'—is my favorite candytuft. It grows a foot tall and six inches wide, producing a summer explosion of lightly fragrant, starch-white blossoms resembling little fireworks.

Globe candytuft, *(I. umbellata,* Zones 0–0, 12–1) is the annual candytuft you are most likely to find in garden centers. It displays a more spreading habit, growing anywhere from six to 12 inches tall by 10 inches wide, and produces a weaker version of *I. amara*'s soft powdery scent. Although the flower clusters are smaller and rounder than those of *I. amara,* they are more numerous and more highly colored, particularly in the 'Flash' series, which offers pink, purple, and carmine forms.

Native to southern Europe, evergreen candytuft *(I. sempervirens,* Zones 5–9,

GROWING BRASSICAS FROM SEED

If you're saving seeds from your own plants, make sure they are fully ripe (i.e., turning brown) before you harvest them. Seeds of most brassicas, ornamental or edible, germinate readily at 70 degrees Fahrenheit with no special cold treatment or light requirements. Among the few exceptions are *Aethionema* and *Physaria alpina,* which germinate best if cold conditioned for two months at 40 degrees; and stocks *(Matthiola* spp.), which sprout best if surface-sown.

For earliest flowering, sow seeds about eight weeks before they will be ready to go outdoors, using a sterile, just-moist growing medium. Cover

Sweet alyssum is easy to grow from direct seeding in spring.

the seeds with an eighth to a quarter inch of soil. Most types will germinate within one to three weeks.

Once germination has occurred, remove the seedlings from bottom heat and grow them in the best light you can give them. Transplant to individual containers using a free-draining growing medium when they have developed two to four true leaves.

Plant outdoors when all threat of hard frost has passed, in a neutral to alkaline soil. If your soil is acidic, amend your bed with a shot of agricultural lime before you plant. —R.L.

TOP: MARK TURNER; RIGHT: SAXON HOLT

Above: Colewort flowers provide a lacy background for peonies and meadow cranesbill in early June. Right: The late-spring flowers of money plant give way to flat, round seed pods with translucent inner walls.

9–3) is a tough subshrub, fond of well-drained, neutral to alkaline soil. Despite its name, this perennial has not proven evergreen for me, dying back to the roots every winter in my USDA Zone 6/AHS Zone 6 garden in Santa Fe. Gardeners who live where winters are warmer can enjoy the dark green, spoon-shaped leaves all year.

Several cultivars are available: 'Schneeflocke' (aka 'Snowflake') grows eight to 10 inches tall with a slightly greater spread and bears particularly large, two- to three-inch blossom clusters. "Weisser Zwerg' (Little Gem) has a compact habit, six inches tall with a 10-inch spread. These selections can be fantastically floriferous and are impressively drought-tolerant once established.

COLEWORT AND SEA KALE

If I had to characterize colewort and sea kale in a few words, I would say, "baby's breath on steroids." A well-grown specimen of sea kale *(Crambe maritima,* Zones 6–9, 9–1) grows about 30 inches tall by 24 inches wide, its foot-long, blue-green leaves frame stout stems that terminate in huge clusters of airy white blossoms.

Colewort *(C. cordifolia,* Zones 6–9, 9–1) is much the same, only bigger: eight feet tall by five feet or so wide when in flower. It also has deeply ruffled, heart-shaped leaves, though, alas, they die down in summer.

Both species can be easily grown from cold-conditioned seed. Plant them in very well-drained soil to prevent root rot.

HONESTY

Honesty includes both a perennial species, *Lunaria rediviva* (Zones 6–9, 9–6), and the annual (sometimes biennial) species, *L. annua* (Zones 3–9, 9–1). Both are most often grown for their dried fruits—papery disks that inspired honesty's other common names, moon plant, money plant, and silver dollar.

The plants reach two to four feet tall by about 18 inches wide, with toothed, oval- to heart-shaped, green leaves, sometimes flushed with purple in cool weather. The individual flowers, which are scentless in *L. annua* but fragrant in *L. rediviva,* open white to purple from late spring to early summer.

Honesty is not particularly drought-tolerant—I grow mine in a large tub and water it every day. The perennial kind is very long lived and resents transplanting once it is established. Both species do well in either full sun or part shade, and they like a mulch in dry weather. When the fruits turn brown and papery, peel them to expose the translucent silvery inner membrane so prized by children and floral decorators.

L. annua 'Variegata' has green, heart-shaped, white-edged leaves and striking reddish-purple blossoms. To avoid leaf burn, site this treasure in part shade.

CARDAMINES

The cardamines or bittercresses are rhizomatous or tuberous woodland brassicas found throughout the Northern Hemisphere. It's a wonder, considering their ubiquity, how little known and grown they are in this country, but this may be due to the thuggish reputation earned by some of the annual cardamines.

The species you're most likely to encounter is *Cardamine pratensis* (Zones 5–8, 8–5), the lady's smock or cuckoo flower. The little rhizomes of this perennial sprout feathery, gray-green to lustrous dark green leafy rosettes about a foot across, from which arise graceful one to two-foot spring-flowering stems topped with prominent four-petaled blossoms in purple, lilac, or lilac-veined white. Double forms such as 'Flore Pleno', an adorable eight-inch dwarf with double lilac-pink blossoms, are well

TOP: MICHAEL S. THOMPSON; CENTER: DAVID CAVAGNARO

MORE ORNAMENTAL CABBAGE FAMILY MEMBERS

Name	Height/Width (inches)	Flowers Color/Season	Foliage	Origin	USDA, AHS Zones
ANNUALS AND BIENNIALS					
Orychophragmus violaceus (Showy rocket)	12–24/12	violet/ late spring, early summer	pale green,upright	Asia	10–11, 8–1
Schizopetalon walkeri	6–14/8	fringed, white, night-scented/summer	green feathery, upright	Chile	0–0, 8–1
PERENNIALS					
Aethionema schistosum (Fragrant Persian stone cress)	6–10/10–15	pink, scented/ early spring	blue-green, succulent	Turkey	4–8, 8–1
Alyssum propinquum	1–3 /10	golden/spring	gray-green	Turkey	4–10, 8–1
Arabis blepharophylla 'Frühlingszauber'/'Spring Charm' (Rock cress)	4–8/4–8	scented, rosy-purple/ spring	evergreen, mat forming	California	5–8, 8–5
Aubrieta ×cultorum 'Leichtlinii' (Purple rock cress)	4/12–18	purple-red/spring	green, mat forming	hybrid	5–7, 7–5
Erysimum asperum (Western wallflower)	12/10	gold/spring	evergreen, upright	Western U.S.	5–8, 8–5
Erysimum 'Bowle's Mauve' (Hybrid wallflower)	30/24	mauve/ early spring to summer	grayish, evergreen upright	hybrid	6–10, 10–3
Lepidium nanum (Dwarf pepperweed)	1/6	tiny, cream/spring	small green, tight cushions	Nevada	3–8, 8–4
Physaria alpina (Avery peak twinpod)	2–4/5–6	yellow-orange/spring	silvery gray rosettes	Colorado	3–8, 8–3
Physaria integrifolia var. *monticola*	5–6/3	yellow/spring followed by decorative tan fruit	small silvery creeping rosettes	Wyoming	3–8, 8–3
Stanleya pinnata (Prince's plume)	36–48/24	yellow/summer	mound of basal foliage	Southwest U.S.	5–10, 10–5

worth growing if you can find them.

For those interested in trying something new, Dan Hinkley of Heronswood Nursery in Washington State, offers a range of little known *Cardamine* species and selections. One of Hinkley's favorites is *C. trifolia* (Zones 5–7, 7–5), a sturdy, dense, low-growing perennial with dark evergreen foliage. "In late winter, clean white flowers rise to six inches in height and remain attractive for many weeks," says Hinkley. "It's self cleaning, so we need not even cut the flowering stems back when the floral show is over."

MICHAEL S. THOMPSON

The late-spring flowers of lady's smock *(Cardamine pratensis)* carpet the floor of this woodland garden.

All cardamines thrive in a cool, moist site in part to full shade.

STOCKS

The genus *Matthiola* contains about 50 species of branching annual, biennial, or perennial herbs with gray-green foliage, spikes of single or double pastel flowers, and an odd, sweet scent, a bit rank in some strains, like the smell of aging hyacinths. American garden writer Louise Beebe Wilder, in *The Fragrant Path,* described stocks as reproducing the colors of "old and worn chintzes—old rose, dim purple, delicate buff, [and] cream," which is exactly right.

There are only two species readily available to gardeners. The day-scented stock *(Matthiola incana,* Zones 5–8, 8–5) is the species from which most garden stocks are

Among sweetly scented brassicas are day-scented stock *(Matthiola incana)*, above, and wallflowers *(Erysimum cheiri)*, right. Both are available in a wide variety of colors.

derived. *M. longipetala* subsp. *bicornis* (Zones 8–10, 10–1) is the night-scented stock, which, in summer, produces single, white to pale lilac to brownish flowers on lolling stems, the whole plant barely reaching a foot in height. During the day, the flowers droop, but at night they pour forth a sweet scent that has none of the rank undertones some detect in *M. incana.*

Stocks grow best in well-drained, neutral to alkaline soil where summer nights are cool. They can tolerate heat and drought if protected from full afternoon sun.

WALLFLOWERS

Erysimum cheiri (Zones 3–7, 7–1) is the common English wallflower, though you will still find these plants listed in most catalogs under their old name, *Cheiranthus cheiri.*

Wallflowers' long, narrow leaves and stout stems are very like those of stocks, but they are rather stiff and dark lustrous green, not gray. Although wallflowers are perennial, they are commonly grown as annuals or biennials and in colder parts of the country, plants must be started each year from seed. But in the dry, well-drained soil of my mountain garden, wallflowers are completely hardy, and in most years they stay evergreen even beneath the snow.

The first wallflowers I grew were 'Cloth of Gold', a yellow, and the orange-brown 'Covent Garden', both of them more-or-less biennial strains that do not flower reliably until their second year from seed. Many old strains flower the second year from a spring sowing, but modern selections will flower the first year, their single to double buds opening with the earliest bulbs. If kept from going to seed, and the weather remains cool, they will continue through the end of May or later. Occasionally, they rebloom in fall. (For more wallflower recommendations, see the chart on page 21.)

So even if you turn up your nose at broccoli, cauliflower, and kohlrabi, consider these lovely cabbage relations as hearty additions to your beds and borders. Their simple flowers will charm you with their abundance and delicacy, and unlike their edible cousins, many are delightfully fragrant.

Writer Rand Lee grows ornamental cabbages in his garden in Santa Fe, New Mexico.

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LEFT: DAVID CAVAGNARO; RIGHT: LYNNE HARRISON

Tea in the Garden

Compost tea is gaining popularity in public and private landscapes, for good reason.

BY ALLISON KNAB

IF YOU WERE to stroll past the Rose Gardens in Chicago's Grant Park, you'd have no idea that a landscaping revolution is brewing there. The gardens look like they always have; no signs indicate an ongoing experiment. The force behind the experiment, Christine Nye, isn't even sure how she'd let visitors know what she's done. "What would the signs say?" she asks rhetorically one afternoon as she stands in the garden, her straw hat shielding her eyes from the sun.

Well, they might say something about compost tea, or natural pest control, or big ideas that Nye, the horticultural manager of Chicago's Shedd Aquarium, had while landscaping at the aquarium in spring 2004. "One day I was out working on the north field and I thought, 'This whole peninsula should be organic,'" Nye says. "We should set an example—that [organic gardening] can be done even on this scale." Soon after, Nye was on the phone to the headquarters of the Chicago Park District, asking per-

RON CAPEK

Christine Nye uses compost tea to improve plant growth in several green spaces in Chicago, including the Rose Garden at Grant Park, above.

Christine Nye, applying compost tea to roses in Grant Park, left, and sampling compost tea-drenched soil, above, is trying to document the effects of compost tea on plant growth and health.

mission to test her theories at several sites in the city's park system.

For nearly a decade, Nye has kept the Shedd Aquarium's indoor spaces free of pesticides and its outdoor landscaping nearly free. She advocates organic methods because she believes that using inorganic fertilizers on plants is akin to giving them addictive drugs. In addition, she has focused on selecting native plants and using natural products for garden maintenance, such as corn gluten meal for pre-emergent weed control.

IMPROVING ON TRADITION

Nye's big interest is compost tea, which she has experimented with on the plants in and around the Shedd Aquarium for years. She brewed the tea in a 22-gallon tank in the aquarium's basement, and, when she had some left over, she trucked it elsewhere in the city and beyond, sharing it with other horticulturists.

Although compost tea is not a new idea—it is a concept that's been around for centuries—the organic plant fertilizer typically has been made and used by only a small number of home gardeners.

Traditionally, compost tea has been brewed by placing compost in a burlap sack, immersing the sack in a container of water, and stirring the odiferous brew now and then until it's deemed ready for use.

But the results of this haphazard method were far from great. "Sometimes it would work, sometimes not, and on occasion, it would kill the plants," says Elaine R. Ingham, president and director of research at Soil Foodweb, Inc. and author of the *Compost Tea Brewing Manual.* "The problem was the lack of consistency in what people were calling compost tea," Ingham continues. "Now that specific production parameters have been defined, production of aerated compost tea using those defined methods means we can guarantee that there will be benefit from the organisms in the tea."

RECIPE FOR SUCCESS

Simply put, today's compost tea is a mixture of compost, water, and a substrate like molasses to encourage the desired organisms, stewed together in a brewer through which air is continuously bubbled. Ingham offers this more scientific definition on her Web site: "Compost tea is a liquid produced by leaching soluble nutrients and extracting bacteria, fungi, protozoa, and nematodes from the compost." The nutrients feed both the beneficial microorganisms in the tea and the plants to which the tea is applied.

Proponents of compost tea say that it puts nutrients and beneficial microorganisms back into soil that has been depleted by years of exposure to pesticides, inorganic fertilizers, and air pollution. As the beneficial organisms consume organic matter, they secrete compounds that promote soil aggregation, which improves soil structure. Some symbiotic fungi—mycorrhizae—colonize plant roots and enhance the plants' ability to absorb food and water. And, in some cases, proponents believe, beneficial organisms out-compete disease-causing organisms. All of these factors, advocates say, lead to healthier soil and, thus, healthier more vigorous plants.

WORD GETS AROUND

With the support and consent of other area horticulturists, last spring Nye began testing her compost tea in green

RON CAPEK (2)

GETTING STARTED WITH COMPOST TEA

"Your compost tea is only as good as your compost," warns T. Fleischer, director of horticulture for Battery Park City Parks Conservancy in New York City. If you're making your own compost, Fleischer recommends that 80 percent of it should be items high in carbon, such as weeds, dry grass clippings, coffee grounds, vegetables, wood chips, newspaper, and leaves. The remaining 20 percent should be nitrogenous—items such as fresh grass clippings, manure, and leguminous material.

Aeration—adding oxygen—is critical to making a high-quality product, so using a brewer will give you the best results. And add unsulfured molasses to feed the bacteria. Compost tea brewers are available in sizes from five to 500 gallons and start at about $100. "Maintain aeration so that the tea is bubbling nicely, like a soft boil on the stove," Elaine Ingham advises. She also recommends vigorously stirring the brew a few times each day to promote microbial growth. Depending on the brewer, making tea will take 12 to 48 hours.

Use the tea soon after it is brewed or the organisms in it will begin to die off. Apply the solution using a watering can to soak the soil around plants or douse seeds before they are planted, or use a sprayer to apply the tea to foliage.

Dedicated gardeners can have their tea analyzed by companies such as Soil Foodweb (see "Resources"), which supplies reports of the microorganism content. —A.K.

Monika Haberland, a horticulturist at New York's Battery Park, where compost tea has been regularly applied for the past seven years, draws a fresh batch from a large brewer.

spaces throughout the city: Lincoln Park's Conifer Garden in north Chicago, Grant Park's Rose Garden, Garfield Park's perennial garden in the southern part of the city, and the Shedd Aquarium's grounds. She applies the tea three times a season, both as a foliar spray and a soil drench. Nye also extracts soil cores from those plots to determine how the compost tea has affected the soil food web. She has the soil samples analyzed and tracks changes in the levels of assorted microorganisms.

Mike Nowak, host of "Let's Talk Gardening" on WGN Radio and cofounder of the Midwest Ecological Landscaping Association (MELA), believes that Nye's studies are important to establish baseline data on the efficiency of compost tea. "Right now, most of the information on compost tea is anecdotal," Nowak says. In fact, proponents and sellers of compost tea products are careful not to describe those products in terms of disease control, because doing so would require testing and approval from the Environmental Protection Agency (EPA).

Nye isn't the first person to undertake a major project using compost tea in public spaces, however. T. Fleisher, the director of horticulture for Battery Park City Parks Conservancy in New York City, has been using compost tea on the park's 92 acres—including trees, lawns, a ball field, and perennial borders—for seven years. "We've maintained the park organically for the past 14 years," Fleisher says. The park's horticulturists apply compost tea approximately once every six weeks, depending on the type of plants, Fleisher says. He cautions against viewing compost tea as a magic bullet, but says, "We've been

Battery Park horticulturist Robert Hansen applies compost tea to a ballfield using a handheld sprayer.

COURTESY OF BATTERY PARK (2)

Christa Conforti, integrated pest management coordinator at San Francisco's Presidio, applies compost tea to a flat of seedlings in an effort to document its effects on container-grown plants.

successful at building a natural nutrient cycle in the soil, and that's one of the benefits of compost tea."

At San Francisco's Presidio—a former military post that is now part of the Golden Gate National Recreation Area—park landscapers conducted a 12-month trial of compost tea on their golf course. In 2001, landscapers treated turf on one green with compost tea and compared it with untreated turf on another green. They applied the tea weekly or biweekly, depending on incidence of disease, and evaluated the turf monthly.

On the compost tea–treated turf, park staff noted a reduction of turf disease and an increase in root depth. As a result, the park has made compost tea "an integral part of the pest management and general turf management program on all Presidio Golf Course greens," says Christa Conforti, Presidio Trust integrated pest management (IPM) coordinator. "We've started using compost tea on the Presidio ballfields and at our native plant nursery. And we're currently conducting a trial on nursery plants to see whether we can document the effects of compost tea on container-grown plants."

EXPANDING THE NETWORK

Inspired by her compost tea projects, in spring 2004 Nye helped organize a symposium for Chicago-area gardeners, landscapers, and horticulturists interested in organic methods. Together with MELA and Daniel Staackmann, president of Organic Matters, Nye put together a program titled, "Natural Plans for Urban Lands."

"The reason I wanted to have that first conference was so that people would talk to each other," Nye says. "If we're not communicating, it's like we're reinventing the wheel." The response was tremendous. In addition to the Chicago Park District, representatives from two other park districts attended, as did employees of lawn-care companies, Brookfield Zoo, Lincoln Park Zoo, and local landscapers. Speakers included Sadhu A. Johnston, assistant to the mayor for the Green Initiatives program, and Jeff Frank, founder of Long Island Lyceum School of Environmental Horticulture.

This past February, MELA held a similar conference, "Common Sense Choices for Landscape Design and Care." Nye has become a board member at MELA, and cofounder Mike Nowak says, "She's the kind of person who changes an organization just by being there."

THE BOTTOM LINE

Although she's awaiting the end-of-season results of her experiments, Nye has been pleased with early feedback. Her former boss at the aquarium, Bryce Bandstra—

TEA TREATMENT FOR RIVER FARM'S TREES

The Care of Trees, a national tree care company that maintains the trees at River Farm, applies compost tea as part of its regular maintenance program. "Compost tea has been a standard component of our tree-care program for about three years now," says Richard Eaton, a certified arborist who is district manager for The Care of Trees.

According to Eaton, the company has found that applications of compost tea around the root zones of trees enhances soil quality. "We see much better general health of trees, fewer pest problems, better growth, and better resistance to drought." The trees at River Farm get several treatments of compost tea throughout the growing season. The tea is applied throughout the entire root zone of the tree from the trunk to the drip line of the canopy.

Eaton says The Care of Trees brews its own compost tea at each district office. The tea is aerated during the brewing process and also during transit to job sites. "We have special trucks fitted with a bubbler system," says Eaton. —AHS STAFF

A technician with The Care of Trees applies compost tea under a Kentucky coffee tree at River Farm.

TOP: COURTESY OF THE PRESIDIO; BOTTOM: JESSICA ROZMUS

Among the growing number of public spaces that are successfully maintained with compost tea is the Marriott Green Roof garden in Houston, Texas, above. The compost tea is delivered through an automatic irrigation system, right, providing an effective way to supply continuous nourishment for the garden's trees and beds of annuals and perennials.

COURTESY OF JENNIFER APPEL (2)

now general foreman of Garfield Park and Lincoln Park Conservatories in Grant Park—notes that spray from the park's Buckingham Fountain contributes to fungus black spot on the roses, but adds, "The roses that were treated with compost tea were no worse than those sprayed with the fungicide. That's a compliment—it means that the compost tea does a pretty good job." Preliminary tests also show that the soil's total bacterial biomass, total fungal biomass, fungal community, and ciliate levels have moved within the desired ranges since last year's tests. "Will you have a perfect, disease-free garden with compost tea?" Bandstra asks. "No. You have to be willing to accept some diseases, some pests."

For Bandstra, a major benefit of compost tea is its safety. When the Rose Gardens are sprayed with pesticides, workers wear protective gear and the area is off limits for four hours afterwards, all of which can be off-putting to the public, he says. Compost tea carries none of those risks.

Others in Chicago also are waking up to the possibilities of compost tea. "When Christine brings [compost tea] to Garfield, there's a fight for it now," Bandstra says, and adds that gardeners who treat ferns and orchids are especially enthusiastic about results of using the tea.

In addition to the environmental and safety benefits of using compost tea, cost is yet another advantage. "If [horticulturists] spent their money on building up the soil, a lot of their problems would disappear," Nye says. Applications to Grant Park's Rose Garden, for example, cost less than $80 last year, compared with the tremendous labor and supply costs of traditional pesticides.

Sources

EPM Inc., Cottage Grove, OR. (541) 767-2747. *www.composttea.com.*

Growing Solutions, Eugene, OR. (888) 600-9558, *www.growing solutions.com.*

Keep It Simple, Redmond, WA. (866) 558-0990, *www.simplici-tea.com.*

North County Organics, Bradford, VT. (802) 222-4277. *www.norganics.com.*

Soil Soup, Seattle, WA. (877) 711-7687. *www.soilsoup.com.*

Resources

International Compost Tea Council, *www.intlctc.org.*

Soil Foodweb, *www.soilfoodweb.com.* Extensive background on compost tea and the soil food web, recommendations for making and using compost tea, as well as making and using compost; *Compost Tea Brewing Manual.*

National Sustainable Agriculture Information Service, *www.attra.org.* See section on Soils & Compost; publication Notes on Compost Teas.

Nye is pragmatic about compost tea's limitations but enthusiastic about its possibilities. "Maybe compost tea isn't going to fix everything, but it's a way to get started," Nye told the scientists, city employees, landscapers, and home gardeners who gathered at the third annual MELA conference earlier this year.

Later, applying tea to one of her plots, she muses, "If something works, it's cheaper than what you're doing, *and* it's safer for the environment, why wouldn't you choose to do that?"

Allison Knab is a freelance writer based in Chicago who enjoys indoor gardening.

spotlight on Tree Bark

Trees with colorful or texturally interesting bark shine in the winter garden.

BY RITA PELCZAR

AMID THE ever-changing scenes in a garden, bark provides continuity. Unlike fleeting blossoms, fruit, or leaves, a tree's bark looks much the same in winter as it does in summer. But in winter, while leaf and flower buds lie dormant, bark takes center stage.

Each tree species bears its own characteristic bark. Textures may be smooth or rough, flaking, or furrowed. And colors run the gamut from white to black, through shades of brown, green, copper, rose, and tan. Walking through my woods in Maryland in mid-December, it is easy to pick out the smooth, light gray bark of an American beech *(Fagus grandifolia),* the dark, rectangular plates of our native persimmon *(Diospyros virginiana),* and the tough, exfoliating bark of the river birch *(Betula nigra).*

Some trees have such remarkable bark colors and/or textures—'Heritage' river birch and paperbark maple (*Acer griseum)* come to mind—that the bark alone is sufficient reason to include it in your garden, assuming it is culturally suited to the site.

But trees that also have attractive flowers and foliage, as do crape myrtle *(Lagerstroemia indica)* and kousa dogwood *(Cornus kousa),* provide additional seasonal color and year-round interest. These small trees make outstanding specimens in both large and small gardens and also fit well in beds with shrubs and herbaceous plants.

So take advantage of the lack of competition from verdant foliage and abundant blooms this winter and enjoy the rugged beauty of bark.

Rita Pelczar is a contributing editor with The American Gardener.

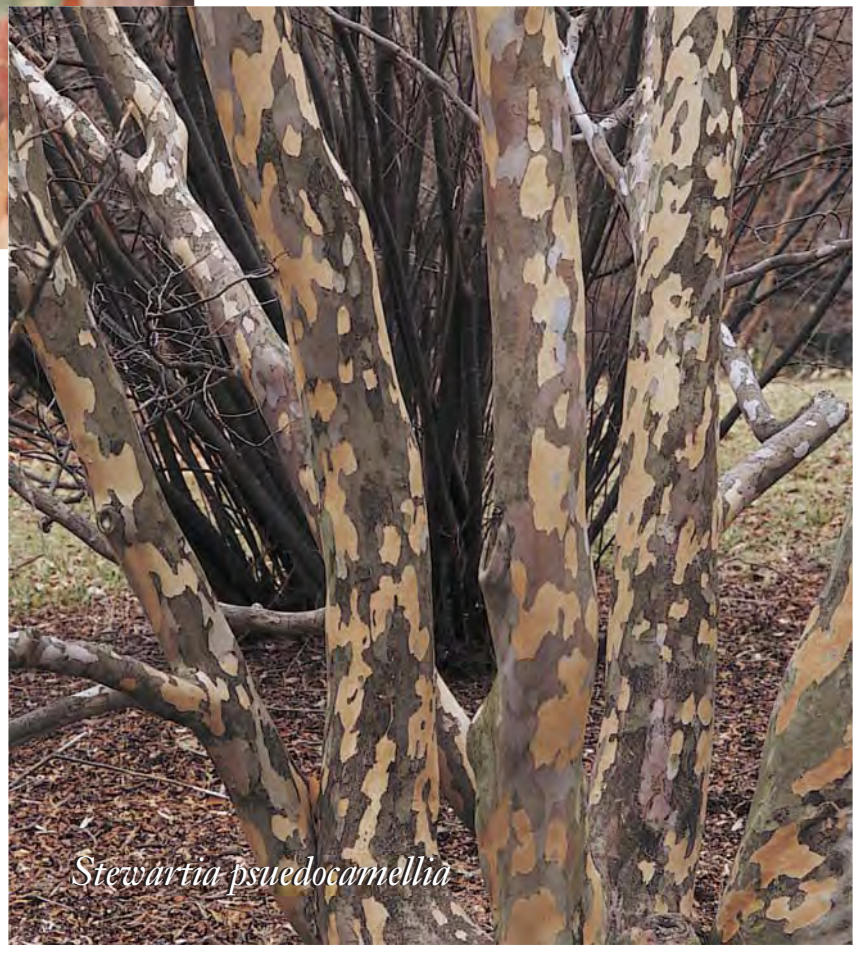
The striped maple or moosewood *(Acer pensylvanicum,* USDA Hardiness Zones 3–7, AHS Heat Zones 7–1) is an understory tree of eastern North American forests. Its green bark is marked with conspicuous white stripes that fade somewhat with age. The cultivar 'Erythrocladum' (above) produces brilliant coral stems that mature to orange-red with prominent white striations.

MICHAEL S. THOMPSON

The paperbark cherry *(Prunus serrula,* Zones 6–8, 8–6) is a small rounded tree from western China with white spring flowers. Its most appealing feature, however, is its exfoliating bark that peels to display glossy swatches in shades of red, brown, and mahogany, with the conspicuous horizontal lenticels typical of cherries.

Above: An import from China, the paperbark maple *(Acer griseum,* Zones 4–8, 8–1) makes a fine specimen tree, usually growing about 30 feet tall. Its reddish brown bark begins to exfoliate at a young age, giving the tree an interesting texture. In autumn, its trifoliate leaves turn bronze and red.

Right: Another Asian species, the Japanese stewartia *(Stewartia pseudocamellia,* Zones 5–8, 8–4) matures to a 30- to 40-foot tree with an oval crown. In addition to its fragrant, camellialike summer flowers and its deep red fall foliage, it develops a magnificent sinewy bark that exfoliates in bold patches of tan, brown, and gray.



CLOCKWISE FROM TOP LEFT: SAXON HOLT; KEN MEYER; JOSEPH G. STRAUCH, JR.

MORE TREES WITH ATTRACTIVE BARK

Botanical name	Common name	USDA, AHS Zones
Araucaria araucana	monkey puzzle tree	7–11, 12–6
Arbutus unedo	strawberry tree	8–9, 9–6
Betula nigra	river birch	4–9, 9–1
Betula papyrifera	paper birch	2–7, 7–1
Bursera microphylla	elephant tree	13–15, 12–10
Carya ovata	shagbark hickory	4–8, 8–1
Cerdiciphyllum japonicum	katsura tree	4–8, 8–1
Chorisia speciosa	floss silk tree	13–14, 12–10
Cornus kousa	Kousa dogwood	5–8, 8–5
Cunninghamia lanceolata	China fir	7–9, 9–7
Eucalyptus gunnii	cider gum	8–10, 10–8
Fagus grandifolia	American beech	3–9, 9–1
Fagus sylvatica	European beech	4–7, 9–4
Juniperus virginiana	eastern red cedar	3–9, 9–1
Lagerstroemia spp. and hybrids	crape myrtle	7–9, 9–7
Metasequoia glyptostroboides	dawn redwood	5–10, 12–8
Parrotia persica	Persian ironwood	4–7, 7–1
Pinus resinosa	red pine	3–7, 7–1
Prunus sargentii	Sargent cherry	5–9, 9–5
Pseudocydonia sinensis	Chinese quince	6–8, 8–4
Quercus myrsinifolia	Chinese evergreen oak	7–9, 9–6
Zelkova serrata	Japanese zelkova	5–9, 9–5

The Tingiringi gum *(Eucalyptus glaucescens,* Zones 9–10, 10–9) is an Australian native that sheds its bark in flakes to reveal a sleek glaucous surface that contrasts effectively with its blue-gray foliage. It develops a conical shape, growing to a mature height of about 40 feet.

Native to China, the lacebark pine *(Pinus bungeana,* Zones 4–7, 7–1) is a slow-growing tree, often cultivated with multiple trunks. Its bark, which peels to expose jigsaw patches of color that range from olive green to brown, gray, and white, develops an intricate, lacy pattern that is spectacular year round.

The reddish brown exfoliating bark of the Pacific madrone *(Arbutus menziesii,* Zones 7–9, 9–7) peels away until it becomes smooth and uniformly cinnamon-colored. Cultivated specimens of this western North American native top out at about 50 feet.

LEFT: JOSEPH G. STRAUCH, JR; TOP RIGHT: KAREN BUSSOLINI; BOTTOM RIGHT: MARK TURNER

intriguing ARISAEMAS

Once mainly the province of collectors, these fascinating aroids—the most widely known of which is Jack in the pulpit—are now popular shade garden plants.

BY GENE E. BUSH

LYNNE HARRISON

Of all the plants I have grown over my many years as a gardener and nursery owner, arisaemas *(Arisaema* spp.) are undoubtedly the most fascinating. These mysterious and captivating plants look exotic but are hardy and easy to grow. I can't imagine my shade garden without them.

When I first began collecting arisaemas some 15 years ago, only a couple of the 150 or so species in the genus were readily available. But, thanks to the efforts of plant fanatics such as Tony Avent of Plant Delights Nursery and Barry Yinger of Asiatica Nursery, dozens of exotic species are now relatively easy to obtain from popular garden catalogs. The Internet and specialty plant exchanges are providing further sources of previously hard-to-find selections.

If you haven't already succumbed to the temptation to try arisaemas in your garden, there's no time like the present. But I offer fair warning, once you've started, it's hard to stop at just one or two!

BACKGROUND AND BOTANY

Arisaemas are the third largest genus—after anthuriums and philodendrons—in the arum family (Araceae). The center of diversity for arisaemas is in Asia—particularly the Himalayan region, China, and

Emerging in early spring, the white, club-tipped spadix of *Arisaema sikokianum* shows up well against the dark, striped hood.

Japan—but they also range into the Middle East, Africa, and North America. They are primarily found in seasonally moist, woodland habitats, and most are native to temperate zones, which makes them adaptable to a wide range of gardens in the United States.

Arisaemas are herbaceous plants that grow from—depending on species—tubers or rhizomes. Despite what you might assume after seeing them in "bloom," arisaemas are really mostly about foliage. In addition to one to three "true" leaves that develop on each plant, what is generally thought of as the flower is actually a modified leaf that curls into a tube, broadening at the tip to form a hood (spathe).

Inside this tube, the inconspicuous true flowers form on a slender club called a spadix. In some species, a band of male flowers forms near the top of the spadix, followed by a sterile band and then a band of female flowers. If pollen from the male flowers reaches the female flowers—and sufficient energy is available in the tuber—seeds will form inside fleshy berries. Most plants are pollinated by flies and beetles.

Berries are produced in tight clusters, usually turning a brilliant waxy red by fall. Because I grow a number of species with different blooming and fruiting sequences, I enjoy a flowering season from March through July, followed by a colorful berry display from September to early December.

When it comes to reproduction, some arisaemas behave in rather unusual ways. Plants can be monoecious as described above, having both male and female flowers at maturity. Some species are dioecious—the male and female flowers are on separate plants. And some change their gender from one year to another in response to environmental conditions.

Berries of *Arisaema triphyllum* (left) add a splash of brilliant color to the shade garden in autumn. In the author's garden (above), the green spadix of a Jack in the pulpit "preaches" beneath its hoodlike spathe.

GROWING ARISAEMAS

Much of the published information about winter hardiness of arisaemas is outdated. USDA Hardiness Zones of 6 to 8 are still quoted for many Asian species, although many have survived in my southern Indiana nursery and garden when temperatures dropped below –30 degrees Fahrenheit, and without benefit of snow cover.

Before selecting an arisaema for your garden, determine whether it emerges early, mid-season, or late. Species break dormancy at varying times in spring, and although a species may be hardy, if it begins growth too early, it can be injured by a late freeze. In southern Indiana, we often get a warm spell during February that lasts seven to 10 days, then it's back to winter. Arisaemas that emerge during those mild days are often damaged.

The best time to plant new arisaemas is in late summer or early fall, so the tubers have time to set roots before the plant goes dormant for winter. Plant tubers four to six inches deep in free-draining organic soil as described below.

I treat all the species I grow pretty much the same. My garden is on the north side of a hill, shaded by trees and shrubs. The original clayey soil has been steadily amended with organic matter so that it's now moist yet well-drained.

Arisaemas respond well to an annual light dressing of composted manure or

LEFT: DAVID CAVAGNARO; TOP RIGHT: GENE BUSH

PROPAGATING ARISAEMAS

If you intend to collect seeds from your arisaemas, it is best to have three or more plants of each species in your garden. This is especially true for dioecious types because both mature male and female plants must bloom at the same time for pollination to occur. It may take some years for the plants to establish a cycle where one remains male and the others become female.

Harvest berries once they are mature, then clean them by squeezing the pulp from the seeds and washing them in a container of water to which a few drops of dishwashing liquid has been added. Be sure to wear a pair of rubber gloves while doing this, because the pulp can stain fingers and some people experience skin irritation.

Sow seeds outdoors in fall where you want them to grow and cover them lightly. Or sow the seed in containers and set them outside in a shaded spot to ride with the local weather over winter. Most of the seed will germinate the following spring, but it can take up to five years before the first blooms appear. And remember that seed propagated plants may display some variation from the parent.

In many cases, offsets form on the mother tuber. If these small tuberlets develop roots or detach themselves from the main tuber, they can be carefully transplanted into containers or to other locations in the garden. A few arisameas, including *A. concinnum,* are stoloniferous, sending out underground stems that may produce a new plant several feet from the parent. —G.B.

a balanced fertilizer. Each fall, I mulch with chopped leaves that break down to provide additional nutrients and organic matter.

NORTH AMERICAN SPECIES

Three arisaema species are found in North America, but one *(A. macrospathum)* is endemic to the highlands of central Mexico and is not hardy enough for me to cover here.

The arisaema most familiar to American gardeners is Jack in the pulpit *(A. triphyllum,* USDA Hardiness Zones 4–9, AHS Heat Zones 9–1). Native to moist woodlands in most states east of the Rocky Mountains, Jack was the first arisaema in my collection. Its common name stems from the fancied resemblance of its inflorescence to a preacher (the spadix) standing in a covered pulpit (the spathe).

Not surprisingly, given its wide native range, Jack in the pulpit is quite variable in appearance, and botanists recognize several subspecies. You can find local populations that have green stems and inflorescences, dark or spotted stems and dark chocolate blooms, or any combination between the two. Mature plants vary considerably in size—some grow almost four feet tall, others never exceed 18 inches.

Jack is very adaptable and can live well over 25 years in suitable environments. Following an especially favorable year, its tuber can increase 200 percent in size.

Normally, a mature Jack has two leaf stems (petioles) that arise from the main stalk (psuedostem) that emerges from a tuber. Each leaf has three leaflets except for a subspecies, *A. triphyllum* subsp. *quinatum,* which has five leaflets. The inflorescence arises on a stem (peduncle) of its own between the two leaves. The plant emerges in late April in my garden, and I enjoy watching it literally unfurling like an umbrella.

Green dragon *(A. dracontium,* Zones 4–9, 9–6) shares much the same range as Jack in the eastern United States, but is considered endangered or threatened in some areas of New England. It is often found growing in moist drainage ditches or swampy areas where it typically reaches two to three feet tall.

Green dragon will grow happily in normal garden soil, but without extra moisture tends to max out at about two feet. The long stalked leaf is shaped like an open half circle at the end of a stick. Around the outside of that circle are five to 15 individual leaflets.

The imaginative common name derives from the shape of the sheath that is found about a third of the way up the stem. The inflorescence is long and slender, like a tube with a tongue sticking out, running up and around the main stalk.

I have a form in my garden that reliably reaches six feet. All parts are bulked up to match the height, making for a formidable-looking plant.

JOSEPH G. STRAUCH JR.

The eight to 10-inch long, tonguelike spadix of *Arisaema dracontium* inspired its common name, green dragon. This native species is considered endangered in some parts of the eastern United States.

FOREIGN RELATIONS

One of the most colorful Asian arisaemas is the snow rice cake plant *(A. sikokianum,* Zones 5–9, 9–3) native to China and Japan. This species stands 14 to 18 inches tall and has two leaves at maturity. Each leaflet has varying degrees of serration along the edges and is mottled whitish green to silver at the center.

The variegated foliage forms a background for the spell-binding inflorescence. The spathe is large in relation to the plant, with an outside color that is very deep and lustrous, black-burgundy ribbed with purple and white stripes. The inside of the spathe is pure

MORE HARDY ARISAEMAS

The following descriptions are based on my observations of plant performance in southern Indiana (USDA Hardiness Zone 6, AHS Heat Zone 5). All these species have survived through temperatures 20 degrees below 0 Fahrenheit more than one winter in my garden. The heights and colors given are typical of the species in cultivation, although there is considerable variability in nature. —G.B.

Species	Height (feet)	Origin	Season of bloom	Remarks
Arisaema concinnum (syn. *A. affine)*	1 1/2	Himalayas, India	late May	single leaf divided into many heavily veined leaflets, spathe tips straight out or downward; purple-brown to dark green with light green stripes
A. heterophyllum	6	East Asia	mid-May	tallest arisaema in my garden; large leaflets arranged in open horseshoe; spathes large and green, large clusters of bright red berries for late season show
A. intermedium	2	Himalayas, N. India	late May	leaf composed of 3 large dull green leaflets with white stripe or purple-brown; threadlike 2-foot spadix coils down and around leaflets
A. sazensoo	1	Japan	mid-May	short and stocky appearance, green leaves with notable golden sheen are over 14 inches across; brown-black spathe with red stripes emerges before leaves
A. serratum (syn. *A. japonicum)*	2	China, Japan, Korea	mid-April	leaves can reach 2 feet across, the form I grow has silver markings; spathe is brown-red with white stripes
A. ternatipartitum	1	Japan	mid-April	smallest arisaema in my garden; 3-part leaves on slender stem; the brown and whitish-striped bloom is in perfect proportion; forms tight colony
A. tortuosum (syn. *A. helleborifolium)*	3	Himalayas	late May	mine has green stems and blooms, but others can be marked or mottled; slender, snakelike spadix extends out and up from the tube, twisting downward as it matures
A. urashima (syn.*A. thunbergii* subsp.*urashima)*	1 1/2–2	Japan	early May	highly variable; single leaf with 11 to 15 leaflets; spathe has almost black hood, tube is purple-brown and red-brown with white markings, spadix whiplike

white with a snow-white club that has a large knob at the top.

It is an early riser for me and it took a while to find a location where it performed well. I now protect it from early winter sun in a northeast location under mature cedars, so it does not warm up too early. I also find that this species is relatively short lived, fading away after five years or so in my garden.

Another colorful Asian species is candy Jack *(A. candidissimum,* Zones 5–9, 9–5). It grows just a bit over two feet tall in my garden. Its single leaf has three ovate leaflets that are about eight inches across by nine inches long. The plant has a solid look about it and the foliage has a clean appearance until mid-September. The inflorescence comes up just before, or in tandem with, the foliage. The spathe hood is tilted back for an open appearance that shows off the inner colors of white and mauve-pink.

Native to China, Japan, and Korea, *Arisaema ringens* (Zones 5–9, 9–6) produces blooms that resemble a miniature cobra pulled back to strike. The inflorescence is short and full, dressed on the outside with white and purple stripes, ending with a tightly curved hood. The form I grow has a deep, waxy, dark purple spadix; it resembles a small snake with its tongue sticking out. The two leaf stems divide just above soil level with three leaflets at the top of each. The bloom emerges between them, and is eventually hidden by the foliage. Stems are only 10 to 12 inches tall with individual leaflets eight to nine inches long, so the plant has a short stocky appearance.

Candy jack is one of the few arisaemas that has a pleasant scent when in flower.

This is an early riser that has adapted to my garden. It emerges in late February or very early March, and usually gets hit by a frost, but it proceeds undamaged to bloom and unfurl its foliage. For a small garden, this would be my choice.

JOSEPH G. STRAUCH JR.

Top: The large, asymmetrical leaflets of *Arisaema fargesii* give this late riser a stout, robust appearance. Right: The tightly curled spathe of *Arisaema ringens* emerges between, and will eventually be hidden by the leaves.

Arisaema fargesii (Zones 5–9, 9–1) is a very late riser, emerging in late June. If it never bloomed, I would still find a place for its marvelous foliage in my garden. This tropical-looking Chinese species produces a single leaf stem that reaches about 20 inches in height, topped with three leaflets. Two upper leaflets are about 12 to 14 inches each, and the third is closer to the length of the leaf stem, by about 15 inches wide. I placed three tubers in a raised bed some years ago and now seedlings and offsets almost fill the bed.

The curved, pointed hood has a waxy sheen outside; its color resembles a white and brown seersucker shirt. This species forms offsets at a reasonable age and sets abundant seed for a colorful show in my garden into December.

The spathe color of *Arisamea flavum* ranges from greenish to bright yellow.

The owl-faced arisaema *(A. flavum,* Zones 5–9, 9–1), native from Yemen to western China, produces two leaves, each with five to 11 leaflets. The spathe is short and rounded, its hood strongly reflexed over the tube with a point that resembles a beak. The hood bends to form "ears" on each side, thus the common name. It does somewhat resemble a yellow owl sitting on a branch. The plant is tall and thin, with narrow, skeletonlike leaves.

Although the usual height described for this species is a bit less than a foot, I have a form in my garden that grows about three feet tall. This is not too surprising; the longer one talks and trades with other collectors, the more one realizes how incredibly variable *Arisaema* species are in nature.

My own fascination for these strange beauties continues to grow. Each year, I find one or more *Arisaema* species that I must have, and the hunt is on to expand my collection.

Gene E. Bush owns Munchkin Nursery & Gardens in Depauw, Indiana, specializing in rare and unusual perennials for shade.

Sources

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Heronswood Nursery, Kingston, WA. (360) 297-4172. *www.heronswood.com.* Catalog $5; free online.

Munchkin Nursery & Gardens, Depauw, IN. (812) 633-4858. *www.munchkinnursery.com.* Catalog $3.

Plant Delights Nursery, Inc., Raleigh, NC. (919) 772-4794. *www.plantdelights.com.* Catalog 10 stamps or box of chocolates; free online.

Seneca Hill Perennials, Oswego, NY, (315) 342-5915. *www.senecahill.com.* Catalog $4; free online.

Resources

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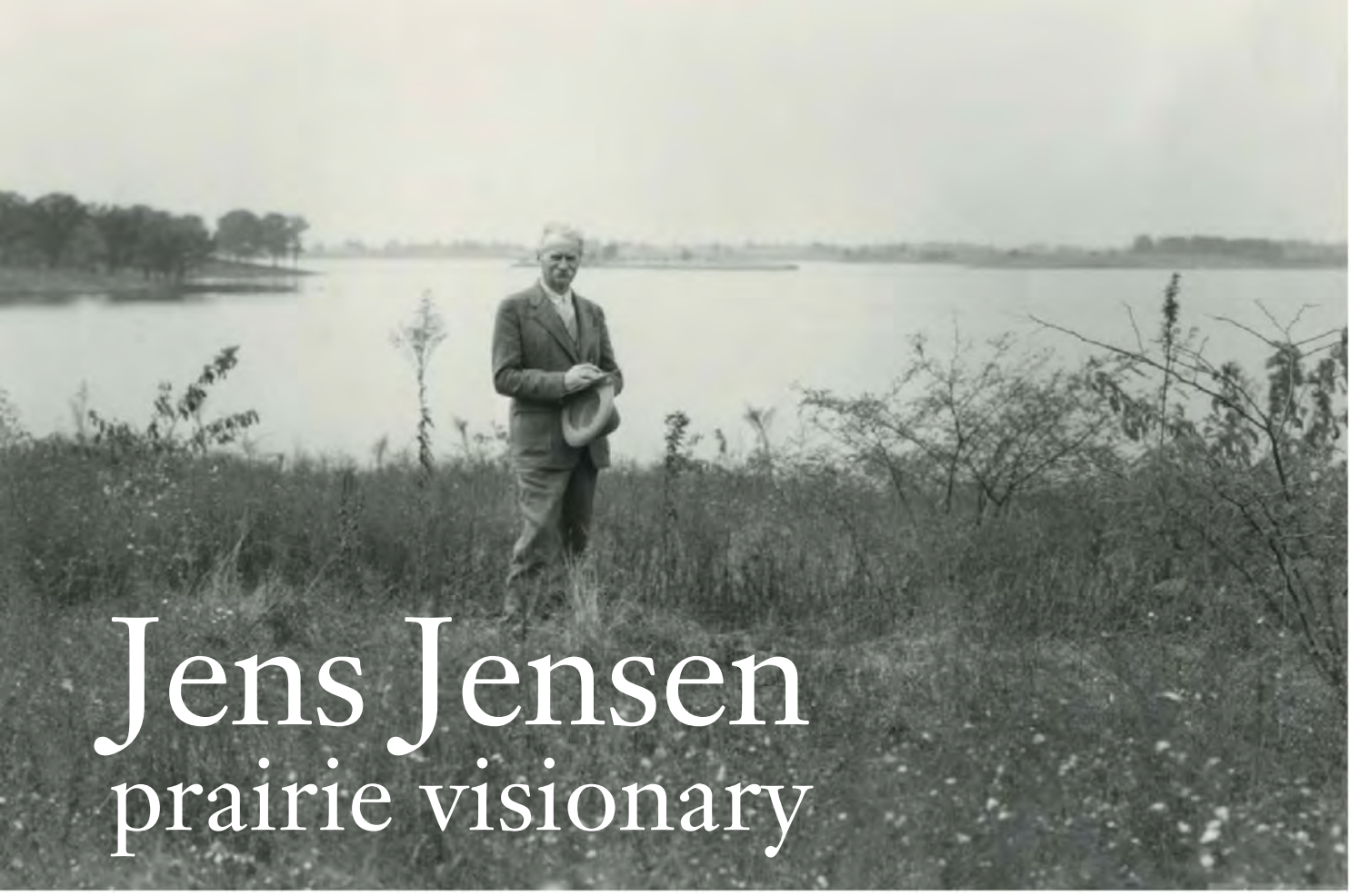
TOP TO BOTTOM: JERRY PAVIA; MARK TURNER; MICHAEL S. THOMPSON



Jens Jensen
prairie visionary

A champion of the prairie landscape style, Jens Jensen left an enduring legacy on American landscape design and conservation of natural areas.

BY CAROLE OTTESEN

In 1884, a young Danish immigrant named Jens Jensen stepped off the boat onto American soil. An imposing figure, standing over six feet tall, he had a great head of red hair, a flowing mustache, and piercing blue eyes. He was just 24, and he had left Slesvig, Denmark, with his fiancée, Anne Marie Hansen, because his prosperous family did not approve of their union.

The couple settled in Chicago, where Jensen found work as a street sweeper in the city's Park District. There, his rise through the ranks was nothing less than meteoric. In a decade, he was well on his way to becoming one of the most influential landscape designers in America, and his legacy as a champion of the prairie landscape endures to this day.

Jens Jensen, above and top, at Lincoln Memorial Garden in Springfield, Illinois, one of his last major public designs.

A PRAIRIE LOVE AFFAIR

Chicago in the waning years of the 19th century was for Jensen the right place at the right time—the ideal setting to maximize his unique potential. The city was bursting at its seams, growing ever outward, devouring the prairie around it. While most hailed rapid growth as a sign of "progress," Jensen lamented the disappearance of the flat landscape's negative spaces.

"He was very worried about the sprawling development eating away at our landscape and extremely worried about losing natural areas," says Julia Bachrach, historian for the Chicago Park District.

"Jensen wasn't infected with the conquer-the-wilderness syndrome that was pervasive at the time," says Neil Diboll, whose Prairie Nursery in Westfield, Wisconsin, propagates and sells native grasses and forbs. Instead of seeing the prairie as "wilderness to be tamed and eliminated," says Diboll, Jensen fell in love with its wide sky, with expansive grasslands punctuated by groves of trees, with rock formations and gently meandering streams.

He studied and developed a deep appreciation for the flora and landforms of the region, adopting what Diboll describes as "a European perspective on the value of our beautiful native plants."

Rick Darke, a writer, photographer, and landscape consultant who lives in

TOP: MORTON ARBORETUM; BOTTOM: COURTESY OF FILSON/GORDON ASSOCIATES

Top: Jensen's naturalistic landscape design can be seen in the meadow at the Edsel and Eleanor Ford House at Grosse Point Shores in Michigan. Above: Jensen incorporated a feature called a council ring into many of his designs, such as this one at The Clearing in Ellison Bay, Wisconsin.

TOP: COURTESY OF EDSEL & ELEANOR FORD HOUSE; BOTTOM COURTESY OF THE CLEARING.

Landenberg, Pennsylvania, notes that instead of focusing just on the plants, Jensen took in the bigger picture. "Jensen looked at the repetition in the regional landscape and recognized patterns," says Darke.

BRINGING NATURE TO THE CITY

"Nearly every Sunday and holiday, summer and winter, spring and fall…I spent botanizing, studying and learning to know every plant that was native to this region," Jensen told Ragna Eskil for a 1930 *Saturday Evening Post* article. "By riding to the end of the street-car line and then walking, one could see quite a number of plants in a day." Jensen enjoyed his frequent jaunts into the country, but worried about the "multitudes who rarely get beyond the City limits."

A seemingly endless stream of people from rural areas and immigrants from Europe were flowing into Chicago at the end of the 19th century. Their legions labored by day and went home at night to cramped quarters in crowded neighborhoods. Jensen feared that these people, cut off from the natural world, would suffer spiritually and emotionally. In this concern he was not alone. Though poet Carl Sandburg championed the city of Chicago, calling it "Stormy, husky, brawling, City of the Big Shoulders," in his poem *They Will Say,* he admonished it:

You took little children away from the sun and the dew…
under the great sky…and…put them between walls
To work, broken and smothered, for bread and wages
To eat dust in their throats and die empty-hearted
For a little handful of pay on a few Saturday nights.

The plight of city dwellers fired Jensen's work at the Park District with a reformer's zeal. If he could not take the workers and their children out of the city to enjoy nature, he would bring nature into the city.

Jensen was soon in a position to do just that. Quickly promoted from street sweeper to gardener, Jensen rose to the position of foreman of the Union and Humboldt Parks in just four years.

"As foreman, I had my chance to design a garden," he told Eskil. He observed that "the foreign plants didn't take kindly to our Chicago soil. They would die out no matter how carefully we tended to them…." Coming to the conclusion that he was "trying to force plants to grow where they don't want to grow," Jensen turned to more willing candidates—the very wildflowers he had seen on his forays into the countryside.

Because at the time, native plants were not available through nurseries, Jensen remembered, "we went out into the woods with a team and wagon and carted [them] in ourselves." In Union Park, he arranged the plants in an informal way, quite unlike the placement of imported plants in formal, geometric beds typical of the era.

Created in 1888, Jensen's informal American Garden of wildflowers, backed by native shrubs and trees, was an innovative and completely new kind of display. And it became wildly popular, not least because its plants thrived in the hot midwestern summer, but also because visitors recognized the homey, familiar flowers of the countryside.

"People enjoyed seeing the garden," Jensen told Eskil. "They exclaimed excitedly when they saw flowers they recognized: They welcomed them as they would a friend from home."

TAKING CUES FROM THE NATIVE LANDSCAPE

The success of the American Garden at

JENSEN'S LEGACY

Jensen's design philosophy was influenced and supported by peers such as O.C. Simonds, superintendent of Chicago's Graceland Cemetery, Wilhelm Miller, a landscape architect and writer on the faculty at the University of Illinois at Urbana, and University of Chicago ecologist Henry C. Cowles.

In turn, Jensen "influenced a generation of landscape architects," says Julia S. Bachrach, historian with the Chicago Park District co-curator of "A Force of Nature," the first major exhibition of the Jensen's life and work.

"The professors at the University of Illinois carried on Jensen's legacy," says Nick Patera, a University of Illinois graduate in landscape architecture, who is now principal and senior vice president of Teska Associates, Inc., in Evanston, Illinois. And Jensen's message traveled beyond Illinois.

"Both my teaching and design work has been greatly influenced by Jensen's work and philosophy," says Darrel Morrison, professor and dean emeritus at the University of Georgia's School of Environmental Design. On alternate summers for some 30 years, Morrison taught a course at The Clearing, the school Jensen established at his final home in Wisconsin. The Clearing, now operated by an independent non-profit organization, continues to offer adults diverse educational experiences in the folk school tradition that Jensen had fostered.

In addition to his landscape design work and his efforts at social reform, Jensen is considered the leader of the Midwestern conservation movement. A force in the preservation of the Indiana dunes and starved rock—a natural landscape of extraordinary beauty and significance—he brought his influence to the formation of the Cook County Forest Preserve, and the Illinois State Park system. —C.O.

In the Glenwood Children's Park in Madison, Wisconsin, Jensen coaxed the native landscape to fill in a dirt trail, above, leaving unbroken forest, right, for children to explore.

Union Park encouraged Jensen to experiment at Humboldt Park. There he undertook an array of projects including a boat house and a long, meandering watercourse he called a "prairie river." He also installed children's gardens in several parks so that the youngest city dwellers would not lose touch with nature and would grow up to love and preserve it. As he worked in both parks, he honed his avant-garde naturalistic style.

"For Jensen, the only meaningful source of inspiration for landscape gardening was the native landscape," writes Jensen scholar Robert E. Grese in *Jens Jensen, Maker of Natural Parks & Gardens* (1998). Jensen rejected traditional garden style and looked, he told Eskil, to "the contours of the earth, the vegetation that covers it, the changing seasons, the rays of the setting sun and the afterglow, and the light of the moon."

Finding the grandiose styles of most conservatories pretentious, Jensen ordered the construction of a glass house with simple lines to be built in Garfield Park. Inside, rather than setting container plants on Victorian pedestals in formal groupings, as were seen in most conservatories of the day, Jensen designed plantings that recreated outdoor landscapes by placing plants directly in the ground. Greenhouse hardware was rendered invisible behind strongly horizontal stonework that suggested the bluffs along midwestern rivers. In 1908, when the greenhouse opened, it was considered revolutionary.

Jensen was an outspoken, dramatic, and controversial personality. He dressed with flair—a silk scarf at his neck—and spoke passionately—some thought overly so—about the things that concerned him. In 1895, his immense talent and energy got him promoted to superintendent of the 200-acre Humboldt Park. Five years later, his integrity got him dismissed by a dishonest park board because he refused to become involved with political graft.

COLUMBUS PARK

In 1905, Jensen was not only rehired, but promoted to general superintendent of the entire West Park System. As the parks' chief landscape architect he exercised his authority in the redesign of old parks and the installation of new ones.

In 1912, he had the opportunity to create an entirely new park. "He considered Columbus Park his masterpiece," says Bachrach. In an inventory of the 144-acre site, Jensen found traces of a sand dune. Utterly intrigued by this remnant of an ancient beach, Jensen used it as the theme for the park and installed berms to represent glacial ridges around the edges to surround a meandering prairie river.

In the children's playground area, he set aside a large open space for children where, away from the hazards of the city, they might run and play freely. This clear-

THIS PAGE: MORTON ARBORETUM (2); OPPOSITE: COURTESY OF BROOK COLLINS/CHICAGO PARK DISTRICT

ing was flanked by a "council ring"—a circular stone bench surrounding a fire pit. One of Jensen's signature design elements, the council ring was intended to encourage story telling and other social interaction. An enormous swimming pool was edged in stone to resemble a swimming hole. And he designed an outdoor theater he called a "players' green."

"Friends of the Native Landscape [a conservation group Jensen helped form] performed 'The Beauty of the Wild' at the solstice," says Bachrach. The audience sat across the stream from a stage surrounded by Jensen's favorite native trees—elms, maples, crabapples, and sumacs.

In addition to tennis courts, baseball diamonds, and football fields, there was a golf course that symbolized for Jensen the horizontal essence of prairie. Jensen took great care in orienting the golf course toward the setting sun and designing groves of trees to provide shade for the players.

In Columbus Park, Jensen brought together all of the elements of his beloved prairie landscape—"our meadow with its woodland borders, our river with its dark shaded bluffs, and our groves with their variation of light and shadow, are only a part of the landscape. The sky above, with its fleeting clouds and its star-lit heavens, is an indispensable part of the whole," he reported to the West Park Commission in 1917.

Resources

Jens Jensen: Maker of Natural Parks & Gardens by Robert E. Grese. Johns Hopkins University Press, Baltimore, Maryland, 1992. Reprinted 1998.

Pioneers of American Landscape Design, edited by Charles A. Birnbaum and Robin Karson. McGraw-Hill, New York, New York, 2000.

The Prairie Spirit in Landscape Gardening by Wilhelm Miller (1915). Reprinted by University of Massachusetts Press, 2002.

Siftings by Jens Jensen (1939). Reprinted by Johns Hopkins University Press, 1990.

Greater than the sum of its parts, Columbus Park, now a National Historic Landmark, condensed the glories of the Midwestern landscape into one idealized whole, that, Jensen told Eskil, fulfilled his "obligation as a park man to bring this out-of-doors to the city."

"Looking west from the river bluffs at sundown across a quiet bit of meadow, one sees the prairie reflected in the river below," he told the West Park Commission. "This gives a feeling of breadth and freedom that only the prairie landscape can give to the human soul."

If Jensen was not already considered the country's foremost landscape architect, Columbus Park cemented his reputation. In the next two decades, many prominent Americans, including the Henry Fords, the Edsel Fords, and Julius Rosenwald—founder of Sears and Roebuck—commissioned his work in their own gardens.

"In his work on private gardens, Jensen also collaborated, on a limited basis, with architects Frank Lloyd Wright, Louis Sullivan, and others who were lead figures in the parallel movement known as the prairie school of architecture," says Darrel Morrison, professor and dean emeritus of the University of Georgia's School of Environmental Design.

One of Jensen's last big public commissions was the Lincoln Memorial Garden in Springfield, Illinois, in 1935. Designed to re-create the landscape Abraham Lincoln might have known in his youth, the garden features a system of interconnecting paths that pass through groves of native trees and wildflower meadows and meet at council rings.

A SCHOOL OF THE SOIL

In 1935, at the age of 75, Jensen retired from his Chicago practice and founded The Clearing on a property he had been using as a summer home on Ellison Bay in Door County, Wisconsin. He directed The Clearing, which he described as "a school of the soil," in the tradition of Danish folk schools. In the isolated simplicity of The Clearing, students would develop their life values from contact with the wilderness, with nature, with the soil.

It was in the peace of the Clearing, that on October 1, 1951, just 17 days after his 91st birthday, Jensen died. Born in 1860 into a Europe hissing with the steam-powered Industrial Revolution, Jensen had spent his adult life in the booming, braying, burgeoning, "hog butcher of the world." In reaction to the great city's noise and glare and relentless development, Jensen drew an honest and fitting style from the landscape around him. It was a design approach that resonates even more powerfully today.

Jensen's design of Columbus Park evoked his beloved prairie landscape.

Carole Ottesen is a contributing writer for The American Gardener.

Sequencing the Sensual

This is the twelfth article of an ongoing series on garden design.

TOM CLIFTON

LAST ISSUE we attempted to impose some order and structure on the usually chaotic and oft-impulsive process of selecting plants for our gardens. The sheer excess of horticultural delights stultifies us. Endless bloom times, colors, and cultural requirements add to the confusion. But once we have narrowed down the choices and assembled a working list of candidates, how then to ensure a well-planned and choreographed garden?

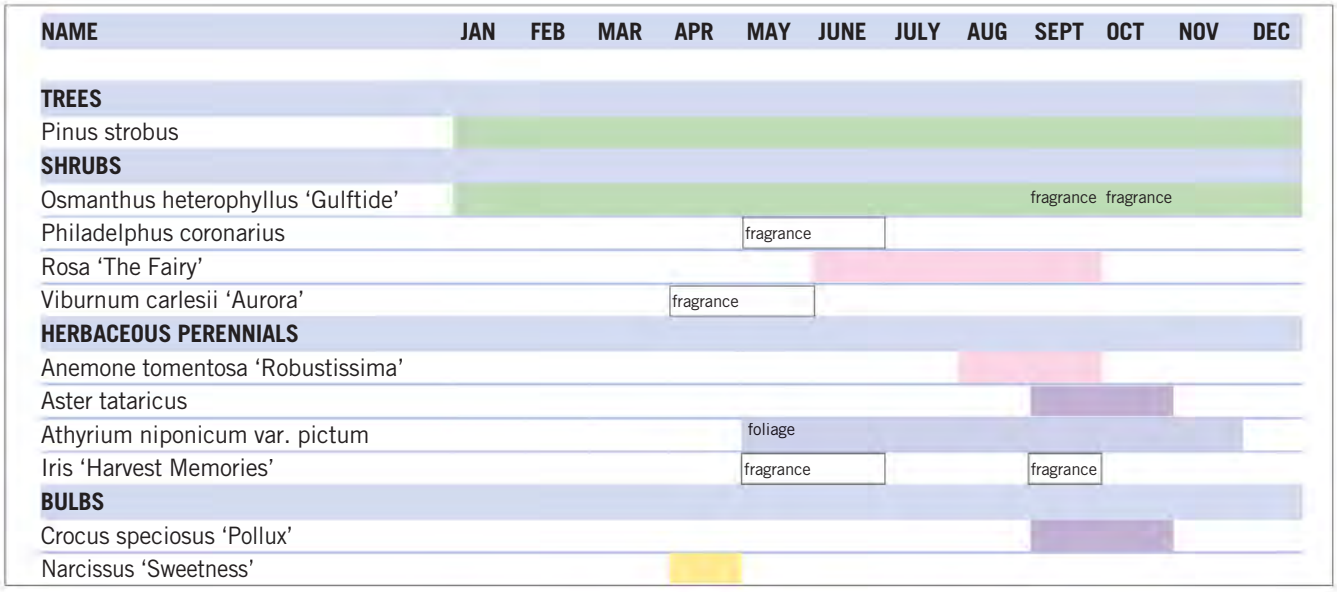
CHART AND SOUL

A time-tested tool I employ in creating gardens is the bloom chart. The chart is a means of capturing a planting's choreography—the complex movement of sense-stirring characteristics —as it waxes and wanes over the seasons. Indeed, landscape architect Lawrence Halprin called his fancy version of the chart a "score," drawing the metaphor from dance and theater (we touched on the garden as theater in the September/October 2004 issue). Halprin's score was a means of directing and documenting the sequential and episodic movement of objects through space over a period of time.

The chart or score's simplicity belies its efficacy and potency for both designing and analyzing gardens. It is a tool for everyone seeking coherence and clarity. Landscape architect William H. Frederick, Jr., a master from whom I have learned much, employs extensive charts to capture in two dimensions the dynamically three-dimensional complexity of his garden. Even a casual glance reveals the subtle and sophisticated layers of seasonal exuberance forming the warp and woof of his gardens (if you find a copy of his out-of-print *The Exuberant Garden and the Controlling Hand,* immediately hock your pearls or Rolex and buy it).

RIGHT PLACE AT THE RIGHT TIME

Making a chart is conceptually rather straightforward. I usually use an electronic spreadsheet program like Microsoft Excel.



A simple chart like this one can help you visualize the sequence of color, fragrance, and texture throughout the year. It's a useful tool for determining what your garden lacks or has in excess at any given season and at different height levels.

Paper and pencil works as well, though the computer allows for easy revisions and editing.

I list the months of the year along the top row of the chart. Charting the 12 months is usually descriptive enough for most plantings. Subdividing each month into early, mid, and late allows for capturing additional, fine textured detail. Many plants do not bloom for a full month, so the subdivisions are very helpful. The obsessive-compulsive among you may even want to schedule week by week. Others may be content with roughly delineating spring, summer, fall, and winter.

The left-most column lists each plant in the garden. I often group these into categories—trees, shrubs, herbaceous perennials, bulbs, etc.—to designate the design's spatial layers. That way, I can be sure I have included interest in all seasons and at all levels of the garden.

I then fill in the row next to each plant corresponding to its moment of special display. I fill the row in with a color roughly matching the plant's ornamental trait—berry, bark, or flower. I also find it useful to chart the various evergreen foliages since they are a constant, underlying structure. The chart will quickly show gaps and excesses in the planting scheme.

Adding various hatchings over the bars of color augments the amount of information you can include. For example, a crosshatch might indicate when the plant contributes fragrance. Other patterns might suggest foliage texture (fine, bold, wispy) or plant form (vertical, rounded, spreading). The trick is to balance capturing essential information against creating a cluttered page that's too chaotic to be useful.

The sidebar outlines several major uses for the chart; you may discover many more of your own. Next issue we conclude the two-year-long Gardening by Design series with a retrospective covering the key issues we have explored in that time.

Tres Fromme is a landscape designer at Longwood Gardens in Kennett Square, Pennsylvania.

WHY CREATE A PLANTING CHART?

A well-made chart illuminates several key aspects of your garden and acts as part of a useful design review.

Organizing Your Thoughts

If you have trouble remembering the specific color and bloom time of every plant you are considering for use in your garden, enter the information on the chart to quickly compare combinations.

Building Upon Sensory Characteristics

A chart shows at a glance what overlapping colors or other characteristics (fragrance, texture, etc.) are simultaneously present in the garden and allows you to see what harmonies and/or horrors you are planning in your plant combinations, as well as where plantings become too busy or go bust.

Testing Intensity and Duration of Interest

The horizontal rows reflect the length of time the plants are in bloom or otherwise doing their thing, when your garden peaks, and when it peters out. White space will indicate in what temporal or spatial layers interest may be lacking. For example, you may realize that ground-level perennials are the only elements providing interest through most of the year.

Inventorying Your Garden

The chart lists all the plants in the garden, so it offers a record of what you are growing. Adding a column at the far right of the sheet provides a space for you to make notes or describe the plants' key attributes. Generating a chart for each year allows comparisons over time.

Kathryn Kennedy, Plant Conservationist

by Lynda DeWitt

EXPERTS ESTIMATE that about 2,000 U.S. plant species—or 10 percent of the country's entire native flora—are at risk of extinction. At the heart of a nationwide effort to prevent these losses is the Center for Plant Conservation (CPC), a network of American botanical institutions headquartered at the Missouri Botanical Garden in St. Louis. Over 30 participating institutions from Hawaii to Massachusetts work with CPC to study and grow imperiled plants with the goal of returning them to natural habitats.

CPC President and Executive Director, Kathryn Kennedy, recently spoke with garden writer Lynda DeWitt about threats to native plants, current preservation plans, and what American gardeners can do to help.

Lynda DeWitt: What are the primary threats to our nation's native flora?
Kathryn Kennedy: The main threat is land use that destroys or degrades wetlands and other habitats as well as the unsustainable use of water resources. We haven't planned ahead for biodiversity, or fine-tuned our land management techniques to sustain many species. Often landowners have no idea that their practices are contributing to the decline of wild plants.

Another major threat is widespread invasive species that change our habitats and displace native plant populations. For certain plants—orchids and cacti come to mind—overcollection in the wild by plant fanciers threatens to wipe out many species.

Could you identify a few of the country's most imperiled plant species?
Hawaii has the highest number of imperiled plants. One is the Hawaiian tree cotton *(Kokia cookei),* a close relative of commercial cotton, which has striking red flowers (see *The American Gardener,* September/October 2003). It was believed to be extinct in the wild due to loss of its dryland forest habitat, but I'm happy to report that the successful tissue culture work at the Harold Lyon Arboretum in Honolulu has renewed hope for its eventual restoration.

Hawaiian tree cotton *(Kokia cookei),* above left, and smooth purple coneflower *(Echinacea laevigata),* above right, are endangered American natives that the Center for Plant Conservation and its partners are hoping to reestablish in their natural habitats.

Another, Baker's larkspur *(Delphinium bakeri),* a beautiful California wildflower, is known from only a single perilously-situated roadside population. CPC institutions are working with the U.S. Fish and Wildlife Service, the California Native Plant Society, and other groups to collect seeds for propagation, monitor the wild population, and examine genetic issues relating to reintroduction possibilities.

In the Midwest, more than 70 percent of our white prairie fringed orchids *(Platanthera praeclara* and *P. leucophaea),* native to tallgrass prairies, are gone. Partners such as Chicago State University and the Henry Doorly Zoo are conducting studies in efforts to help propagate these species, so we're increasingly hopeful that declines will be reversed.

In the Atlantic states, smooth purple coneflower *(Echinacea laevigata),* which grows in forest openings, is more than half gone. The North Carolina Botanical Garden has worked on the federal recovery plan for this plant and is optimistic about the species' re-establishment.

In addition to these critically endangered species, another 3,000 U.S. plant species "are of conservation concern." These species include the showy Bush's poppy mallow *(Callirhoe bushii)* and the widespread but declining aquatic Parker's pipewort *(Eriocaulon parkeri).*

LEFT TO RIGHT: COURTESY OF DAVID KENNEDY; COURTESY OF CPC; COURTESY OF J.S. PETERSON @ USDA-NRCS PLANTS DATABASE

The CPC network is monitoring 1,090 rare plant sites nationwide. We hope to determine which plants need intervention *before* populations fall to critically low numbers.

With so many endangered plants and so little time, how does CPC manage these conservation efforts?

Our state and federal resource managers are critical to coordinating efforts, but, ultimately, recovery has to be done locally by informed, engaged communities and institutions. That's what is so important about CPC; it works to build this network.

Institution scientists work with imperiled plants in greenhouses and in the wild, and they help to maintain and restore habitats for the plants' later re-introduction. A critical component of this effort is the National Collection of Endangered Plants, a collection of cultivated plants and seeds of imperiled, native plants that is stored at participating institutions across the county. The collection is a backup in case a species becomes extinct or no longer reproduces in the wild.

For More Information

Center for Plant Conservation
P.O. Box 299
St. Louis, MO 63166–0299
(314) 577-9450
www.centerforplantconservation.org

Are you hopeful that these endangered plants can be saved?

Without intervention, many of them are expected to be gone within 20 to 25 years, but there is still great potential for recovery for the majority of these species.

We *have* to avert these losses. Every species plays a role in a healthy ecosystem, and you just can't foresee what compounds or features our native plants have already evolved that we may need in the future. Eighty percent of U.S. endangered plants are closely related to plants that are economically important today.

What can gardeners do to help?

People often ask if they can grow plants at home for us. Unfortunately, without scrupulous management of reproductive lines, most species' genetics begin to shift away from wild-hardy types, so most gardeners cannot cultivate these plants at home for restoration work.

But gardeners *can* help by keeping invasives out of their landscapes. To help with this, CPC offers a voluntary code of conduct that we encourage all gardeners to follow (see *www.centerforplantconservation.org/invasives).* Another way gardeners can help is to avoid any unnecessary spraying when pollinators are actively foraging.

We need people who value plants to use their voices and their gardens to advocate for plant conservation. Every garden plant came from a native somewhere. Share your appreciation for plants with children, friends, and neighbors, and talk about why they are important. It's also critical to write or speak to our policy makers and let them know that you support saving our national plant treasures and are willing for them to make the necessary investments.

Free-lance writer Lynda DeWitt lives in Bethesda, Maryland.

tropical Florida *and* Hawaii

BY JOANNE WOLFE

The tropics offer a wealth of native wildlife plants.

Scarlet hibiscus, left, and sea grape, right, are good options for Florida habitat gardens.

LEFT: BILL JOHNSON; RIGHT: JERRY PAVIA

HABITAT GARDENING in tropical climates such as Hawaii and southern Florida is both a challenge and a delight. The challenge is that so much native habitat in these regions has been lost to development and encroachment of invasive, non-native species that it can be difficult to locate suitable habitat models and plants.

But if you take the time to research your location and find appropriate plants, you'll find that it's possible to create a delightful and rewarding landscape for both humans and wildlife.

As always, when considering plants that will sustain wildlife, focus on a diverse combination of those that offer food in the form of fruits or nectar and those that offer dense or evergreen foliage for shelter from the elements and predators.

FLORIDA HABITAT GARDENS

Tropical Florida and Hawaii share some similar plants—tree ferns and hibiscus, for example—but each has its own unique plants and wildlife. Although equally tropical, Florida habitat gardens tend to look very different from those in Hawaii.

Trees: Four top trees for tropical habitat gardens are geranium tree *(Cordia sebestena),* fringe tree *(Chionanthus virginicus),* sea grape *(Coccoloba uvifera),* and scrub hickory *(Carya floridana).* All are in the 20- to 30-foot-tall range, with hickory and sea grape on the taller end of the spectrum.

Geranium tree is one of the showiest Florida native trees; its large, tubular orange flowers are a magnet for hummingbirds and show up well from the back of the garden, where it's best located so that you don't notice the geiger beetles that tend to attack its foliage.

Scrub hickory, also called Florida hickory, has catkins of yellow-green flowers in spring, followed by husk-covered, sweet nuts that are enjoyed by humans and many wild creatures. This attractive landscape tree is highly drought tolerant. Fringe tree's unusual, fingerlike leaves and delicate, fragrant flower clusters give it an airy aspect. Large, dark blue fruits ripen in August and September, but the show is brief, because birds quickly consume the juicy morsels.

Sea grape also has unusual leaves—round and leathery with red veins, they start out bronze then turn green in summer and red in fall. Grapelike clusters of fruit can be eaten fresh or made into jelly. Sea grape is salt tolerant.

Shrubs and Vines: Berries are popular with humans and wildlife; choose red mulberry *(Morus rubra),* elderberry *(Sambucus simpsonii),* and dewberry *(Rubus trivialis)* for both flowers and edible fruit. Elderberry is especially appealing because it blooms most of the year. Vining coral honeysuckle *(Lonicera sempervirens)* is a hummingbird favorite, as is firebush *(Hamelia patens),* which also attracts butterflies.

Annuals and Perennials: *Salvia coccinea* is one of the best hummingbird

plants in any garden, followed by *Hibiscus coccineus;* let them share the limelight with *Lobelia cardinalis* and various milkweeds *(Asclepias tuberosa, A. incarnata, A. currassavica)* for an unequaled butterfly haven.

Round off the floral show with blanketflower *(Gaillardia pulchella),* beach or swamp sunflowers *(Helianthus debilis, H. angustifolius),* and wild petunia *(Ruellia caroliniensis),* all of which attract butterflies and bees.

HAWAIIAN HABITAT GARDENS

The Hawaiian Islands are a group of unique tropical environments that share plant genera. Species of those genera can vary from island to island, however, so it's be sure to seek out species that are indigenous to your area. Consult the resources on this page and get help from local botanical gardens and native plant nurseries.

Three types of habitats dominate the Hawaiian chain: coastal, dry forest, and wet forest. Some native plant species cross over, but coastal communities are characterized by low-growing, shrubby vegetation, whereas forest communities offer everything from huge trees and tree ferns to vines, shrubs, perennials, and annuals.

COASTAL

In coastal communities, anchor your habitat garden with a smaller tree such as screw pine, also called hala *(Pandanus tectorius),* or lo`ulu *(Pritchardia* spp.). Hala can grow to 30 feet but casts diffuse shade that allows other plants to thrive beneath it. The male trees offer clusters of fragrant flowers called *hinano;* pineapple-shaped fruits are borne only by female trees older than 10 years.

Lo`ulus are small palms that make attractive landscape focal points; moreover, some species bear edible seeds that taste like coconut.

Shrubs are a mainstay of coastal gardens and native choices include Hawaiian cotton or ma`o *(Gossypium tomentosum),* beach naupaka *(Scaevola sericea),* and `akia *(Wikstroemia uva-ursi).*

Ma`o grows two to five feet tall and sports hibiscuslike yellow flowers nestled among silvery evergreen leaves. Let it sprawl in rocky areas where it receives plenty of sun. Naupaka is best used in larger gardens, as it can grow to 10 feet and spread between six and 15 feet; however, it tolerates pruning. It offers clusters of purple-streaked white-to-lilac flowers and juicy fruit; it tolerates poor soils and salt air. `Akia provides a dense, sprawling shelter as tall as four feet; red, juicy fruits follow clusters of tubular yellow blooms. Twelve species of `akia are endemic to the islands, so look for one native to your area.

Consider screw pine, top, and Hawaiian cotton, above, for Hawaiian coastal gardens.

Shrubby ground covers include pua pilo *(Capparis sandwichiana),* which opens its white flowers after sunset; beach heliotrope *(Heliotropium anomalum),* which has succulent, hairy leaves and fragrant white-to-purple flowers with yellow eyes; and pohinahina *(Vitex rotundifolia),* a mat-forming shrub with trailing stems that bear clusters of blue flowers.

FOREST

Tree ferns are a signature plant of Hawaiian forest communities. Hapu`u *(Cibotium splendens)* can reach 20 feet and bear fronds as long as nine feet, but it is extremely slow growing.

For a faster-growing tree, try wiliwili *(Erythrina sandwicensis),* which averages 20 to 30 feet tall and shows off dense clusters of red, orange, or yellow flowers between August and September when the tree sheds its leaves. Wiliwili is a dry forest tree and will not tolerate wet soils.

Hibiscus is another Hawaiian signature plant. Its nectar-rich flowers attract hummingbirds and many insect pollinators. Koki`o `ula `ula *(Hibiscus kokio)* grows to 12 feet tall and has a canopy from three to 10 feet with flowers in dark red to orange. It tolerates wet or dry conditions. The Hawaiian state flower, ma`o hau hele *(Hibiscus brackenridgei)* sports large yellow blooms and is drought tolerant.

Joanne Wolfe is a contributing editor for The American Gardener.

Resources

FLORIDA

The Association of Florida Native Nurseries, P.O. Box 434, Melrose, FL 32666. (877) 352-2366. *www.afnn.org.* Retail directory available.

The Florida Native Plant Society, P.O. Box 690278, Vero Beach, FL 32960. (561) 562-1598. *www.fnps.org.*

Florida's Best Native Landscape Plants by Gil Nelson, University Press of Florida, Gainesville, Florida, 2003.

HAWAII

How to Plant a Native Hawaiian Garden (online handbook), *www.hawaii.gov/health/oeqc/garden/index.html.*

National Tropical Botanical Garden, 3530 Papalina Road, Kalaheo, HI 96741. *www.ntbg.org.*

Native Hawaiian Plant Society, Box 5021, Kahului, HI 96733-5021. *www.angelfire.com/hi4/nhps/index.html.*

BOTH COURTESY OF FOREST AND KIM STARR (USGS)

Horticultural News and Research Important to American Gardeners

100 YEARS OF HORTICULTURE

Two giants in the horticulture industry celebrated a century in business this year. Ball Horticultural Company and Bailey Nurseries, Inc., both started in 1905, found fitting ways to observe the milestone.

Headquartered in West Chicago, Illinois, Ball is a family-owned business that develops ornamental plants such as the well-known Wave™ petunias and their Simply Beautiful™ line. In honor of the company's centennial, Ball redesigned its seven-acre trial and display gardens at their headquarters. The new "Gardens at Ball" were unveiled this past summer to

Left: Part of the redesigned gardens at Ball Horticultural Company's headquarters in Chicago. Above: Minnesota-based Bailey Nurseries planted a new rose garden at the State Capitol in St. Paul to celebrate the building's 100th anniversary.

"better show our visitors the innovation, excellence, and creativity we value at Ball," says Jim Nau, Ball's trials manager. As they begin their second century, Ball will continue to develop innovative new plant varieties, with a focus on sustainable horticulture through the use of biodegradable containers, organic practices, and programs to increase customer and public awareness. For more information about Ball, visit *www.ballhort.com.*

Bailey Nurseries is also family-owned, now run by fourth generation Baileys. Based in Newport, Minnesota, it has grown into one of the largest wholesale nurseries in the United States. Since the State Capitol Building in St. Paul turned 100 this year as well, Bailey designed and installed a new rose garden in front of it this past June. The nursery donated all the plants to create the garden, which features 11 varieties of Easy Elegance® roses—including *Rosa* 'Centennial' named in honor of the celebration. Each of the 87 counties in Minnesota also received five 'Centennial' rose plants as part of the festivities.

As for future plans, "We will continue to actively support research, contribute to organizations that enhance the environment, and study ways to reduce usage of chemicals, water, and plastic in our industry," says Bailey president Terri McEnaney. In addition, the company will "remain dedicated to providing the highest quality products and services." Visit *www.baileynurseries.com* to learn more.

REPLANTING AFTER HURRICANE KATRINA

The long-term effects of Hurricane Katrina will take years to be fully understood; however, the landscape—both physical and emotional—within the cites of New Orleans, Biloxi, and other communities throughout the lower Mississippi River Valley has been irrevocably altered. One change has been the loss of the region's most prominent natural features: the trees. Katrina's wind and water dislodged and smothered many roots, sparing neither 1,000-year-old specimens nor saplings.

One sliver of positive news on the tree front is that live oaks *(Quercus virginiana),* perhaps the Gulf Coast's most characteristic trees, have proven fairly resilient. "Of all the trees in Louisiana, the live oaks fared the best during the Hurricanes Katrina and Rita," says Coleen Perilloux Landry, chairman of the Live Oak Society (LOS). Landry is the only human "member" of the LOS; the other 5,000-plus members are all live oak trees. To become a registered member of the society, a tree must have a trunk with a minimum girth (circumference) of eight feet. According to Landry, the 'Seven Sisters Oak' in Lewisburg, the oak with the largest girth, "survived Katrina quite nicely, just two blocks from the shore of Lake Pontchartrain." To learn more about the LOS, visit *www.*

Unlike many Gulf Coast trees, live oaks—like these in New Orleans City Park—proved resilient against Hurricane Katrina.

LEFT: COURTESY OF BALL HORTICULTURAL COMPANY; CENTER: COURTESY OF BAILEY NURSERIES, INC.; RIGHT: COURTESY OF COLEEN P. LANDRY

louisianagardenclubs.org/pages/oak.htm.

American Forests, a national nonprofit group dedicated to extending the tree canopy in urban environments and promoting sound forestry practices, has created a Katrina ReLeaf Fund to aid in the replanting of Mississippi Valley trees. "We know from similar experiences after Hurricane Andrew and Hugo that the people of the Gulf Coast soon will miss their trees," says Deborah Gangloff, executive director of American Forests. "Trees are important for their leafy shade, as well as the sense of community they provide. American Forests has pledged to help residents put down new roots in their communities when it's possible to plant again in the Gulf Coast."

Donations made through American Forests' Web site, *www.americanforests.org/planttrees,* are eligible for federal matching funds. The group has teamed up with state and local Forest Service organizations and universities in the three hardest-hit states to implement the "ReLeaf" program in 2006.

Visit the AHS Web site *(www.ahs.org)* for a link to the "Releaf" programs and other efforts to help the Gulf Coast region recover from Hurricane Katrina.

The tiny larva of a winter moth (compare its size to the penny below it) inflicts tremendous damage to trees by attacking the leaf buds and young leaves, which eventually weakens trees.

NEW MOTH PLAGUES MASSACHUSETTS

A relative newcomer on the pest scene, winter moths *(Operopthera brumata)* have been found in Washington and Oregon as well as in regions of Canada, but now are becoming a serious problem in eastern Massachusetts and seem to be spreading.

"We know it's in all coastal towns in the state—it's in the north shore, Boston, the south shore, Martha's Vineyard, Cape Cod, really most of the

COURTESY OF ROBERT D. CHILDS

HORTICULTURAL HISTORY: HENRY NEHRLING'S GARDENS

Henry Nehrling, a schoolteacher and naturalist born in 1853, was also an avid gardener. In 1884, he purchased 40 acres of land in Gotha, Florida, where he built a renowned garden over the next several decades. "As my 'Palm Cottage Gardens' at Gotha grew and developed from year to year, the results far surpassed any expectations or efforts Nehrling wrote in *The Plant World in Florida*, a collection of his notes published in 1933. "Kind folk sent me more and more tropical plant material, and I soon found myself surrounded with many rare and valuable palms, trees, ferns, shrubs—in fact every type of growing plant."

Henry Nehrling

Working with the U.S. Department of Agriculture, Nehrling devoted himself to studying and testing these plants in this garden, including many plants, such as caladiums, hybrid amaryllis, and gloriosa lilies, that became the foundation for Florida's then nascent nursery industry. Thousands came to visit his garden, including the likes of Theodore Roosevelt, Thomas Edison, and Nehrling's friend and famous horticulturist Liberty Hyde Bailey.

When Nehrling died in 1929, the property was sold to cover his debts. Over the ensuing years, it has changed hands many times and been divided up. Now, efforts are being made to preserve the six acres that remain of Nehrling's original gardens in Gotha. His great grandson Richard Nehrling has founded the non-profit Henry Nehrling Society, for this purpose.

The Henry Nehrling Society hopes to preserve Nehrling's original home, above, along with six acres of surrounding gardens.

After an unsuccessful attempt to purchase the property as parkland in conjunction with Orange County in Orlando, Florida, this past September, the organization is working to find another solution. "Even though this is a local garden, we hope that people will realize that Henry Nehrling's work has influenced plants and trees that we now grow all over the country," says Richard.

For more information about the garden and the efforts to preserve it, contact Angela Withers, president of the Henry Nehrling Society, at (407) 876-9962, or visit *www.nehrlinggardens.org.*

—V.N.

capes," says Richard Childs, an entomologist for the University of Massachusetts Extension Landscape, Nursery, and Urban Forestry Program. "It's also in five counties in Rhode Island, and I wouldn't be surprised if we found it in southern New Hampshire."

The moths are light brown and their wings appear to have hairy margins. They emerge near the end of November to mate and lay eggs. When the larvae hatch, they eat leaf and flower buds of host trees during March and April—in some cases crippling the trees' ability to leaf out. The voracious caterpillars continue to feed on tender young leaves until May or June. Tree mortality can occur after several years of moth defoliation. Host trees are diverse, including oaks, maples, cherries, ashes, white elms, and crabapples. The moths also target roses, blueberries, and herbaceous perennials growing underneath trees.

Applications of dormant oil and products containing the bacterial insecticide *Bacillus thuringiensis* (Bt) have proven effective at killing the eggs and young larvae, respectively. University of Massachusetts scientists are also experimenting with a parasitic fly called *Cyzenis albicans,* which feeds on winter moth larvae.

'Feuerhexe' Cheddar pink, the Perennial Plant Association's 2006 Plant of the Year

DIANTHUS WITH DISTINCTION

Intense magenta flowers, silvery-blue foliage, and an easy-going nature have earned *Dianthus gratianopolitanus* 'Feuerhexe' (Firewitch) the distinction of 2006 Plant of the Year from the Perennial Plant Association. This plant produces abundant, clove-scented flowers in spring and will re-bloom if deadheaded. Growing up to six inches tall, it makes a good ground cover or rock garden plant. It thrives in full sun and well-drained soil, and will grow in USDA Hardiness Zones 3 to 8 and AHS Heat Zones 10 to 1.

TOP LEFT: COURTESY OF NAPLES ZOO AT CARIBBEAN GARDENS; TOP RIGHT: COURTESY OF THE HENRY NEHRLING SOCIETY; BOTTOM: COURTESY OF MARY WALTERS/WALTERS GARDENS

On a nomenclatural note, the common name of this *Dianthus* species is Cheddar pink, which refers to a region of southwest England, Cheddar Gorge, where the plant was once commonly found in the wild. The accepted cultivar name is the original German rendition, but in North America the plant is often sold under the English translation, Firewitch.

SUGAR NOT-SO-SWEET FOR INSECTS

Researchers have discovered how to harness one of nature's own insect controls—sugar-based compounds found in wild tobacco plants. Known as sugar esters, this family of compounds is showing potential as a safe and effective alternative to conventional chemical insecticides.

Several years ago, Agricultural Research Service (ARS) researchers at the U.S Department of Agriculture (USDA) laboratories in Beltsville, Maryland, observed an interesting phenomenon when insects came in contact with the tobacco plants. The insects rapidly weakened and died from what turned out to be desiccation. Although scientists initially believed the nicotine in the plants caused the insects to die, they later determined that sugar esters were responsible.

Natural sugar esters proved too costly to manufacture on an industrial scale, so scientists turned to synthetic models. In 2002, Gary J. Puterka, an entomologist at the Appalachian Fruit Research Station in Kearneysville, West Virginia, patented the first synthetic sugar ester—sucrose octanoate—with industry partners. This compound has been registered for use on agricultural and greenhouse crops as well as on indoor and garden plants. Marketed under the name Sucrocide, it is currently being used by the beekeeping industry to control varroa mites on honey bees.

Most recently, Puterka and his team have patented two new synthetic sugar esters, one of which, sorbitol octanoate, can be produced more cheaply than sucrose octanoate. Puterka is awaiting a decision from the U.S. Environmental Protection Agency on approval of a license for commercial and garden use of the new compound.

A PRESERVATION PARTNERSHIP

Through a multi-million dollar campaign called "Restore America: A Salute to Preservation," Home and Garden Television (HGTV) and the National Trust for Historic Preservation partnered in 2003 to restore 12 sites per year around the country. Sites are chosen from the National Trust's Save America's Treasures program, which is "dedicated to identifying and rescuing the enduring symbols of American tradition that define us as a nation."

Horticulturally important sites on the list to date include the Conservatory of Flowers in San Francisco, California; Dunn Gardens in Seattle, Washington; and Hakone Gardens in Saratoga, California. HGTV features each preservation project on its program "Restore America" for a month. Please check HGTV's Web site at *www.hgtv.com* for program scheduling and more information.

Written by Assistant Editor Viveka Neveln and Editorial Intern William Clattenburg.

GIFTS FOR THE GARDENER

For the deserving gardeners on your list, here are some nifty gift ideas that are sure to please.

AHS Membership

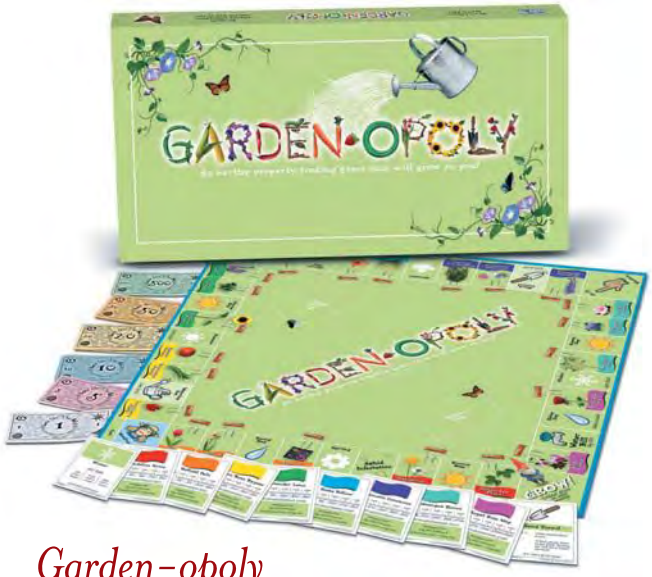
Until December 5, you can get three memberships in the American Horticultural Society for the price of two (a $105 value for only $70). Membership includes six issues of *The American Gardener,* free admission to hundreds of botanical gardens and flower shows, priority registration for AHS educational programs, and participation in the popular AHS Annual Seed Exchange. To take advantage of this offer, visit *www.ahs.org* or call (800) 777-7931.

Olive Wreath

Not only is this silvery green wreath a stately adornment for your door or table, but all profits from its sales benefit America's Second Harvest—The Nation's Food Bank Network. Priced at $50 plus shipping. Available exclusively at *www.lindsayolives.com* or by calling (800) 801-1469.

Gardener's Remedy Kit

Protect your skin before gardening and soothe it afterwards with the help of this all-natural assortment from All Terrain. Includes insect repellent, lip balm, massage cream, sunscreen, and more. Retails for $41.53. To order, call (617) 332-1960, or visit *www.all-terrainco.com.*

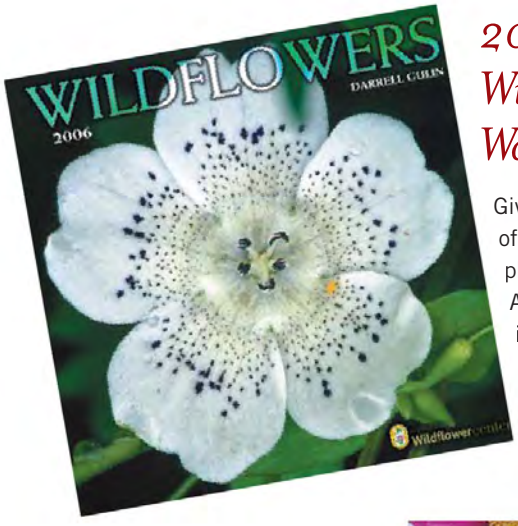


Garden-opoly

Gardeners of all ages will enjoy this new twist on a familiar board game. Garden-opoly offers a whimsical way to learn fun facts about the garden as players buy "plant" properties and spend time "weeding" rather than going to jail. Available for $24.95. (800) 422-3434. *www.lateforthesky.com.*

Radius Garden Tools

Gardening chores just got easier with four new ergonomically designed garden hand tools from Radius—a trowel, bulb planter, weeder, and cultivator—each designed to reduce wrist stress and maximize efficiency. Available from Lee Valley Tools *(www.leevalley.com)* and from retail garden centers. Contact Radius for a source near you; (734) 222-8044, *www.RadiusGarden.com.* Each tool retails from $13 to $15.



2006 Lady Bird Johnson Wildflower Center Wall Calendar

Give a gardening friend 12 months of beautiful native wildflowers photographed by Darrell Gulin. Available for $18.95, shipping included. Call toll free (877) 945-3357 or order at *www.wildflower.org.*

Cattail Bird Feeder

Treat a friend (and his or her birds) to one of these unique metal feeders. Each holds up to a half pound of sunflower seeds and is easy to refill. Available from Gardener's Supply Company for $19.95. To order call (800) 427-3363 or visit *www.gardeners.com.*

Mini Wellington Boots Terracotta Vase

This glazed terracotta "wellies" vase adds a touch of charm to any desk or shelf. It's just the right size for a small bouquet, or it can also hold pencils or plant labels. Available in green or blue for $14.95 from Garden Artisans. (410) 721-6185. *www.gardenartisans.com.*

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

Join us now to take advantage of the many benefits of membership in the American Horticultural Society

As an AHS member, you get

The American Gardener Our beautiful full-color bi-monthly magazine offers in-depth articles written by plant and gardening experts and enthusiasts.

Free Admission or special discounts to 170 public gardens and flower and garden shows across the United States and Canada.

Free Seed Exchange Program AHS's annual seed exchange program enables members to obtain hundreds of uncommon varieties of seeds.

Travel Study Program AHS and the Leonard Haertter Travel Company offer superb national and international garden-based, educational tours to beautiful private and public gardens in the United States and abroad.

Special invitations to educational programs such as the AHS Garden Schools and AHS partner events that include the Epcot International Flower & Garden Festival and the Colonial Williamsburg Foundation Garden Symposium.

AHS Online Our Web site *(www.ahs.org)* contains a wealth of information, including articles from *The American Gardener,* members-only pages with special information and updates, and links to other prominent gardening sites.

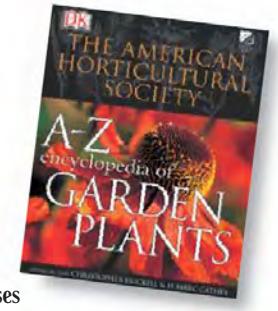
Your membership also supports our many national programs

George Washington's River Farm The AHS's National Headquarters is located on a scenic 25-acre site overlooking the Potomac River. Formerly one of our First President's farms, the property now features an artful blend of naturalistic and formal gardens that offer year-round delight to visitors of all ages.

National Children and Youth Garden Symposium Since 1993, this annual program has led the way in promoting the value of children's gardens and garden-based education.

The Growing Connection This innovative educational program teaches children about the science of growing food plants and their role in a healthy diet.

Online Gardening Courses Enroll in state-of-the-art online garden classes through AHS's partnership with the Horticultural Gardening Institute of Michigan State University.



Heat Tolerance Map In 1997, AHS introduced the AHS Plant Heat Zone Map, which has revolutionized the way American gardeners select region-appropriate plants.

Book Program AHS and DK Publishing, Inc., have teamed up to create a definitive horticultural reference library for the 21st century.

SmartGarden™ Launched in 2000, this AHS program uses existing tools, such as the USDA Plant Hardiness and AHS Plant Heat Zone codes, and considers new criteria to develop guidelines that best reinforce our stewardship of the earth.

Horticultural Intern Program Horticulture students from around the country get hand's-on experience in garden maintenance and design and an opportunity to work with leading gardening experts.

National Awards Program The Great American Gardeners Awards recognizes individuals and organizations who have made significant contributions to horticulture. The Flower Show Awards spotlight earth-friendly garden displays at flower shows. Noteworthy garden books are the focus for our Book Awards program.

Annual Membership Levels

Annual membership in the American Horticultural Society, including six issues of *The American Gardener* magazine and all the benefits described on this page, is available at the following basic levels (for additional levels, visit *www.ahs.org)*:

- $35 Individual
- $100 Family*
- $50 International
- $50 Couple
- $1,000 President's Council
- Corporate Membership (contact our office)
- Horticultural Partner (contact our office)

*Up to four membership cards per household

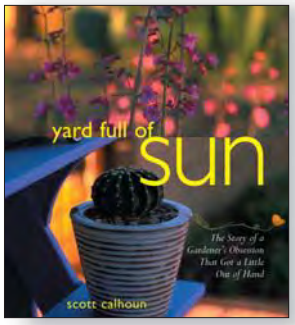
To become an AHS member, call (703) 768-5700 or visit us at *www.ahs.org*

Recommendations for Your Gardening Library

Yard Full of Sun: The Story of a Gardener's Obsession That Got a Little Out of Hand

Scott Calhoun. Rio Nuevo Publishers, Tucson, Arizona, 2005. 192 pages. Publisher's price, softcover: $22.95.

WHAT DO NOAH WEBSTER, Peter O'Toole, and Wile E. Coyote have in common? Each has contributed to society's misguided notions about deserts. In his dictionary, Webster defined a desert as "a desolate or forbidding area." This scary image would later be "confirmed" in movies such as *Lawrence of Arabia* and all those Roadrunner cartoons.



In fact, the deserts of the Southwest are alive with a variety of vibrant colors, textures, and forms, and over the years, a number of books have attempted to counter all that unfriendly propaganda. Among the very best is Scott Calhoun's *Yard Full of Sun.*

Calhoun is a professional nurseryman living in Tucson. Besides being an exceptional gardener, he is also a gifted writer; he tells the story of his (and his family's) horticultural odyssey with wit and a delightful earthiness—qualities all too rare in gardening literature. His book reads like a chatty letter from a friend.

"Where Phoenix had largely rejected the Sonoran Desert," Calhoun observes, "Tucson embraced it." So did the Calhouns. The author details the building of his family's resource-conserving "green" home, and the designing of their Sonoran garden. His plant profiles are full of solid information as well as personal anecdotes, including a thwarted prairie zinnia raid at a local library.

One of the requisites of a good gardening book is good photography, and we are not disappointed here. The pictures of plants and gardens are first-rate, thanks to the combined camera skills of Calhoun, his wife Deirdre, and W. Ross Humphreys. The photo of an ocotillo fence is pure art.

Calhoun also provides useful plant lists, rainfall charts, and lists of public gardens and native nurseries in all the Southwestern states. He even throws in some prickly pear recipes.

If you live in New Jersey or Iowa, you'll find this book a delightful read. If you live in the Southwest, it'll be one of your most valuable resources.

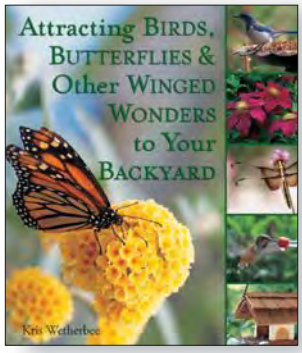
—Andy Wasowski

Andy Wasowski and his wife, Sally, have authored nine books on native landscaping, including Requiem for a Lawnmower: Gardening in a Warmer, Drier World. *They live near Taos, New Mexico.*

Attracting Birds, Butterflies & Other Winged Wonders to Your Backyard

Kris Wetherbee. Lark Books, New York, New York, 2004. 176 pages. Publisher's price, hardcover: $24.95.

KRIS WETHERBEE, in collaboration with her photographer husband Rick, has created an attractive, illustrated, step-by-step guide to help you entice birds and butterflies to visit and nest in your garden. After introducing wildlife's basic needs—food, fresh water, and shelter—she elaborates with chapters full of projects and illustrated instructions for providing them.



Every page contains captivating pictures—from birds at feeders, to tandem damselflies, to charming birdhouses. The author approaches her topic with passion and from an apparent wealth of personal experience, providing practical tips throughout, such as filling bird feeders at night and placing stones for butterflies to bask on. Descriptive lists of plants with their wildlife value, sections on how to design and garden, and profiles of 15 bird types, 10 butterfly and four moth groups, and six dragonfly/damselfly genera round out the text.

On occasion, the book misses opportunities to enlighten its readers. Despite several mentions of checking with local nurseries for advice about plants that will grow well in one's conditions, there's no emphasis on the value to wildlife of growing regional species—for example, the need of some species for the protective effect of chemicals in the nectar of flowers with which they coevolved. And although a sidebar extols the virtues of natural pest control, the book does not explicitly warn that using pesticides may undo your good work in attracting beneficial wildlife.

Readers will find well-written instructions for making 11 different nest boxes (including those for robins, screech owls, and chickadees). There are six feeder projects, such as hanging platform, covered bridge, and butterfly fruit feeder, and four projects for providing water in the garden, which range from—my personal favorite—a simple flowerpot birdbath to a full-out mini wetland. A delightful chapter, titled "Enjoying the Show," teaches how and when to get out in the yard to find and enjoy these winged wonders.

—Elizabeth Schwartz

Elizabeth Schwartz teaches native-plant gardening at the University of California–Los Angeles Extension.

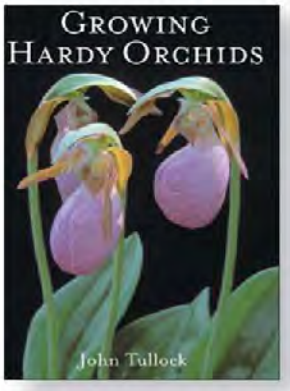
Growing Hardy Orchids

John Tullock. Timber Press, Portland, Oregon, 2005. 244 pages. Publisher's price, hardcover: $29.95.

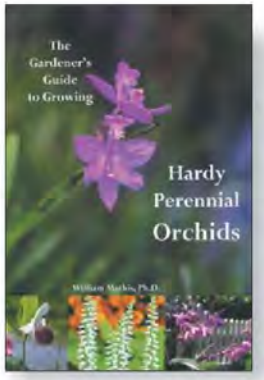
The Gardener's Guide to Growing Hardy Perennial Orchids

William Mathis. The Wild Orchid Company, Doylestown, Pennsylvania, 2005. 104 pages. Publisher's price, softcover: $24.95.

ORCHIDS! The very name conjures up images of colorful, exotic flowers in a hobbyist's humid greenhouse, or vigorous plants laden with oversized blooms on display in a botanical garden's conservatory. With over 50,000 species and hybrids in cultivation, most of which are easily grown and more readily available than ever, tropical orchid appreciation is among the world's most popular pastimes.



Until a few years ago, these were the only scenarios for growing orchids in the temperate zone. In the 1980s, knowledgeable and forward-thinking folks exchanged ideas at two ground-breaking symposia that focused on growing native terrestrial orchids and discussed the problems of propagating them from seeds, division, and tissue culture. That was the beginning. Now, suddenly, there are two great books that offer gardeners detailed information about growing hardy orchids in the backyard.



Growing Hardy Orchids and *The Gardener's Guide to Growing Hardy Perennial Orchids* are excellent books that contain well-researched discussions of plants and planting techniques, and sources of commercially propagated species. Both books have fully illustrated galleries of orchids.

John Tullock's book is the more thoughtful of the two in presenting his personal views on orchids in nature, their conservation, and the problems with previous efforts to grow hardy species. He describes his tested soil mixes and growing situations that anyone can follow. The pictures of plants and bed preparation are also very good.

The book by William Mathis focuses more on growing techniques, and less on background and philosophical issues. He also includes some good photos of unusual hybrids and companion plants, such as pitcher plants for the bog garden.

While certain hardy orchid genera have long been available—such as *Calanthe, Cypripedium, Platanthera,* and *Pleione*—helpful information about them was obscure. With these books, you won't have to content yourself with *wishing* you could grow these and others in your garden, you'll know how.

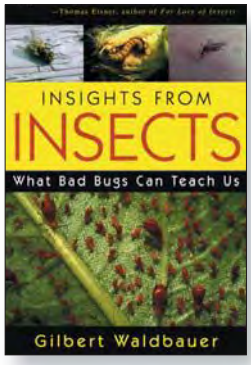
—Larry Mellichamp

Larry Mellichamp is director of the University of North Carolina at Charlotte Botanical Gardens and co-author of The Winter Garden.

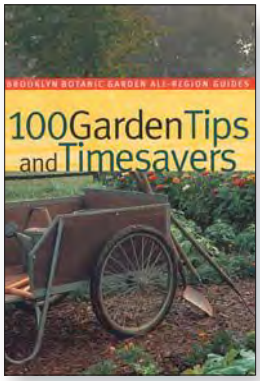
A Potpourri of Tempting Titles

LOOKING FOR A good book to dig into on a cold winter's day? Or perhaps you're hoping to find the perfect holiday gift for a gardening friend. These tantalizing titles could do the trick. From understanding insect pests to time-saving garden tips, each book offers unique, useful, and fascinating insights into the horticultural world.

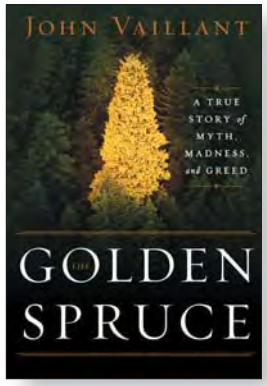
Most gardeners bristle at the thought of marauding aphids and voracious Japanese beetles, but in ***Insights from Insects: What Bad Bugs Can Teach Us*** (Prometheus Books, 2005, $18), Gilbert Waldbauer makes the case that if you really stop and get to know these insects, you'll find they're actually quite amazing creatures. "We know much more about pest insects—those that conflict with our interests—than about the great majority of other insects," explains Waldbauer. "Fortunately, what we learn about pest insects applies to all insects, and teaches us a great deal about the role of insects in a worldwide web of life, upon which we depend for our very existence." The book profiles 20 pernicious pests from mosquitoes and house flies to gypsy moths and corn earworms to reveal intriguing insights into ecology, natural selection, genetics, and more.



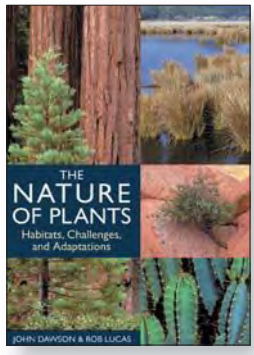
For those who wish to hone their gardening skills or want to perform garden chores more efficiently, there's ***100 Garden Tips and Timesavers,*** one of the Brooklyn Botanic Garden's All Region Guides (Brooklyn Botanic Garden, 2005, $9.95). "I've tried to make the most of my time in the garden by using a combination of inspiration, ingenuity, and a fair amount of common sense to find shortcuts to a beautiful, healthy, abundant garden," writes author Walter Chandoha. In this handy little volume, he has picked 100 of his tips to share, from Number 1: "Deadheading Annuals for Repeat Blooms," to Number 10: "Reusing Toy Wagons." Tips are organized into categories such as "Garden Design" and "Improving the Soil" for easy reference, and illustrated with color photographs and diagrams.



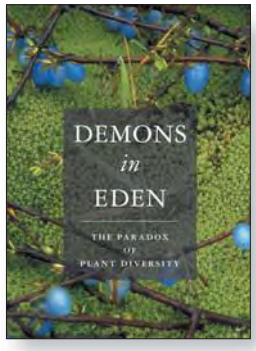
Some of the largest plants on earth star in ***The Golden Spruce: A Story of Myth, Madness, and Greed*** (W.W. Norton, 2005, $24.95) by John Vaillant. Set in the old-growth forests of Canada's Queen Charlotte Islands, this true tale opens with a mysterious kayak washing up on a remote island in some of the roughest waters in the world. How it got there and why can only be answered by first exploring the rich natural history of the region, which revolves around the native Haida people and their encounters with early explorers, fur traders, and finally loggers. One logger in particular has an integral and unexpected part to play in this vividly written and well-researched story about the golden spruce, a 300-year-old tree the Haida held sacred.



A mutant golden spruce is just one example of the weird and wonderful variations found in the plant kingdom. ***The Nature of Plants: Habitats, Challenges and Adaptations*** by Jason Dawson and Rob Lucas (Timber Press, 2005, $39.95) takes a thorough and scholarly look at the incredible diversity of plant life, spurred by the need to adapt to our planet's extremely variable conditions. Readers will discover how plants have not only managed to gain a foothold from the world's tropics to the poles, but to thrive in spite of drought, floods, fire, heat, and cold, not to mention the animals, fungi, and bacteria that use them for food. Over 200 color photographs further augment this fascinating book.



In light of such diversity, one might wonder why there are so many plant species in any given region when natural selection tends to favor only the best survivors. In ***Demons in Eden: the Paradox of Plant Diversity*** (University of Chicago Press, 2005, $25), ecologist Jonathan Silvertown takes on the challenge of answering this question. He leads readers on a journey around the globe, looking at what can happen when "the Darwinian demon hiding in every species" is unleashed and how biodiversity persists in spite of these "demonic" tendencies. While this may sound like rather cerebral subject matter, Silvertown has a knack for explaining complex biological concepts in an accessible and engaging way. He deftly uses analogy and example to illuminate his discussions, and often waxes lyrical in his descriptions.



—Viveka Neveln, Assistant Editor

Horticultural Events from Around the Country

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 *ww.ahs.org/events/reciprocal_events.htm.*

NORTHEAST

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

RAP NOV. 19–JAN. 8. **Holiday Train Show.** The New York Botanical Garden. Bronx, New York. (718) 817-8616. *www.nybg.org.*

DEC. 2–4. **Monadnock Festival of Trees.** Peterborough Garden Club. Peterborough, New Hampshire. (603) 924-6630.

DEC. 4. **Holiday Sing-In and Candlelit Greenhouse.** Planting Fields Arboretum. Oyster Bay, New York. (516) 922-9210. *www.plantingfields.org.*

RAP DEC. 10. **Heirloom Apples and Homemade Cider.** Garden demonstration. Wave Hill. Bronx, New York. (718) 549-3200. *www.wavehill.org.*

DEC. 10. **Winter Tree Identification.** The New England Wildflower Society. New Haven, Connecticut. (508) 877-7630. *www.newenglandwildflower.org.*

MID-ATLANTIC

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

AHS DEC. 1–DEC. 23. **Holiday Display.** River Farm. American Horticultural Society. Alexandria, Virginia. (703) 768-5700. *www.ahs.org.*

DEC. 5–8. **Virginia Turfgrass Short Course.** Virginia Turfgrass Council. Virginia Beach, Virginia. (757) 464-1004. *www.vaturf.org.*

RAP DEC. 21–JAN. 8. **Winter Silhouettes Exhibit.** Bonsai. U.S. National Arboretum. Washington, D.C. (202) 245-2726. *www.usna.usda.gov.*

Looking ahead

JAN. 20–22. **"Magical Gardens" Virginia Flower & Garden Show.** The Virginia Horticultural Foundation. Virginia Beach Pavilion. Virginia Beach, Virginia. (877) 882-0057. *www.vafgs.org.*

SOUTHEAST

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

NOV. 18–DEC. 31. **Fantasy in Lights.** Callaway Gardens. Pine Mountain, Georgia. (706) 663-5187. *www.callawaygardens.com.*

RAP NOV. 21. **Evening Lichen Ramble.** The State Botanical Garden of Georgia. Athens, Georgia. (706) 542-1244. *www.uga.edu/botgarden.*

RAP NOV. 24–JAN. 2. **Victorian Holiday.** Exhibit. Harry P. Leu Gardens. Orlando, Florida. (407) 246-2620. *www.leugardens.org.*

Looking ahead

JAN. 5 & 6. **The New Mid-States Horticultural Expo.** The Kentucky Nursery & Landscape Association, The Tennessee Nursery & Landscape Association, the Southern Nursery Association. Louisville, Kentucky. (770) 953-3311. *www.sna.org/midstates.*

JAN. 19–22, 2006. **Gardens of Florida. The Tampa Bay Flower Show.** Tropicana Field. St. Petersburg, Florida. (727) 596-1204. *www.flowershow.com.*

NORTH CENTRAL

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

RAP NOV. 18–JAN 8. **Holiday Door Décor and More.** Exhibit. Klehm Arboretum. Rockford, Illinois. (815) 965-8146. *www.klehm.org.*

RAP NOV. 20 & 21. **Decorative Outdoor Winter Container Garden.** Presentation. Chicago Botanic Garden. Chicago, Illinois. (847)

835-5440. *www.chicagobotanic.org.*

DEC. 3. **Wreath Workshop.** Reiman Gardens. Ames, Iowa. (515) 294-2710. *www.reimangardens.iastate.edu.*

RAP DEC. 11–MAR. 2006. **The Art of Nature.** Exhibit. Olbrich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. *www.olbrich.org.*

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

RAP NOV. 26. **Fall Wildflower Walk.** Crosby Arboretum. Picayune, Mississippi. (601) 799-2311. *www.msstate.edu/dept/crec/camain.html.*

RAP DEC. 10. **Holiday Wreath Workshop.** Missouri Botanical Garden. Saint Louis, Missouri. (314) 577-5100. *www.mobot.org.*

SOUTHWEST
AZ, NM, CO, UT

DEC. 2–4 & DEC. 9–11. **Luminaria Lights.** Holiday display. Tucson Botanical Garden. Tucson, Arizona. (520) 326-9686. *www.tucsonbotanical.org.*

RAP DEC. 3–JAN. 22. **Blossoms of Light.** Denver Botanic Gardens. Denver, Colorado. (720) 865-3525. *www.botanicgardens.org.*

Looking ahead

JAN. 13–15. **Maricopa County Home & Garden Show.** Arizona State Fairgrounds. Phoenix, Arizona. (800) 995-1295. *www.phoenixhomeshow.com.*

WEST COAST
CA, NV, HI

RAP DEC. 4. **Birding in SFBG Walk.** San Francisco Botanical Garden at Strybing Arboretum. San Francisco, California. (415) 661-1316. *www.sfbotanicalgarden.org.*

RAP DEC. 10–18. **Holiday Festival.** Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. *www.descansogardens.org.*

DEC. 12. **Camellias: Sasanquas and Other Early-Blooming Camellias.** Lecture. San Diego Horticultural Society. Encinitas, California. (760) 730-3268. *www.sdhortsoc.org.*

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

RAP NOV. 26–JAN 1. **Garden d'Lights.** Holiday display. Bellevue Botanical Garden. Bellevue, Washington. (425) 451-3755. *www.bellevuebotanical.org.*

RAP DEC. 9–JAN. 1. **Winter Garden Aglow.** Holiday display. Idaho Botanical Garden. Boise, Idaho. (208) 343-8649. *www.idahobotanicalgarden.org.*

Looking ahead

JAN. 20–22. **Clark County Home & Garden Show.** O'Loughlin Trade Shows. Ridgefield, Washington. (503) 246-8291. *www.oloughlintradeshows.com.*

CANADA

DEC. 9–31. **Festival of Lights.** Van Dusen Botanical Garden. Vancouver, British Columbia. (604) 878-9274. *www.vandusengarden.org.*

Looking ahead

RAP JAN. 17. **Conifer Workshop.** University of Guelph. Guelph, Ontario. (519) 824-4120 ext. 52113. *www.uoguelph.ca/arboretum.*

Carver Garden Opens in St. Louis

THE MUCH-ANTICIPATED George Washington Carver Garden opened October 15 at the Missouri Botanical Garden (MOBOT) in St. Louis, Missouri. A fitting tribute to a man who dedicated his life to plant sciences, conservation, education, and humanitarianism, the garden features a walkway lined with some of Carver's inspirational quotes leading to a reflecting pool surrounded by an amphitheater. The garden's focal point is a life-size bronze statue of Carver created by noted sculptor Tina Allen.

"A lot of people are calling this garden a reflective garden," says Amy Haake, coordinator of garden programs at MOBOT. "We hope that it promotes thought and inspires action, using Carver as a role model and teacher."

Carver, who was born in Diamond Grove, Missouri, is probably best known for his pioneering work with peanuts, soybeans, and sweet potatoes. As Haake notes, Carver's professional dreams are what connect him to the city of St. Louis. After earning a master's degree at the Iowa Agricultural School (now Iowa State University), Carver "had wanted to go on and do his Ph.D. work at Washington University (St. Louis)," says Haake. Before Carver took that step, however, Booker T. Washington convinced him to accept a position at the Tuskegee Institute in Alabama, which Washington had founded. It was during his time at Tuskegee that Carver developed the many agricultural innovations that still affect us today.

Top right: Visitors view the Carver statue on opening day. Bottom right: Also in attendance were sculptor Tina Allen, second from left, television actor and St. Louis native Robert Guillaume, far right, and other guests.

The one-and-a-half-acre George Washington Carver Garden will also promote Carver's legacy through education. "We, along with a consortium that's being formed, will be designing and developing a curriculum for school groups, primarily based on Carver's methods of observation," Haake explains. "The children will be keeping Carver research journals." The consortium is also planning a Carver internship designed for college-age students interested in a career in botany.

The Missouri Botanical Garden is a member of the Reciprocal Admissions Program, so AHS members receive free admission and a discount in the gift shop with a current AHS membership card. For more information about MOBOT, call (314) 577-5100 or visit *www.mobot.org.*

—William Clattenburg, Editorial Intern

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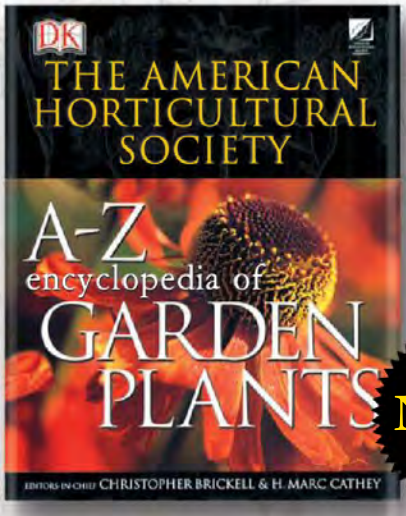

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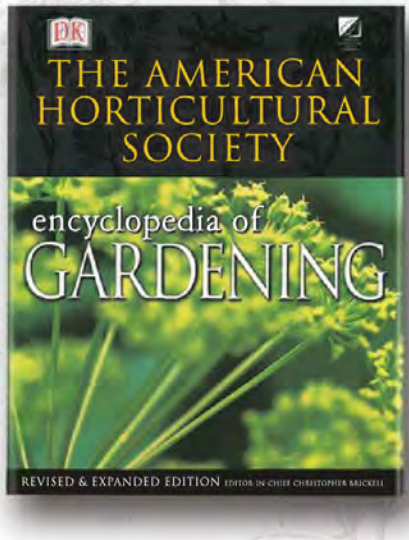

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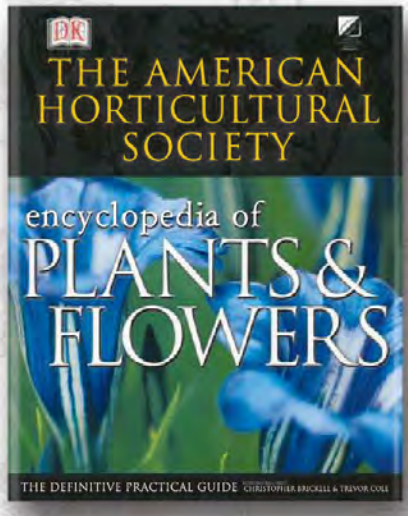

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2005 MAGAZINE INDEX

AUTHOR

SUBJECT

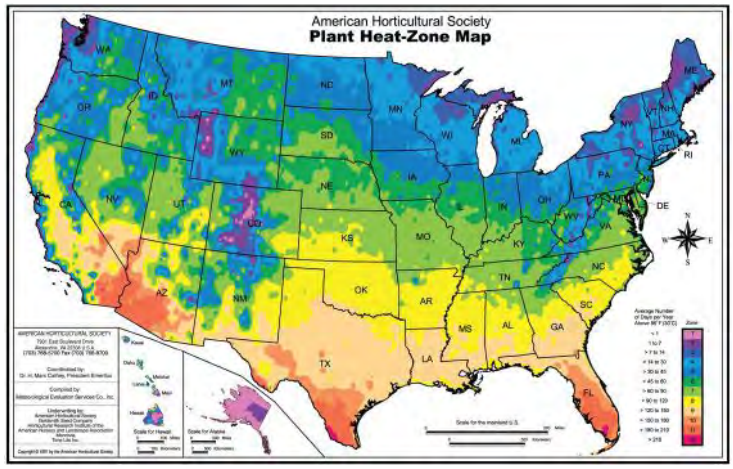
Index compiled by Elaine Lee.

PRONUNCIATIONS AND PLANTING ZONES

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

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

To purchase a two-by-three-foot glossy AHS Plant Heat Zone Map for $9.95, call (800) 777-7931 or visit *www.ahs.org*. Hardiness and Heat zone codes are generated by AHS and documented in the Showtime© database, owned by Arabella Dane.



A–D

Acer griseum AY-sur GRIS-ee-um (USDA 4–8, AHS 8–1)
A. pensylvanicum A. pen-sil-VAN-ih-kum (3–7, 7–1)
Alyssum montanum uh-LIS-um mon-TAN-um (4–9, 9–1)
Arbutus menziesii AR-byew-tus men-ZEES-ee-eye (7–9, 9–7)
Arisaema candidissimum air-ih-SEE-muh KAN-dih-diss-ih-mum (5–9, 9–5)
A. dracontium A. drak-o-NY-tum (4–9, 9–6)
A. fargesii A. far-JEZ-ee-eye (5–9, 9–1)
A. flavum A. FLAY-vum (5–9, 9–1)
A. macrospathum A. mak-ro-SPATH-um (7–10, 10–7)
A. ringens A. RIN-jenz (5–9, 9–6)
A. sikokianum A. sih-ko-kee-AN-um (5–9, 9–3)
A. triphyllum A. try-FIL-lum (4–9, 9–1)
A. triphyllum* subsp. *quinatum A. try-FIL-lum subsp. KWIN-ay-tum (4–9, 9–1)
Asclepias curassavica as-KLEE-pee-us kur-uh-SAV-ik-uh (9–11, 12–6)
A. incarnata A. in-kar-NAY-tuh (3–9, 9–2)
A. tuberosa A. too-bur-O-suh (4–9, 9–2)
Aurinia saxatilis aw-RIN-ee-uh saks-uh-TIL-iss (4–8, 8–1)
Betula nigra BET-yew-luh NY-gruh (4–9, 9–1)
Capparis sandwichiana CAP-uh-riss sand-wich-ee-AN-uh (10–14, 12–10)
Cardamine pratensis kar-DUH-mine pruh-TEN-sis (5–8, 8–5)
C. trifolia C. try-FO-lee-uh (5–7, 7–5)
Carya floridana KEH-ree-uh flor-ih-DAN-uh (9–11, 11–9)
Chionanthus virginicus ky-o-NAN-thus vir-JIN-ih-kus (4–9, 9–1)
Cibotium splendens sy-BOAT-ee-um SPLEN-denz (10–15, 12–10)
Coccoloba uvifera ko-ko-LO-buh oo-VIF-ur-uh (10–11, 12–9)
Cordia sebestena KOR-dee-uh suh-bess-TEEN-uh (10–14, 12–10)
Cornus kousa KOR-nus KOO-suh (5–8, 8–5)
Crambe cordifolia KRAM-bee kor-dih-FO-lee-uh (6–9, 9–1)
C. maritima C. muh-WRIT-ih-muh (6–9, 9–1)
Diospyros virginiana dy-OS-pih-ros vir-jin-ee-AN-uh (4–9, 9–1)

E–L

Erysimum cheiri ee-RISS-ih-mum KEER-eye (3–7, 7–1)
Erythrina sandwicensis air-ih-THRY-nuh sand-wih-CHEN-siss (11–15, 12–10)
Eucalyptus glaucescens yew-kuh-LIP-tuss glaw-SES-senz (9–10, 10–9)
Fagus grandifolia FAY-gus gran-dih-FO-lee-uh (3–9, 9–1)
Gaillardia pulchella gay-LARD-ee-uh pul-KEL-uh (10–11, 12–1)
Gossypium tomentosum gos-SIP-ee-um toh-men-TOH-sum (11–14, 12–10)
Hamelia patens huh-MEE-lee-uh PAY-tenz (8–12, 11–8)
Helianthus angustifolius hee-lee-AN-thus ang-gus-tih-FO-lee-us (6–9, 9–4)
H. debilis H. DEB-ih-liss (8–11, 12–1)
Heliotropium anomalum hee-lee-o-TROP-ee-um uh-NO-muh-lum (11–14, 12–10)
Hibiscus brackenridgei hy-BISS-kus brak-un-RIDGE-ee-eye (10–14, 12–7)
H. coccineus H. kok-SIN-ee-us (6–11, 12–6)
H. kokio H. KO-kee-o (10–15, 12–7)
Iberis amara eye-BEER-iss uh-MAR-uh (0–0, 12–1)
I. sempervirens I. sem-pur-VY-renz (5–9, 9–3)
I. umbellata I. um-bel-LAY-tuh (0–0, 12–1)
Lagerstroemia indica lag-ur-STRO-me-uh IN-dih-kuh (7–9, 9–7)
Lobelia cardinalis lo-BEEL-yuh kar-dih-NAL-iss (2–8, 8–1)
Lobularia maritima lob-yew-LAIR-ee-uh muh-WRIT-ih-muh (0–0, 12–1)
Lonicera sempervirens lah-NISS-er-uh sem-pur-VY-renz (4–9, 9–1)
Lunaria annua lew-NAR-ee-uh AN-yew-uh (3–9, 9–1)
L. rediviva L. reh-dih-VY-vuh (6–9, 9–6)

M–Z

Mattholia incana mah-tee-O-luh in-KAN-uh (5–8, 8–5)
M. longipetala* subsp. *bicornis M. lon-jih-PEH-tal-uh subsp. by-KOR-nis (8–10, 10–8)
Morus rubra MOR-us ROO-bruh (5–9, 9–5)
Pandanus tectorius pan-DAN-us tek-TOR-ee-us (12–15, 12–10)
Pinus bungeana PIE-nus bun-jee-AN-uh (4–7, 7–1)
Prunus serrula PROO-nus sair-ROO-luh (6–8, 8–6)
Rubus trivialis ROO-bus triv-ee-AL-iss (8–10, 10–8)
Ruellia caroliniensis roo-EL-ee-uh kair-o-lin-ee-EN-siss (7–11, 11–7)
Salvia coccinea SAL-vee-uh kok-SIN-ee-uh (11, 12–1)
Sambucus simpsonii sam-BOO-kus simp-SOWN-ee-eye (4–11, 12–1)
Scaevola sericea skee-VO-luh seh-RISS-ee-uh (10–11, 12–10)
Stewartia pseudocamellia stew-AR-tee-uh soo-doh-kuh-MEEL-yuh (5–8, 8–4)
Veronica liwanensis ver-ON-ih-kuh lih-wuh-NEN-sis (4–8, 8–4)
Vitex rotundifolia VY-teks ro-tund-ih-FO-lee-uh (6–9, 9–6)
Wikstroemia uva-ursi wik-stroh-ME-uh yew-vuh-UR-sy (12–15, 12–10)

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