

The American GARDENER

The Magazine of the American Horticultural Society

July/August 2001

Best New Hostas for every garden

Colorful Native Hibiscuses

Discover South Africa's Diascias

48 Secret Gardens Worth Visiting

\$4.95

www.ahs.org



An Expert With Every Bunch.



Introducing Flowers In Stock, your Internet source for the finest, freshest flowers available from around the globe. Not only can we find the flowers you're looking for, we have real experts ready to talk to you about your order. No more floating in cyberspace with unanswered questions. We can make recommendations on what's available, talk about the timing for your order, make appropriate suggestions, not to mention provide all sorts of helpful tips for care after delivery. So whether you're putting together one arrangement or one hundred, visit us today, or call 1-888-601-2284 and our experts will make sure your flowers are everything you imagined.

Flowers in Stock.com

We're Bloomin' Experts

Contents

Volume 80, Number 4 · July / August 2001



page 28

FEATURES

18 DISCOVER DIASCIAS

BY PANAYOTI KELAIDIS

These annual and perennial wildflowers from South Africa are about to become the next hot plants for North American gardens.

23 SECRET GARDENS

BY RITA PELCZAR

Planning your summer travels? Consider visiting some of our members' favorite little-known garden gems.

28 ALL-AMERICAN MALLOWS

BY DONALD HUMPHREY

Hibiscuses and their many comely American cousins add vibrant colors to summer gardens.

36 A NORTHERN LIGHT

BY SUSAN DAVIS PRICE

Plant breeder Harold Pellett has expanded the variety of cold-hardy trees and shrubs for northern gardens.

40 HOSTA FEVER

BY CAROL WALLACE

With thousands of cultivars to choose from, it's important to pick those best suited to your site.

46 COLLECTING AND SAVING SEEDS

BY MARY YEE

This time-honored gardening practice is easy and rewarding.

48 NO PLACE LIKE HOME

BY JERRY W. BROWN

After years of looking to England for gardening inspiration, this Missouri gardener found true satisfaction in his own back yard.

ON THE COVER: Bright yellow-green 'Sun Power' and variegated 'Great Expectations' are two of over 200 hosta cultivars thriving in Sandie Markland's townhouse garden in Lorton, Virginia.

Photograph by Roger Foley.

DEPARTMENTS

5 AN INSIDE LOOK

6 MEMBERS' FORUM

7 NEWS FROM AHS

AHS and PlantAmerica partner on Web, AHS plant sale success, living lab intern develops newsletter, truck donated to AHS.

9 AHS AWARD WINNERS IN FOCUS

Horticultural educators Dirck and Molly Brown.

10 AHS MEMBER IN FOCUS

Author and garden designer Ann Lovejoy.

11 SMARTGARDEN™

Heading off pests and diseases.

12 GARDENER'S NOTEBOOK

2001 regional plant picks, longhorned beetle research, booster for Bt pesticide discovered.

14 OFFSHOOTS

Stress and the garden tour.

15 GARDENERS INFORMATION SERVICE

Dividing irises, propagating hibiscuses, sudden oak death, woundwort's identity.

16 NATURAL CONNECTIONS

Life in a compost pile.

52 SEASONAL GARDEN GOODS

A selection of garden seating.

53 BOOK REVIEWS

Ann Lovejoy's Organic Garden Design School, Growing Shrubs and Small Trees in Cold Climates, A Year in Our Gardens.

58 REGIONAL HAPPENINGS

A roof garden at Chicago's City Hall.

61 HARDINESS AND HEAT ZONES AND PRONUNCIATIONS

62 NOTES FROM RIVER FARM

In praise of trees.



page 10



AMERICAN HORTICULTURAL SOCIETY

7931 East Boulevard Drive Alexandria, VA 22308-1300
(800) 777-7931 fax (703) 768-8700 www.ahs.org

The American Horticultural Society (AHS) educates and inspires people of all ages to become successful and environmentally responsible gardeners by advancing the art and science of horticulture.

PRESIDENT / CEO Linda D. Hallman

BOARD OF DIRECTORS OFFICERS 2001-2002

CHAIRMAN James L. Corfield *Geneva, Illinois*
FIRST VICE CHAIRMAN Katherine McKay Belk-Cook *Charlotte, North Carolina*
SECOND VICE CHAIRMAN Valerie L. Thomas *Alexandria, Virginia*
SECRETARY William A. Pusey *Arlington, Virginia*
TREASURER Christine Perdue *Middleburg, Virginia*
IMMEDIATE PAST CHAIRMAN Katy Moss Warner *Cambridge, Massachusetts*

Leslie Ariail *Alexandria, Virginia* ■ Kurt Bluemel *Baldwin, Maryland* ■ Arabella S. Dane *Boston, Massachusetts* ■ Peg Dunnigan *Alexandria, Virginia* ■ Joel Goldsmith *Gilroy, California* ■ Brian E. Holley *Cleveland, Ohio* ■ Duane Kelly *Seattle, Washington* ■ Melissa R. Marshall *Pittsburgh, Pennsylvania* ■ Theodore R. Marston *Kirkland, Washington* ■ Egon Molbak *Woodinville, Washington* ■ Carol C. Morrison *Palatine, Illinois* ■ Albin MacDonough Plant *Baltimore, Maryland* ■ William Seale *Alexandria, Virginia* ■ Jeanne Otis Shields *Greenville, Delaware* ■ Charles Henry Smith Jr. *Middleburg, Virginia* ■ Howard McK. Tucker *Alexandria, Virginia* ■ Susie Usrey *Dayton, Oregon*

PRESIDENT EMERITUS Dr. H. Marc Cathey

AHS HORTICULTURAL PARTNER
Oklahoma Horticultural Society

AHS PRESIDENT'S COUNCIL

CHAIRMAN'S CIRCLE Mrs. Shirley V. Bartlett ■ Mr. and Mrs. Paul Ecke Jr. ■ Mr. Ezra Glaser ■ Mrs. Enid A. Haupt ■ Mrs. Rachel L. Mellon ■ Mrs. Diana Carter Samples ■ Mr. and Mrs. Charles Henry Smith, Jr. ■ Miss Jane Steffey ■ Dr. and Mrs. Sellers Thomas ■ Mr. and Mrs. Robert D. Volk **LIBERTY HYDE BAILEY ASSOCIATES** Mrs. Katherine McKay Belk-Cook ■ Mrs. Mary Ann Charles ■ Mrs. Arabella S. Dane ■ Mrs. Peg Dunnigan ■ Mrs. William C. Ireland ■ Mr. and Mrs. Ted Marston ■ Mrs. Dudley Morgan ■ Mr. and Mrs. Harvey C. White **HAUPT ASSOCIATES** Dr. and Mrs. William E. Barrick ■ Mr. and Mrs. Kurt Bluemel ■ Mrs. Susan M. Cargill ■ Mr. and Mrs. James L. Corfield ■ Mrs. Betty R. Grisham ■ Mr. Gerald T. Halpin ■ Mr. and Mrs. Robert E. Kulp, Jr. ■ Ms. Carol C. Morrison ■ Harry A. Rissetto, Esq. ■ Mr. Howard McK. Tucker ■ Mrs. Susie Usrey and Mr. W. Bruce Usrey ■ Ms. Maggie R. Seeley ■ Mr. Andre Viette ■ Ms. Marguerite Peet Foster **PRESIDENT'S COUNCIL** Mrs. Karin Alexander ■ Mr. Patrick M. Anderson ■ Mr. and Mrs. Richard C. Angino ■ Mr. and Mrs. John H. Ariail, Jr. ■ Mrs. Robert Avinger ■ Mrs. Suzanne F. Bales ■ Mrs. William Beckett ■ Mr. Daniel Bell ■ Mr. and Mrs. Anthony Bigos ■ Ms. Sylvia Black ■ Caroline and Peter Black ■ Mr. and Mrs. C. William Black ■ Mr. John and Mrs. Doreen Blackburn ■ Dr. Sherran Blair ■ Mr. and Mrs. Robert L. Bogle ■ Mr. Bruce Bordine ■ Mr. and Mrs. James Bradford ■ Ms. Barbara L. Carr ■ Mrs. Sharon B.J. Casdin ■ Dr. H. Marc Cathey ■ Mr. and Mrs. Charles Chandler ■ Mr. Russell Clark ■ Mrs. William Cooper ■ Mr. Edward N. Dane ■ Mr. Robert Danforth ■ Count Michel De Ganay ■ Mr. and Mrs. Edward G. Dowling ■ Mrs. Elisabeth C. Dudley ■ Mrs. Beverley W. Dunn ■ Mr. Thomas J. Fannon ■ Mr. William Filbert and Dr. Margaret Filbert ■ Dr. and Mrs. John A. Floyd, Jr. ■ Ms. Carolyn V. Foil ■ Mrs. Ethel W. Foley ■ Mrs. Elaine Gavina and Mrs. Pamela Corbet ■ Mrs. Karin Gelotte ■ Mrs. Suzanne Godec ■ Mrs. Marion E. Greene ■ Mr. and Mrs. Joseph E. Hall ■ Ms. Linda D. Hallman ■ Mrs. Richard W. Hamming ■ Mrs. Richard W. Hanselman ■ Dr. and Mrs. William O. Hargrove ■ Mr. and Mrs. John Harrison ■ Mr. and Mrs. Max Hartl ■ Mr. and Mrs. William Hays ■ Mrs. Shirley Heberton ■ Mrs. Patsy Hilaire and Mrs. Cots Mengolini ■ Mrs. George J. Hill, III ■ Mrs. Elsie Hilliard Hillman ■ Ms. Carole S. Hofley ■ Mr. and Mrs. Mark Holeman ■ Mr. and Mrs. Allan L. Holmstrom ■ Mr. Philip Huey ■ Mrs. Rosario Moreno Hueyo ■ Mr. Henry Jameson ■ Ms. Patricia Jodsaas ■ Mr. and Mrs. Mauricio Lariviere ■ Mr. and Mrs. Pierre Larminat ■ Mr. Joseph Marko ■ Mrs. Elizabeth Marshall ■ Mr. and Mrs. Randolph Marshall ■ Mrs. Malcolm Matheson, Jr. ■ Mrs. Frances B. McAllister ■ Mr. and Mrs. Harold McClelland, Jr. ■ Ms. Lillian L. McKay ■ Mrs. Gene L. Miller ■ Mr. and Mrs. Samuel Moerman ■ Mr. and Mrs. Egon Molbak ■ Mr. and Mrs. Arthur Motch ■ Mrs. Eleonora Nazar ■ Mr. and Mrs. William B. Nicholson ■ Ms. Shirley A. Nicolai ■ Ms. Marian M. Nisbet ■ Mrs. Nancy Keen Palmer ■ Ms. Abby Pamplin ■ Mr. Michael Panas ■ Mr. William G. Pannill ■ Ms. Christine Perdue ■ Ambassador Lauralee M. Peters ■ Ms. Patricia L. Pierce ■ Mr. and Mrs. Albin MacDonough Plant ■ Mrs. Joseph Poetker ■ Mr. William S. Poston ■ Mr. and Mrs. Norris Preyer ■ Mrs. Charles Price ■ Mr. and Mrs. William A. Pusey ■ Mr. Paul H. Pusey ■ Dr. Julia W. Rappaport ■ Mr. and Mrs. Robert Rask ■ Mr. and Mrs. Alfred G. Rindler ■ Mr. and Mrs. Anthony Rodale ■ Mrs. Barbara Saenz Rosas ■ Mrs. Alicia Sarmiento ■ Mrs. Louisa S. Sarofim ■ Dr. and Mrs. Brian Sayer ■ Mr. Adolf Schoepe ■ Mrs. Maria Luisa Segura ■ Mrs. Josephine M. Shanks ■ Mr. Emanuel Shemin ■ Jeanne Otis Shields ■ Mr. and Mrs. George O. Slaughter ■ Dr. and Mrs. Ralph E. Smith ■ Ms. Hildegard Sorenson-Sterling ■ Mr. William M. Spencer, III ■ Mr. and Mrs. Robert Spilman ■ Mr. and Mrs. John B. Strassenburgh ■ Mrs. George Strawbridge ■ Mr. and Mrs. Gustavo A. Tavares ■ Mrs. Angelica Thays ■ Mr. Paul H. Pusey ■ Dr. John W. Thomas and Mrs. Valerie Thomas ■ Mrs. Harry J. Van de Kamp ■ Ms. Angela Vikesland ■ Janet and Mike Walker ■ Ms. Katy Moss Warner ■ Mrs. Agnes Binder Weisiger ■ Ms. Jean S. Wells ■ Mr. and Mrs. Harry H. Wetzel ■ Mr. and Mrs. John W. White, Sr. ■ Mrs. Marilyn B. Wilson

MEMBERSHIP BENEFITS

For general information about your membership, call (800) 777-7931. Send change of address notifications to our membership department at the address on the left. If your magazine is lost or damaged in the mail, call the number above. Requests for membership information and change of address notification can also be sent via e-mail to membership@ahs.org.

THE AMERICAN GARDENER

To send a letter to the editor of *The American Gardener*, write to the address on the left or e-mail to editor@ahs.org.

GREAT AMERICAN GARDENERS ANNUAL CONFERENCE

For information about the Society's Annual Conference, call (800) 777-7931 or visit the annual conference section of our Web site at www.ahs.org.

DEVELOPMENT

To make a gift to the American Horticultural Society, or for information about a donation you have already made, call our development department at (800) 777-7931 ext. 128.

GARDENERS INFORMATION SERVICE

Need help with a gardening problem? Call the AHS Gardeners Information Service at (800) 777-7931 ext. 131 or 124 from 10 a.m. to 4 p.m. Eastern time on weekdays. Or e-mail questions to gis@ahs.org anytime.

INTERN PROGRAM

To receive an application for the Society's Intern Program, write to Janet Walker, director of horticulture, at the address above or e-mail her at jwalker@ahs.org. Intern application forms can also be downloaded from the Society's Web site at www.ahs.org.

RECIPROCAL ADMISSIONS PROGRAM

The AHS Reciprocal Admissions Program offers members free and discounted admission to flower shows and botanical gardens throughout North America. A complete list of participating shows and gardens can be found in this year's Directory of Member Benefits and also on our Web site.

TRAVEL STUDY PROGRAM

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

WEB SITE: WWW.AHS.ORG

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

NATIONAL CHILDREN AND YOUTH GARDEN SYMPOSIA

For information about the Society's annual Youth Garden Symposia (YGS), call (800) 777-7931, or visit the YGS section of our Web site.

The American GARDENER

DIRECTOR OF MEMBERSHIP

Joe Lamoglia

EDITOR

David J. Ellis

MANAGING EDITOR AND DESIGNER

Mary Yee

ASSOCIATE EDITORS

Rita Pelczar

Carole Ottesen

EDITORIAL ASSISTANT

Sarah Schroeder

EDITORIAL ADVISORY BOARD

CHAIR John Alex Floyd Jr.
Birmingham, Alabama

Nina L. Bassuk
Ithaca, New York

Richard E. Bir
Brevard, North Carolina

John E. Bryan
San Francisco, California

John L. Creech
Columbus, North Carolina

Keith Crotz
Chillicothe, Illinois

Panayoti Kelaidis
Denver, Colorado

Richard W. Lighty
Greenville, Delaware

Elvin McDonald
West Des Moines, Iowa

ADVERTISING Mitchell Petersen, Inc.
1775 Jamieson Street
Suite 210
Alexandria, VA 22314-5715
(703) 518-4700
FAX: (703) 518-8495

The American Gardener (ISSN 1087-9978) is published bimonthly (January/February, March/April, May/June, July/August, September/October, November/December) by the American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308-1300, (703) 768-5700. Membership in the Society includes a subscription to *The American Gardener*. Annual dues are \$35; two years, \$60. International dues are \$50. \$10 of annual dues goes toward magazine subscription. Periodicals postage paid at Alexandria, Virginia, and at additional mailing offices. Postmaster: Please send Form 3579 to *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308-1300.

Botanical nomenclature is based on *The American Horticultural Society A-Z Encyclopedia of Garden Plants*, on *A Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland* and on the *Royal Horticultural Society Index of Garden Plants*. Opinions expressed in the articles are those of the authors and are not necessarily those of the Society. Manuscripts, artwork, and photographs sent for possible publication will be returned if accompanied by a self-addressed, stamped envelope. We cannot guarantee the safe return of unsolicited material. Back issues are available at \$8 per copy.

Copyright ©2001 by the American Horticultural Society.
Printed in the U.S.A.

An Inside Look

THE AMERICAN HORTICULTURAL SOCIETY has admired the Master Gardeners International (MGI), in large part because both organizations are dedicated to spreading the word about successful and environmentally responsible gardening practices. In cooperation with MGI and with support from the Canadian Sphagnum Peat Moss Association, an interactive map on the AHS Web site (www.ahs.org) provides links to state Master Gardener Web sites.

In May, several members of the AHS staff—including President and CEO Linda Hallman, Director of Membership Joe Lamoglia, Director of Horticulture Janet Walker, and myself—participated in the MGI's three-day symposium at Walt Disney World in Lake Buena Vista, Florida. Following presentations that Janet Walker and I gave on the AHS SMARTGARDEN™ program and Heat Zone gardening, respectively, one participant thanked us for turning what could have been rather technical topics into clear and useful information. She said she's convinced that understanding the ramifications of global warming is one of the biggest challenges for 21st-century gardeners.

Inspiration and education are the key elements of AHS's mission, and this issue of the magazine contains equal parts of both elements. You'll learn about three exciting but very different plant groups: hostas, native mallows, and twin-spurs (*Diascia* spp.). The last is a genus of tender perennials native to South Africa that is just starting to find its way to garden centers everywhere.

Those of you who have struggled to replicate the perfect English garden will identify with the experiences of Jerry Brown, a Missouri gardener who has been converted to the joys of growing prairie plants more appropriate to his regional climate and soil.

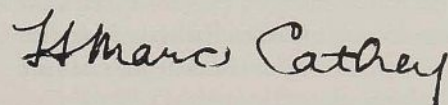
We traditionally think of fall as the time to harvest seeds, but the seeds of many ornamental plants are ripe for the picking in mid- to late summer. An article by Managing Editor and Designer Mary Yee offers tips for collecting and saving these seeds.

Everyone loves a secret garden. Thanks to the input we received from you, our members, Associate Editor Rita Pelczar has compiled a list of little-known or under-appreciated public gardens around the country. If you plan to travel this summer, give one of these regional "secret gardens" a try.

And Susan Davis Price profiles Harold Pellett, a University of Minnesota horticulturist who directs the plant-breeding program of the Minnesota Landscape Plant Development Center.

As AHS members, we are all part of a larger community of gardeners. I encourage you to become more active in this green network by joining your local Master Gardeners chapter. It's an opportunity to advance your own horticultural frontiers, while at the same time spread the word about the Society's important programs and gardening resources.

Ever in green,



—H. Marc Cathey, AHS President Emeritus

Members' Forum

NAMELESS NO MORE

In your article "Magnificent Meadow Rues" (May/June), the caption for the photograph on the bottom of page 30 does not identify the variegated plant at the bottom of the image. Can you help with its identification?

*Ardyce Holmen
Mamaroneck, New York*

EDITOR'S RESPONSE: *The plant was not identified on the original image, but it appears to be snow-on-the-mountain (Euphorbia marginata), an annual native to North America. The yellow-flowered plant in the same bed is whorled loosestrife (Lysimachia punctata).*

EQUAL TIME FOR CONIFERS

After reading the caption on page 37 of "Garden Vignettes" in the May/June issue, I had to check to see if the magazine had been renamed *The American PERENNIAL Gardener*. You of all people should understand that conifers deserve as much attention to cultivar representation as the rest of the plants in the horticultural world. Why was the spruce (obviously a fastigiata form and not necessarily a dwarf at all) listed only as "a dwarf Colorado spruce," while even the lowly petunias were identified by genus, species, and cultivar, no less. The spruce is regal enough to be crowned the state tree of Colorado, yet in your article it received no more credit than a vague common name.

I've noticed that conifers are barely represented in the world of flash and color. Perhaps that could be remedied in a future issue?

*Pat Hayward
Garden Railways Magazine
Masonville, Colorado*

EDITOR'S RESPONSE: *Our standard practice, where space permits, is to fully*

How Do You Control Weeds in Your Garden?

Any vigorous plant that grows where it isn't wanted can be considered a weed. We've all heard horror stories of gardeners who planted bamboo hoping for a quick privacy screen, only to need heavy machinery a few seasons later to eradicate it from half the yard. Yet sometimes what one person considers a weed is someone else's idea of the perfect solution for a specific place or use in the garden. And a plant that's a thug in one area may be perfectly civilized in another part of the country.

We would like to hear your stories about what plants have proven to be most invasive in your garden. What kind of environmental conditions—such as soil type, sun exposure, etc.—exist in your garden? What methods have you successfully used to control undesirable plants? Write or e-mail us with your comments so we can include them in an upcoming article on managing invasive plants in the garden.

Include your name, address, telephone number, and e-mail address so we can contact you. Mail your stories to *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308, or e-mail them to editor@ahs.org. You can also fill out and submit a survey form that is posted on the AHS Web site at www.ahs.org. **Submissions must be received by August 20, 2001.**

identify as many of the plants shown in our photographs as possible. We didn't mean to give the Colorado spruce short shrift, but in this case we must plead mea culpa. The spruce is Picea pungens 'Iseli Fastigiata'.

Overall we stand by our coverage of conifers, however. You must have missed our article on native conifers in the November/December 2000 issue. And we have an article on deciduous conifers scheduled for this November/December.

MUSHROOM CHUCKLE

Your great article "Mushrooms in the Lawn: To Mow or Not to Mow?" (March/April) prompts me to share a true story that happened in Nancy, France, many years ago. It is included in my book *Cookery for Lovers*, which was self-published in 1984.

A family of five went mushroom hunting in the local woods. After the

family returned home, the mother cooked up a large batch of the harvest. While everyone was devouring the delicious morsels, the house cat kept begging, so family members happily shared the mushrooms with their pet. Suddenly the cat started yowling and rolling around in spasms. The family guessed the mushrooms they had been eating were poisonous, so they rushed to the hospital to have their stomachs pumped. When they came back home, the cat met them by the door with five new kittens.

*Bettie Furuta
Escondido, California*

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.



News

AHS Programs and Events

AHS and PlantAmerica Forge Web Partnership

IN PARTNERSHIP with PlantAmerica, a business solutions firm specializing in horticultural applications, AHS will by early August launch a redesigned and more user-friendly Web site to better serve Society members and gardeners everywhere.

Current AHS Web site features such as articles from *The American Gardener*, AHS Plant Heat-Zone Map information, links to Master Gardener Web sites around the country, and details about upcoming gardening events will continue on the reformatted site, but will be supplemented by a variety of new features, eventually including interactive horticultural programming. Visitors will also have access to an extensive database of frequently asked plant questions and answers compiled through the Society's Gardeners Information Service.

"We are both proud of and excited by our partnership with PlantAmerica," says AHS President and CEO Linda Hallman. "PlantAmerica's operational and technological expertise will complement the strides AHS has made in recent years to become the primary national source for accurate and environmentally responsible gardening information."

"We are thrilled at having the opportunity to work with AHS and its members," says PlantAmerica CEO Michael Deale. "AHS is without peer as a horticultural resource to the academic, commercial, and public gardening communities, and we look forward to helping the Society take advantage of technology and partnerships to expand its reach and influence within the green industry and to the public."

Founded in 1995, PlantAmerica specializes in developing Internet-based marketing tools. Among its successful products are a 38,000-plant information database and CD-ROM plant references created in partnership with University of Georgia horticulturists Michael Dirr and Allan Armitage.

The reconfigured AHS Web site will have the same address: www.ahs.org. Look for changes starting August 1.



Starting in August, the AHS Web site will have a new look and enhanced content.

Successful Plant Sale

THANKS TO WONDERFUL WEATHER and eager gardeners, the Society's 2001 plant sale, held in late April, was a rousing success. More than \$4,000 was raised—double last year's amount—to support AHS Horticulture Department projects. An estimated 1,000 people attended the three-day sale, which was co-sponsored by the Alexandria Council of Garden Clubs.

"The plant sale is one of the ways we connect with the community and our local members," says Janet Walker, the Society's director of horticulture. "When they come here, they see just how passionate we all are about plants and gardening." Some of the plants AHS offered this year, including peonies and Siberian irises, were propagated from plants growing at River Farm.

More than 50 Friends of River Farm volunteers and staff members pitched in during the sale, welcoming visitors, answering questions, and helping to load plants. "We just can't thank our volunteers and staff enough for their participation," says Walker. "Everything went smoothly, and the vendors were pleased with how well they sold. All in all, the sale was extremely successful."



Plant sale visitors mull over purchases at the AHS tables.

Intern's Newsletter Is a Hit with Preschoolers

THE AHS RIVER FARM Living Laboratory program, which debuted in 1996, was originally designed to provide local school-age children with opportunities for garden-based science education. But because River Farm's Children's Garden is a popular destination for preschool children, Nancy Busick, AHS's Living Laboratory intern, saw a need to do something for that age group as well.

RIGHT: MARY YEE



Intern Nancy Busick, center, leads a kids' tour at River Farm.

"Our daily clientele is preschoolers," notes Janet Walker. "We wanted the Living Lab to respond to the people who were already calling us asking, 'What activities do you have for kids?'"

Each intern at River Farm must complete a project, so Busick—who has a degree in early childhood development—decided to create a monthly children's newsletter. With the aid of entertaining poems, songs, and garden folklore, Busick focuses on different aspects of the garden in each issue. She also includes activities that parents can do with their young children at River Farm or at home. The newsletter, printed courtesy of Custom Print in Arlington, Virginia, is available in the garden and in the Gift Shop and Visitors Center at River Farm.

According to Busick, many of the learning skills young children need to develop can be fostered in a garden. "Anything you can learn inside a classroom, you can learn outside," she says.

Although Busick's internship will soon come to an end, Walker hopes to keep the children's newsletters going and is seeking funding to develop the program based on national science education standards. "Nancy's enthusiasm has really made our Living Lab come alive," she notes.

Truck Donation

THE WORK OF the Society's Horticulture Department has been made easier thanks to a truck recently donated by AHS member and volunteer Lauralee H. Peters.

Peters donated her late husband's 1997 Dodge Dakota after seeing that a truck was on the "needs list" in the AHS volunteer newsletter. "She wanted the truck to be used for something worthwhile," says Marianne Polito, GIS manager and volunteer coordinator. "We can't thank Lauralee enough for this generous gift."

The truck will be used to pick up plants and horticultural supplies from local vendors and to haul loads around the grounds of River Farm. "This new truck is really fantastic," says Janet Walker. "It makes us more efficient and gives us a lot more flexibility in our day-to-day operations."

Peters, a former ambassador to Sierra Leone who lives near River Farm, is a regular volunteer in the River Farm gardens. ☺

AHS volunteer Lauralee Peters, center, stands in front of the truck she donated to AHS. Flanking her are Marianne Polito, manager of GIS, and AHS Garden Manager Barry Stahl.



an APPRECIATION

Rosemary Verey

December 21, 1918—May 31, 2001

by Ethne Clarke

ALTHOUGH SHE was a garden consultant to princes and pop stars, Rosemary Verey—who died at 82 of complications from pneumonia—will be remembered most for the advice and friendship she extended to thousands of ordinary garden lovers who crossed her path. Some, like AHS members on the Society's Travel Study Program trips to England, met Rosemary when visiting Barnsley House, her home in the Cotswolds of England; others knew her from her many books, articles, and television appearances. In all cases, she exercised a considerable influence on the way we garden and on the way we look at gardens. How fortunate I was to have Rosemary as a friend and mentor.



Rosemary's passion for garden history informed the design of her own garden and ultimately helped spark a revival of public interest in historical gardens and the social history of gardening. "The entrance to your garden must be from the best

room in the house," she'd pronounce, quoting William Lawson, a 17th-century English garden writer, and once again we began to think in terms of garden rooms, vistas, and the importance of "good bones."

Rosemary went through life with her eyes wide open. "Always keep looking," she once told me. "There is so much to be learned." While we in the United States were sighing over the perfection of English gardens, she recognized that American gardens were among the finest in the world and not only woke us up to that fact, but started spreading the word in England. "You MUST realize, Americans have this wonderfully diverse climate and flora, as well as truly original designers," she said. "There is nothing they can't do!"

Rosemary valued her studies in economics because "they taught me how to think," and at 70 wished she could study botany "to make me a better gardener." She claimed to envy the energy of her younger colleagues, yet her pace left us breathless. In 1999, at the gala dinner during the Garden Conservancy's annual meeting in Charleston, South Carolina, Rosemary danced the night away—including a moment of Texas Two Step with me. "I WILL come to Austin," she declared in her positive-action mode. But sadly, after her return to England, she fell and broke her hip, and from that moment her health began to decline.

As a birthday present, I once gave her a mug with the words, "Old gardeners never die, they just push up the daisies." She laughed and said she hoped her daisies would be the most cheerful in the meadow. I'm certain they will be. ☺

Ethne Clarke is a free-lance writer living in Austin, Texas.

award winners IN FOCUS

Browns Receive 2001 Jane L. Taylor Award

by Sarah Schroeder

IN A WORLD gravitating toward indoor technology, it is more important than ever for children to experience and appreciate the natural world, say Dirck and Molly Brown, winners of the Society's 2001 Jane L. Taylor Award, which was presented to them at the AHS Annual Conference in Cleveland in June.

The Browns were recognized for developing a school-based intergenerational gardening program, "The Roots and Shoots," that provides a unique learning experience for elementary school students. A Roots and Shoots garden is a friendly spot where young children—the Shoots—and older community volunteers—the Roots—grow vegetables, flowers, and herbs together.

In 1985 Molly co-founded the first Roots and Shoots School Garden at the Elizabeth Gamble Garden Center in Palo Alto,



The Browns in the Lexington, Virginia, garden.

California. For 10 years before this she had been involved in environmental education with elementary school children. Dirck has a doctorate in education and is a licensed counselor.

In 1995, after moving to Lexington, Virginia, the Browns founded a second Roots and Shoots garden at Waddell Elementary School. Molly develops the curriculum and teaches; Dirck manages fund-raising and works as a liaison with volunteers and community groups.

"Being with children in the natural world is very rewarding," says Molly. "When children plant seeds, see them grow, and take care of them, they gain an early sense of stewardship. The outdoors is also an exciting classroom for teaching about science, art, literature, music, and the environment."

When the first Roots and Shoots garden was conceived, the Browns never dreamed similar programs would be sprouting up all over the country; in fact, one is even being implemented in Africa. To guide others, the Browns have written *The Down to Earth Handbook*, a manual with specific lesson plans that can easily be adapted by schools and communities.

For more information about the Browns' program, visit www.rootnsshoots.go.to.

Sarah Schroeder is editorial assistant for *The American Gardener*.

ANNUALS PERENNIALS HERBS

VINES TREES SHRUBS

VEGETABLES TROPICALS

it's time to get ready
for the

2002 Annual AHS Seed Exchange

NEW for 2002: Members who donate seeds to the program will get first pick of seeds when the exchange kicks off in January! Plan to donate!

Look for more details about how you can participate in the program in the next issue of *The American Gardener*.



The Cedar Store

5 Different Styles of Cedar Swings!

We Carry a Complete Line of Cedar Swings, Garden Benches and Chairs, Gliders, Tables, Planters, Arbors, Bridges and Patio Sets.

Order Today
Any Swing 4', 5', or 6'
Receive **FREE** Hardware
and **FREE** Comfort Springs
and **FREE** (\$45.00 Savings!)

1010 5' Allegheny Highback Swing

GREAT GIFTS!

FREE Brochure

BEAUTIFUL NATURAL FINISH

Visit Our Online Store to Order and a Chance to Win New Furniture! or Call Toll Free (888) 293-2339

New Cedar Patio Sets

Our Furniture is Handcrafted by the Pennsylvania Amish

www.cedarstore.com/ag.html

Ann Lovejoy

by Rita Pelczar



AUTHOR, TEACHER, garden expert, and AHS member Ann Lovejoy's latest book, *Organic Garden Design School*—reviewed in this issue on page 53—offers gardeners a wealth of practical information about home landscaping. Lovejoy, who lives in Bainbridge Island, Washington, writes a gardening column for the *Seattle-Post Intelligencer* and also runs a garden design school. I talked to Lovejoy recently about her down-to-earth approach to gardening and the gardener's life.

How did you get started in gardening?

I grew up gardening because my mother gardened. When I was a child, we lived in Concord, Massachusetts, in an old Victorian house with a garden that I thought was so beautiful—beds in the shapes of stars and moons. My mother thought it was too old-fashioned, so she transformed the garden into beds with stacked rocks and natural shapes—a style I now infinitely prefer.

How long have you been a member of AHS?

About 10 years or more. I really support what Dr. Cathey is doing in the SMARTGARDEN™ program; it's an excellent approach and so timely.

I see this as I travel around the country talking about sustainable gardening and natural methods of care and maintenance. Last year I was asked to speak to a lot of groups about the future of gardening. I told them, "There won't be any gardens at all unless we make some really radical changes *right now*." In the past, that's not a message many horticultural groups would have been receptive to, but that's changing, and I'm thrilled.

How did your interest in organic gardening come about?

When I was in high school, someone gave me a box of old *Organic Gardening and Farming* magazines, and I thought they were fabulous. As far back as I can remember, I've always felt the natural world was something you worked in harmony with—not something to be dominated or controlled.

In your new book you have a section on organic weed control. Would you talk a little about that?

I begin weed control in late winter, when the weeds start growing, by flaming them. I have a compressed propane gas tank backpack—originally developed for organic growers—that I use to scatter-spray the paths, the driveway, and new beds. The

flame kills small plants very fast. The backpacks are generally available at hardware stores and some nurseries.

I like to use boiling water on grass weeds that have adapted to prairie fires and don't burn very well. This method is good for grass between bricks, but since boiling water can make bricks flake in the winter, I usually wait until the ground has thawed.

And I use corn gluten a lot. It's a natural by-product of making corn meal that works by causing seeds to dry out after they start to germinate. So if you use corn gluten for weed control, you have to put it in the vegetable garden *after* your vegetables have come up. In my garden, I flame, plant my seeds, and after they have germinated, I put the corn gluten around them.

A good tip when you dig up a weed in a lawn is to make a little paste of corn gluten and pat it over the area where you pulled your weed out, so all the weed seeds you've just uncovered in the soil can't germinate. I also use corn gluten when I'm creating a new ground-cover bed: I prep my bed, set my plugs, then I apply corn gluten. That way I don't get invaded with new weeds right off the bat.

How does one start the process of becoming an organic gardener?

The very first thing you want to do is bring your soil back to life because chemicals kill soil. I always start by mulching with compost—preferably with cow manure.

Composted cow manure is great because it doesn't contain weed seeds, and it actually suppresses certain root rots, which are big problems in the Northwest, where I live. It's also highly conducive to beneficial fungus growth and looks almost like peat moss. Horse manure, on the other hand, is coarse and tends to cause minerals to build up in soils over time, so I prefer to use it in a hot compost pile with other materials.

I don't use peat moss at all. It has no nutrient value and is almost impossible to wet when it's dry. And if you've ever visited a place where peat has been harvested, you can see cuts made in the 1880s that look as fresh as if they were made yesterday. Peat does regenerate, but glacially—not in human lifetimes.

What's your advice for busy people who are looking for shortcuts to a beautiful garden?

I would start by eliminating grass if it isn't serving any purpose. Grass requires weekly effort and water, while different ground covers and native plants, once established, would require an hour or so of maintenance perhaps once or twice a year. Almost anything takes less care than grass.

Do you sense reluctance on the part of ornamental gardeners to practice the techniques of organic gardening?

The whole problem with the ornamental movement stems from a striving for perfection—for example, the perfect flower wins the prize. It's about controlling and dominating nature. It's profoundly anti-natural, and often we don't see how pervasive this attitude is in our lives. I encourage audiences at my talks: Take your glasses off, or put somebody else's glasses on. Look at your garden with new eyes.

Rita Pelczar is associate editor of *The American Gardener*.



SMARTGARDEN™ —Pest and Disease Control

Work with nature to prevent problems before they start

In the last issue we focused on the benefits of working with nature to select and grow plants that are well suited to the growing conditions of your site. This approach significantly minimizes the destruction caused by diseases and pests: Healthy, well-adapted plants are less likely to be seriously damaged by diseases or pests because they can withstand a great deal more than a plant that is struggling from the stress that results from its placement in an inappropriate site.

When discussing garden diseases and pests, it is important to keep in mind that a certain amount of damage is tolerable. Accepting a tolerable level of imperfection does not mean ignoring damage when it occurs. The more reasonable approach is to assess the damage, identify the cause, estimate the potential for further damage, and, depending on that assessment, continue to monitor the problem and adjust cultural practices to reduce its spread or proceed with a specific control measure. The key is to strive for balance rather than perfection. As in human health issues, the best method for dealing with plant pest and disease problems is to prevent them from ever occurring.

KNOW THY ENEMY

Becoming familiar with the most common pests and diseases of the plants you grow is the first step to outwitting them. By understanding their life cycles, feeding and overwintering habits, potential hosts, and natural predators, you can work with nature to tilt the balance in favor of your garden plants.

For example, fire blight is a bacterial disease that infests apples, pears, firethorn, hawthorn, quince, and several other ornamental plants, typically causing sudden dieback of twigs. Serious damage can often be avoided by limiting the use of high-nitrogen fertilizer on susceptible plants, because succulent new growth—which is stimulated by nitrogen—is most prone to infection. If the disease does cause dieback, pruning out and destroying infected stems will generally stop the spread of the disease before it causes serious damage. Left untreated, the infection may move into older wood, where it forms cankers in which the bacteria overwinter. Drastic removal of branches displaying such cankers would be required at that point.

AN OUNCE OF PREVENTION

Gardeners have many relatively simple cultural techniques at their disposal to help avoid serious problems or minimize those that do occur. Practices such as selecting varieties that are resistant to common diseases,

rotating crops so they are in a different spot each season, practicing sanitation, and adjusting planting schedules can thwart many problems.

Resistant varieties. Selecting varieties that are resistant to common pests and diseases that your plants are likely to encounter is one of the easiest ways to give a leg-up to your garden plants. For example, many tomato varieties are resistant to several fungal wilts, viral diseases, and certain nematodes that can devastate a crop. And by selecting varieties of hosta with thicker, more substantial leaves, damage by slugs is often reduced or avoided. (For more about hostas and slugs, see “Hosta Fever,” pages 40 to 45.)

Crop rotation. In vegetable gardens and annual beds, crop rotation—rearranging the placement of plants from one season to the next—is a valuable means of outwitting pests and diseases. Most diseases and many insects are rather specific in their selection of plants that they attack. And many survive over winter in the soil surrounding a host from the previous year. Replanting the same crop in the same space from one year to the next means the chance for problems recurring is very high. Make it hard for the pest or disease. Move your beans to the other side of the garden, plant marigolds where you had petunias last year. This is a simple avoidance technique that can minimize recurring problems.

Sanitation. A cultural tool that should be part of your annual fall clean-up activities is removal and disposal of disease- or pest-infested plant remains from the garden. Many pests and disease-causing organisms overwinter in or on the remains of their former host, often as eggs or spores. Remember that eggs and spores that survive the winter in your garden will be ready to cause problems come spring. When practical, remove the source before it has a chance to spread.

MORE AVOIDANCE TECHNIQUES

Other cultural tools for preventing problems include mulching to create a physical barrier between soil-borne spores and potential hosts; using floating row covers to protect vegetables from flying pests; providing space between plants to ensure adequate air circulation; planting early or late to avoid a pest or disease that invades at a predictable time each year; and removing weeds or other plants that may serve as alternate hosts.

Of course, sometimes more aggressive control methods are necessary and unavoidable. In our next issue, we will discuss several environmentally friendly options for controlling garden pests and diseases.

Rita Pelczar, Associate Editor

Gardener's Notebook

Horticultural News and Research

REGIONAL PLANT PICKS

INCREASINGLY, regional botanic gardens and other horticultural groups are putting out annual lists of plants that perform well in their respective climates. Here are some regional award winners in 2001.

The Pacific Northwest. Great Plant Picks, a plant award program established this year by the Elisabeth C. Miller Botanical Garden in Seattle, Washington, is designed to help home gardeners in the maritime Northwest identify outstanding plants. Plants were selected in the following three categories:

Trees and Conifers

- Paperbark maple (*Acer griseum*)
- Fernleaf full-moon maple (*Acer japonicum* 'Aconitifolium')
- Kousa dogwood (*Cornus kousa* var. *chinensis* 'Milky Way')
- Lavalle hawthorn (*Crataegus xlavallei*)
- Blue-needled Japanese white pine (*Pinus parviflora* 'Glauca')

Shrubs and Vines

- Buttercup winter hazel (*Corylopsis pauciflora*)
- Dwarf fothergilla (*Fothergilla gardenii*)
- Oakleaf hydrangea (*Hydrangea quercifolia* 'Snow Queen')
- Rhododendron (*Rhododendron* 'Ken Janeck')
- Japanese hydrangea vine (*Schizophragma hydrangeoides* 'Moonlight')

Perennials

- Sneezeweed (*Helenium* 'Moerheim Beauty')
- Stinking hellebore (*Helleborus foetidus*)
- Catmint (*Nepeta racemosa* 'Walker's Low')
- Black mondo grass (*Ophiopogon planiscapus* 'Nigrescens')
- Longleaf lungwort (*Pulmonaria longifolia* 'Cevnensis')

Rocky Mountains and Plains States.

Recommended selections from Plant Select—a cooperative program among the Denver Botanic Gardens, Colorado State University, and regional nurseries that showcases the best plants for the Rocky Mountain and Plains states—include a yellow-flowered native columbine (*Aquilegia chrysantha* Denver Gold), a pink (*Dianthus* 'First Love'), a gooseberry (*Ribes uva-crispa* 'Red Jacket', trademark Comanche), and a California fuchsia (*Zauschneria garrettii* Orange Carpet).



Oakleaf hydrangea (*Hydrangea quercifolia*) was chosen shrub of the year for Nebraska.

Plant Select also released three new introductions: a hyssop (*Agastache aurantiaca* Coronado), a mock orange (*Philadelphus lewisii* Cheyenne), and a columbine (*Aquilegia* 'Colorado Violet & White'). The columbine's trademark name, Remembrance, honors the memory of the students and teacher who were killed at Colorado's Columbine High School. Proceeds from sales of this plant will benefit organizations that promote diversity and tolerance in schools.

Nebraska. A part of GreatPlants—a joint effort of the Nebraska Statewide Arboretum and the Nebraska Nursery and Landscape Association—Plants of the Year selects subjects with exceptional ornamental value, hardiness, ease of maintenance, and availability in Nebraska.

The perennial of the year is the penstemon, of which Nebraska boasts 10 in-

digenous species. The oakleaf hydrangea (*Hydrangea quercifolia*) was chosen shrub of the year, and the bald cypress (*Taxodium distichum*) was named tree of the year.

Kansas. The Pride of Kansas Program, launched by the Kansas Nursery and Landscape Association and Kansas State University Research and Extension, identifies plants with outstanding qualities that are underused in Kansas's three geographic regions.

Choices for 2001 include Virginia sweetspire (*Itea virginica* 'Henry's Garnet') for the northeastern region, Gladwyn barberry (*Berberis xgladwynensis* 'William Penn') for the western region, and serviceberry (*Amelanchier xgrandiflora* 'Autumn Brilliance') for the southeastern/central region.

Nationwide. The Garden Club of America's Montine McDaniel Freeman Horticulture Medal, presented annually to a plant deemed worthy of special recognition, went to the striped or moosewood maple (*Acer pensylvanicum*), an understory tree native to woodlands from eastern Canada to northern Georgia.

BEETLE AWARENESS

THE MORTON Arboretum in Lisle, Illinois, has received a grant from the U.S. Department of Agriculture Forest Service to develop an awareness and outreach strategy for early detection of the Asian longhorned beetle, a pest of ornamental and forest trees.

The beetle, which apparently made its way to North America in packing materials imported from Asia, was first identified infesting trees in Brooklyn, New York, in 1996. Several outbreaks were subsequently documented in the Chicago area. The beetle's larvae bore into the wood of living trees, weakening and eventually killing them. Infested trees in the New York and Chicago regions have been cut down and burned to prevent further spread of the beetles.

Morton will coordinate its outreach efforts with regional agencies, horticultural associations, and tree-care and landscape professionals. Educational materials explaining how to identify early signs of beetle infestations will be created and disseminated. "Our ultimate goal is to detect currently unreported beetle infestations and enlist a wide range of people to look for the beetle in the course of their daily work," says Gary Watson, a senior research scientist at Morton. Initial efforts will focus on northeastern Illinois, southeastern Wisconsin, and northwestern Indiana, but



The Asian longhorned beetle kills trees by boring into the wood.

Watson says the strategy developed will be appropriate wherever in North America the Asian longhorned beetle is a risk.

BT BOOSTER DISCOVERED

AN OBSCURE antibiotic may help boost the effectiveness of a biological pesticide that is used by organic and conventional gardeners and in the future may counteract insect resistance to the pesticide. Researchers at the University of Wisconsin-Madison have discovered that an antibiotic known as zwittermicin-A greatly enhances the effectiveness of the particular strain of *Bacillus thuringiensis* (Bt) used to control gypsy moth larvae—caterpillars. In experiments where zwittermicin was combined with Bt and fed to gypsy moth larvae, the number of larvae that died increased in direct proportion to the amount of zwittermicin in the diet.

Although American gypsy moth populations have yet to show the signs of resistance to Bt already discovered in Europe, scientists are preparing for that contingency. They fear that the increasing use of genetically modified crops that incorporate Bt may speed up the process by which insects become resistant to the pesticide.

Scientists hope that the zwittermicin/Bt cocktail will prove effective against a variety of insect pests.

DRAMM Rain Wand

Water your plants like a pro with a quality Colormark Rain Wand™ from Dramm. A heavy-duty brass valve and an original Water Breaker™ nozzle have made the Rain Wand™ the choice of professionals for over 55 years. Available in a rainbow of colors and styles. Ask for Dramm Professional Tools at only the best garden centers and nurseries.



Often imitated, never duplicated... Ask for Dramm Professional Watering Tools by name!

www.RainWand.com

PO Box 1960 · Manitowoc, WI · 54221-1960 USA

WILT PRUF®

ANTI-TRANSPIRANT

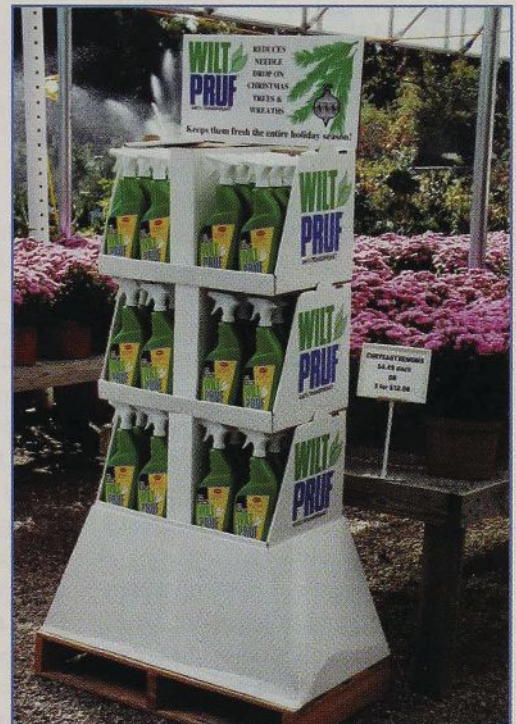
Wilt-Pruf® spray
protects your plants
from drying out

during periods of water stress.

Use on broadleaf evergreens,
Christmas trees and wreaths
to keep them green and healthy.
Visit your nearest lawn and
garden dealer now.

**The #1 anti-transpirant
for over fifty years.
100% natural organic
and biodegradable.**

Also available in concentrate sizes



Write for free literature:
Wilt-Pruf Products, Inc.

P.O. Box 469, Essex, CT 06426

<http://www.wiltpruf.com>

e-mail: wiltpruf@wiltpruf.com

Offshoots

The Garden Tour

by Rosalie Hanson

I ACTUALLY volunteered to do this. Tomorrow I will face the scrutiny of friends, neighbors, and strangers alike: My garden is stop number three on the local garden tour.

It seemed like an appealing idea back in January. Being part of the tour, I thought, would be the impetus for me to tie up all the loose ends in my garden and tackle those new projects I kept putting off. This was my chance to try everything on my wish list I had set aside for another season. That hosta garden I had envisioned last spring was beckoning me to set down roots in one of my still-unclaimed beds. Arbors and pergolas arose from the soil of my imagination to refine the character of undefined spaces. Even the allée of irises and peonies showcased on a recent “Victory Garden” episode did not seem out of reach. I could do it all.

April rolled around. Now, in Massachusetts, this could mean you are either digging out from the last big snowstorm or biting your nails expecting it to arrive. So I waited until the coast seemed clear—or at least the slush was melting—before I headed for my first big job: cutting back four *Caryopteris ×clandonensis* ‘Blue Mist’ sticking their arms and legs out of the snowdrifts. Finishing that task made me feel amazingly on top of things, well on my way to conquering the spring-cleaning my garden would require. It wasn’t until May that reality hit me.

List-maker that I am, I drew up a plan of attack: Edging, dividing, cutting back, weeding, feeding, mulching—all the basics had to be accomplished before I could even approach the “good stuff” such as experimenting with new species and planting eye-catching pots. “Forget those pergolas,” I thought. “I’ll be lucky if just the fundamentals get finished by June.”

What I hadn’t realized before committing to my coming-out floral exhibition was that all those fabulous gardens over which I had drooled on previous tours were usually not the feat of the owners. In most cases they had hired, tireless, PAID help. The back-breaking-call-your-chiropractor grunt work was not their concern. At best, some of the owners actually knew the names of a few of the favorite plants their landscaper had decorously positioned. “Humph,” I thought to myself. “Be it ever so humble,



at least my garden is mine, chickweed and all.” But it was my good fortune to have a certified, authentic horticulturist leading the tour—thankfully, also a friend of mine.

Toward the end of May, serene self-righteousness gave way to panic. I *had* to whip this baby into shape! A deep-seated need to be liked and admired began overtaking me. It seemed as if I were inviting people over to my house with the beds unmade and the dishes still in the sink. *What was I thinking?*

Sleep became a waste of time. Maybe, by the gleam of a flashlight, I could continue picking out the blades of grass irreverently springing up amid the creeping juniper lining the back hill. At least being awake would save me from a recurring episode of a nightmare called “The Inva-

sion of the Moles.” About 2 or 3 in the morning, the creatures emerged. Starting with the little walled area in the garden, they ate the roots of my ‘Emerald Gaiety’ euonymus, overturning the plants like broccoli with their stalks in the air. Soon every bed was riddled with the holes of uprooted plants, which lay about like dead bodies. I am normally a live-and-let-live type of gardener, but now the moles were getting between me and that perfect garden: It was war. But when the whirligigs, castor oil, and dried cougar urine didn’t stop the moles’ onslaught, I knew it was time for the big guns: red pepper. Fighting them in my sleep, I’d scream out loud, “Drop that leaf, you vermin!”

Little had I known that being on a garden tour would bring out obsessive-compulsive tendencies. As June arrived, I found myself on hands and knees among my perennials day and night, on the lookout for weeds. No matter how vigilant I was, there was always a wayward plant unwilling to fall into line or stand up straight. I agonized over whether my climbing roses would be rosing or my Iceland poppies still popping at 11 a.m. on June 9.

Tension mounted as the day drew closer. I needed to do something to bolster my wavering confidence. Recalling a little trick I admired on one of those “professional” tours, I quickly swept through my beds, making tidy knots of the spent stalks of my daffodils. Then, to liven up the colorless spots, I planted a watercolor mix of pansies. “There,” I breathed as I finished putting in the last plant.

I stood at my door surveying all my handiwork of the past few months. Amateur—yes. Neurotic—yes. Gratifying—definitely. I could already hear the approving oohs and aahs from the 11-o’clock group as they approached. Maybe I’ll do this again next year.

Rosalie Hanson is a free-lance writer living in Concord, Massachusetts.



Gardeners Information Service

DIVIDING REBLOOMING IRISES

I have irises that bloom in the spring and again in the fall. When do I divide them?

—S.L., BEAUFORT, SOUTH CAROLINA

Most remountant irises—those that bloom more than once a year—are bearded types, so we'll assume that's what you have. These fall into the rhizomatous category (as opposed to bulbous) and should be divided every two or three years. The exception is the aril iris, which may need to be divided annually.

Mary Forte of Fortes Iris Gardens in Los Banos and Atascadero, California, recommends dividing remountants about six weeks after the last bloom fades in the spring. "At that time, the irises are resting from the spring bloom but haven't yet started to actively develop new rhizomes," she explains. "Sometimes they pout after division and will skip a bloom season or two, but once in a while they will go ahead and bloom the same fall."

To divide, carefully dig up the rhizomes and cut the newer portions away from the old, discarding the latter. Then replant the new rhizomes. "The faster you get them back in the ground and watered, the more likely they are to rebloom that same year," says Forte.

Terry Aitken, editor at the American Iris Society, recommends using any late-fall bloom shoots of newly transplanted remountant irises as cut flowers, "so that the plant can focus on vegetative growth for the following spring."

PROPAGATING HISBISCUSES

I have several hibiscuses as houseplants. I am having trouble getting cuttings from these plants to root. Any suggestions?

—L.V., MORELAND HILLS, OHIO

According to the American Hibiscus Society, some varieties of hibiscus are easier to root than others. But many of the tropical hibiscuses, which are often grown as houseplants in cool-

er climates like yours, root fairly easily. Perlite is a good choice for a rooting medium, and using a rooting hormone usually stimulates root growth in six to eight weeks. It is very important never to let the medium dry out and to keep cuttings in an area where they are provided warm temperatures, high humidity, and moderate light.

Hybrid hibiscuses, however, might be more difficult to root because some have been grafted to specialized rootstocks that are more vigorous than the hybrid and more resistant to soil-borne diseases. For more information on the grafting process and other methods of propagating hibiscuses, visit the American Hibiscus Society Web site americanhibiscus.org/.

SUDDEN OAK DEATH

As a California resident, I have been hearing a lot about sudden oak death. Can you provide some information about this disease?

—P.M., YUBA CITY, CALIFORNIA

First detected in 1995, sudden oak death is a fungal disease that has been identified in attacks on several species of native oak trees that grow along the northern California coast. The suspected pathogen is a new species of the fungus *Phytophthora*, although bark beetles, other fungi, and weather may be exacerbating factors.

Sudden oak death has been linked to the deaths of thousands of tanoaks (*Lithocarpus densiflorus*), coast live oaks (*Quercus agrifolia*), and California black oaks (*Q. kelloggii*) in California, mostly in the San Francisco area. More recently, the disease is suspected to have infected California huckleberry (*Vaccinium ovatum*) and some species of rhododendrons.

The fungus is believed to infect its hosts by entering through the bark, possibly after being splashed there by raindrops during the rainy season. Symptoms of infection include dark sap oozing from the trunk, followed by yellowing and wilting of leaves, and evidence

of bark beetle damage. Once a tree has become infected, its vigor rapidly declines and it becomes vulnerable to secondary infections and insect pests that researchers suspect may be the actual causes of tree death.

The University of California has established a Web site to provide up-to-date information on this serious problem: camfer.cnr.berkeley.edu/loakst/TheProblem.

IN SEARCH OF A TRUE IDENTITY

Last fall I purchased a plant called "woundwort." This past spring, it came up with wonderful softly hairy foliage and beautiful stalks of flowers. I've been searching for more information about this plant, but I have only found one reference to woundwort, which listed it as *Anthyllis vulneraria*.

—B.M., VIA THE AHS GARDENING COMMUNITY LISTSERVE

There are a number of plants commonly called some variation of woundwort. Most of them are in the genus *Stachys*, best known for lamb's-ears (*S. byzantina*), and it is likely your plant is in this genus. It could be *S. palustris*, also known as betony and all-heal. It could also be *S. germanica*, known as downy woundwort, or *S. macrantha*, which usually goes by the name big betony. Because *S. macrantha* has the most attractive flowers of these three species, it may be the one you purchased.

Anthyllis vulneraria also goes by the common name woundwort, but it is a leguminous plant that has been used for livestock feed and is not particularly ornamental.

The common name woundwort refers to the historic—and largely archaic—use of the woolly, absorbent leaves of *Stachys* species to staunch bleeding and dress wounds. ☪

William May, Gardeners Information Service, and Marianne Polito, Gardeners Information Service Manager.

WE'RE READY TO HELP: For answers to your gardening questions, call Gardeners Information Service at (800) 777-7931, extension 131, between 10 a.m. and 4 p.m. Eastern time, or e-mail us anytime at gis@ahs.org.

Natural Connections

Compost Critters: The Invisible Life of the Compost Pile

by Kathryn Lund Johnson

ALTHOUGH THE ADAGE “compost happens” is true, it takes a furious amount of activity from a vast and varied assemblage of “critters” to generate that coveted substance. Just who are these hard-working creatures, what do they do, and how do they do it? It all begins with the microorganisms.

The main component of mature healthy compost is humus—the remains of organic matter that resists further decomposition. Added to soil, humus improves its structure by facilitating the formation of soil aggregates—irregularly shaped soil particles that bond together, creating tiny air pockets. This structure allows for a good oxygen/water balance in a soil, because the air pockets regulate moisture through their storage and drainage abilities. The creation of humus depends upon the presence of microorganisms, or chemical decomposers, whose activity breaks down organic matter.

In nature and in the compost pile, all organic matter ultimately decomposes. The process may be manipulated, as in an actively maintained compost pile, but the necessity of certain crucial ingredients does not vary. Carbon and nitrogen must be present to provide food for the microorganisms. Adequate oxygen must be available for their growth and energy, and to ensure the presence of desirable, non-odor-producing aerobic bacteria. A 40- to 60-percent water content is usually an optimal level, but the percentage deviates slightly depending on the organic matter being composted. Water is also crucial for the presence of aerobic bacteria. Additional variables—including temperature, volume, surface area, and particle size—also play a role in the breakdown process.

BACTERIA

Of the billions of microorganisms living in a gram of compost, 80 to 90 percent are bacteria. Bacteria require specific temper-



Though seemingly inert, this compost pile is cooking with bacterial activity.

ature ranges to enable them to function at peak efficiency.

Psychrophilic bacteria. Active at cool temperatures—from 10 to 55 degrees Fahrenheit—psychrophilic bacteria initiate the decomposition process by attacking organic matter and releasing nutrients. As they eat, they reproduce at a frenzied pace, generating heat.

Psychrophilic bacteria work most efficiently at approximately 55 degrees—a temperature not much higher than that found in our refrigerators—digesting carbon compounds and causing them to be burned off or oxidized, with the resulting release of more heat. Although the heat produced by oxidation and reproduction plays no direct role in the breakdown of the organic matter, it creates an environment conducive to the appearance of additional microbes.

Mesophilic bacteria. These bacteria arrive on the scene when the compost temperature reaches 50 degrees Fahrenheit, and they eat and reproduce most efficiently at temperatures between 70 and 90 degrees, and their activities further raise the temperature in the pile. Although the decomposition rate of the pile is greatest following the appearance of the mesophiles, the temperature during this stage is not high enough to kill weed seeds or disease-causing organisms that might be present. For that process, we need the thermophilic bacteria, which become active when the core temperature reaches 104 degrees.

Thermophilic bacteria. At the height of the activity of thermophilic bacteria, the fastest-working of the compost bacteria, the core temperature of a compost pile can climb as high as 170 degrees. But food, air, and water sources are eventually depleted, causing a slowdown in bacterial activity. At this point, the pile must be turned within three to five days to maintain the maximum working power of the thermophiles. Otherwise, the temperature will drop and the activity of the thermophilic bacteria will slow in response, allowing for the reappearance of the mesophiles.

All three of these types of bacteria produce enzymes that assist them in breaking down complex carbohydrates into simpler forms. The enzymes remain in the compost long after the bacteria have died, attacking cellulose and lignin—large, complex molecules that are highly resistant to decomposition.

Resources

Compost—Black Gold. AHS Resource Bulletin. \$5. Call (800) 777-7931 ext. 131 to order.

Let It Rot! The Gardener's Guide to Composting by Stu Campbell. Storey Books, 1998.

Smith & Hawken The Hands-On Gardener: Composting by Liz Ball. Workman Publishing Co., 1997.

Start with the Soil by Grace Gershuny. Rodale Press, 1993.

Fungi. Although bacteria are crucial to the creation of healthy compost, equally important are fungi. Fungi do not possess chlorophyll and many are saprophytic, obtaining their food through the consumption of dead organic matter such as leaves and wood. Fungi are, in fact, the most efficient of the microorganisms at

degrading lignins, and many species of fungi are able to decompose the tough cellulose found in leaves.

Hyphae—long filaments produced by fungi—secrete enzymes that break down organic matter into nutrients that can be absorbed by the fungi. Most fungi live near the surface of compost, where oxygen is plentiful and they are able to satisfy their requirements for both organic matter and moisture.

Actinomycetes. The presence of a more complex form of bacteria, the actinomycete, is also important in the production of compost. By liberating carbon, nitrate nitrogen, and ammonium nitrate, actinomycetes allow for plant uptake of these valuable nutrients. Actinomycetes have filaments similar to fungal hyphae, but smaller. They thrive in the more moderate heat zones of the pile.

Actinomycetes break down starch and proteins and, along with fungi, are valuable decomposers of cellulose and lignin. Their presence in the compost pile is most apparent during the later stages of

decomposition, when they assume a grayish, cobwebby appearance and exude a pleasantly earthy smell.

FROM DINERS TO DINNER

The breakdown of organic matter by the microorganisms prepares the pile for the arrival of the macroorganisms—or physical decomposers—including slugs, snails, earthworms, nematodes, springtails, mites, and a variety of vertebrates. These creatures further the decomposition process by variously chewing, digging, grinding, and digesting organic matter, including the previously mentioned bacteria, fungi, actinomycetes, and their by-products.

Although most of the macroorganisms in a compost pile are readily visible to the naked eye, the unseen microorganisms are surely deserving of our awareness and appreciation as we enrich our gardens with that rich “black gold.”

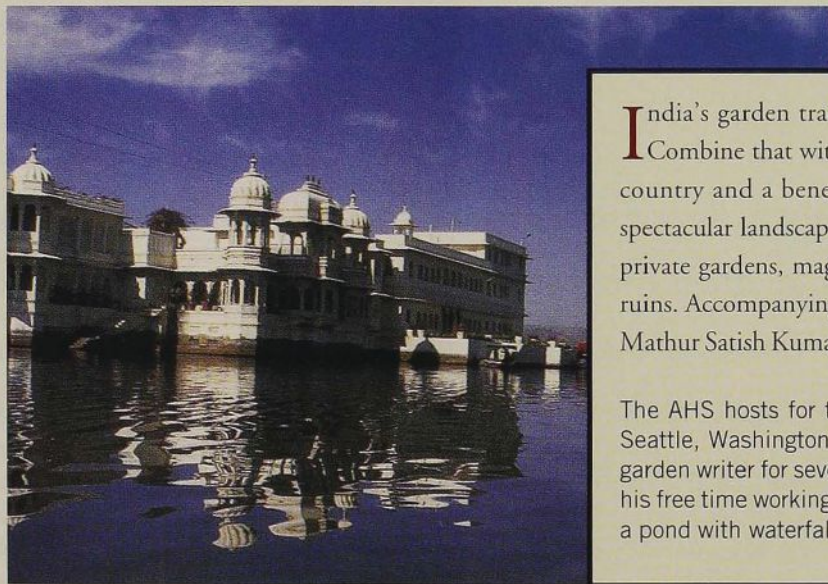
Kathryn Lund Johnson is a free-lance writer and photographer living near Middleville, Michigan.



2001 American Horticultural Society TRAVEL STUDY PROGRAM

Gardens and Monuments of India

November 6–18, 2001

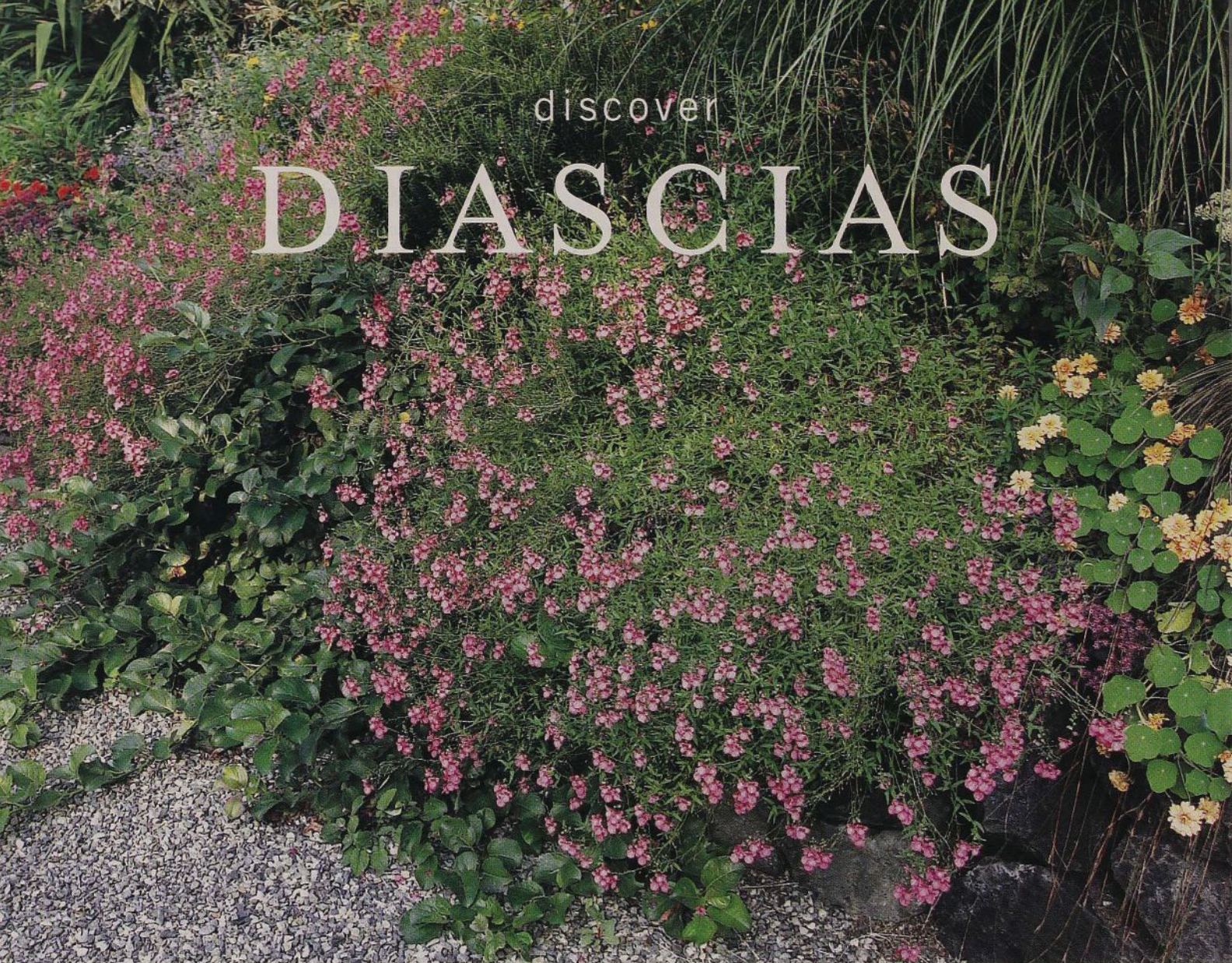


India's garden traditions are rooted in the Hindu respect for nature. Combine that with the gardening traditions the British brought to this country and a benevolent climate and you have the recipe for a most spectacular landscape. This lush and exotic trip will take you to exclusive private gardens, magnificent public monuments, and mysterious ancient ruins. Accompanying us on this trip as our guest horticulturist will be Dr. Mathur Satish Kumar, past director of the world-famous Moghul Gardens.

The AHS hosts for this special trip will be Ted and Dorothy Marston of Seattle, Washington. Ted serves on the AHS Board of Directors and is a garden writer for several magazines. An avid gardener, Ted spends most of his free time working in his own gardens, which now include a greenhouse, a pond with waterfall, and a rock garden.

For complete details of the exciting 2001 schedule, visit the AHS Web site at www.ahs.org, or call the Leonard Haertter Travel Company at (800) 942-6666.

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



discover

DIASCIAS

These annual and perennial wildflowers from South Africa are about to become the next hot plants for North American gardens.

BY PANAYOTI KELAIDIS

FEW TOPICS EVOKE stronger emotions in horticulturists than flower color: Some people hate orange, and others find pastels too pallid for words. Yet there is a color that provides the impact of orange *and* passes muster with the color police: Salmon. If salmon is the color you seek, twinspurs (*Diascia* spp.)—a genus of annual and tender perennial wildflowers from South Africa—may be just the ticket. They manifest the color salmon in all its subtlety and variation, much as delphiniums and gentians epitomize the color blue. Starting at the sunrise end of orange, twinspurs



range through tangerine, mango, peach, apricot, and dozens of other fruity shades; their colors make me think of sunset-tinted sandstone canyonlands and Victorian brickwork. Although relatively new on the gardening scene, twinspurs are quickly catching on among American gardeners.

Ideal for the front of borders as well as in containers and hanging baskets, diascias are prized not only for their flower color but for their long season of bloom. Most cultivated selections are hardy in USDA Plant Hardiness Zones 7 to 9 and heat tolerant in AHS Plant Heat Zones 9 to 6. They thrive in full sun in regions with mild climates, but in warmer areas perform better when planted where they will receive afternoon shade.

SOUTH AFRICAN ROOTS

PART OF THE FIGWORT family (Scrophulariaceae), the genus *Diascia* consists of roughly 50 species of annuals, herbaceous perennials, and sub-shrubs restricted mainly to South Africa. Diascias have facelike flowers with a drooping lower lip that are reminiscent of snapdragons (*Antirrhinum* spp.), but they are more closely related to figworts such as *Nemesia* and *Bacopa*. What principally distinguishes twinspurs from other scrophs—as the family is affectionately known by fig-

Opposite page: *Diascia* 'Emma' cascades gracefully over the edge of a low stone wall. This page, above: A close look at the flowers of *Diascia vigilis* 'Jack Elliott' reveals the characteristic curved spurs and the translucent yellow "windows" in the upper petals. Right: *Diascia* 'Coral Belle' makes a fine September showing in this Oregon garden.

wort enthusiasts—are the two small backward-facing, pouchlike spurs on their flowers that gave rise to their common name. Diascias also feature one or two translucent yellowish patches or "windows" in the upper central portion of their uppermost petal. The flowers form in dense clusters on spiky inflorescences.

Diascia species often display a sprawling or decumbent habit—the stems tend to droop or trail along the ground before sending up flower stalks—but breeding has created more compact and erect selections that form fairly dense mounds. Some species are stoloniferous, spreading slowly by underground roots to form mats, while others stem from a central crown.

Twinspurs occur all over South Africa, but the annual species are largely confined to the drier parts of the western Cape Province, where they grow in dusty or sandy soils. Although many of the annual diascias are spectacular, few are cultivated. These winter-growing plants could be used in the same manner as the various annual African daisies in genera such as *Arctotis*, *Felicia*, *Dimorphotheca*, and *Ursinia* to provide vivid spring colors in warm-climate gardens.

The perennial species are mostly evergreen or semi-evergreen alpine and meadow plants of the glorious Drakensberg mountains in Lesotho and the southeastern section of South Africa. These wild species bear strikingly beautiful flowers in their own right, but it is a series of vigorous hybrids with eye-catching flower colors developed since the 1970s that has taken gardeners and gardens by storm.

NEW KIDS ON THE BLOCK

ALTHOUGH BOTANISTS first described diascias in the 19th century, the perennial selections are surprisingly recent introductions to horticulture. The first hybrid I came across nearly 20 years ago was *D. barberae* 'Ruby Field'. Growing to a foot tall and as wide with striking ruby-colored flowers, 'Ruby Field' makes a compact and outstanding bedding plant in cool, rich soil. Like most cultivated diascias, it is also a fine container subject.



POLLINATION AND PROPAGATION

Diascias are exclusively pollinated by a genus of South African bees that botanists believe co-evolved with the plants. The bees have developed forelegs of varying lengths that enable them to harvest a volatile oil secreted either from a patch on the flower or from hairlike glands tucked in the depths of the saclike spurs.

Diascias are also self-incompatible—that is, they require cross-pollination by another plant of the same species to set viable seed. Not surprisingly, given the complexities of diaschia flower structure and their specialized pollination requirements, they rarely produce seed in cultivation in the Northern Hemisphere. For breeding purposes, flowers can be cross-pollinated by hand, but for propagation it is much easier to root stem cuttings or divide stoloniferous selections in spring or fall.

Cuttings taken in late summer can be overwintered in a cold frame or cool greenhouse and planted out the following spring; this is a good precaution in regions where diascias are borderline hardy. —P.K.

The majority of the twinspur hybrids are the work of Hector Harrison, an amateur plant breeder from England who set out to develop hardier plants with distinct flower colors and superior habit. Through painstaking hand pollination, he overcame the natural incompatibility of twinspurs and over a couple of decades has created a series of outstanding selections. Among the first of these was ‘Salmon Supreme’—sometimes incorrectly listed as ‘Hector Harrison’—which has pale, salmony pink flowers. Other breeders soon got into the act, and the diaschia color spectrum expanded to include flowers from near white in ‘Lilac Mist’ to rich rose-colored selections such as ‘Jacqueline’s Joy’ to the nearly purple ‘Langthorn’s



Above: *D. integrerrima* ‘Blush’ is among the palest diaschia cultivars. Right: *D. rigescens* serves as a colorful ground cover on this hillside at the Botanical Garden of the University of British Columbia in Vancouver.

Lavender’. (See the chart on page 21 for brief comparative descriptions of diaschia species and cultivars.)

Most of the early hybrids grow best in rich loamy soil that is kept moist and out of the hottest glare of the mid-American sun, although they can take full sun in mild, maritime climates such as northern California, the Pacific Northwest, and coastal New England. Some newer selections are proving successful in a broader range of growing conditions, including exposed, sunny spots. Among these are rosy pink-flowered ‘Emma’, which is very hardy and also tolerates sunnier sites, and an Australian introduction, ‘Strawberry Sundae’, which is reported to be quite heat tolerant.

WILD AND WONDERFUL SPECIES

AS A PLANT HUNTER and horticulturist, I have a special place in my heart for this species, because over the course of four trips to South Africa I have seen many twinspurs in the wild. On the high tundra of the Drakensberg mountains in eastern South Africa, diascias paint whole hillsides pink. Once, while walking several thousand feet up Sani Pass, along the border between the KwaZulu-Natal province of South Africa and the small country of Lesotho, I came across huge bushes of coral pink-flowered *D. integrerrima* interspersed with glowing yellow mounds of the daisy *Euryops tysonii*. Among the hundreds of plants I saw blooming on the trail that day, that dazzling spectacle is ingrained in my memory.

A stoloniferous twinspur with lax, wiry stems, *D. integrerrima* has bluish green foliage and is more tolerant of dry conditions than most twinspurs. Two cultivars of note have been selected from this species: ‘Blush’, which has silvery pink flowers that fade to white; and ‘Coral Canyon’, an extremely hardy selection I discovered in the wild in South Africa and



Right: *Diascia* cultivars 'Blackthorn Apricot' and 'Ruby Field' sparkle in the foreground of this perennial border, filling in around the ankles of taller plants such as salvias, delphiniums, and penstemons.

introduced to cultivation through the Denver Botanic Gardens Plant Select program. 'Coral Canyon' forms a compact mound a foot or so tall and even broader that blooms from late spring to autumn and thrives in a wide range of soils and exposures. It is quickly becoming a popular plant in the Denver area, where it requires much the same care as any annual but rewards growers with its graceful bearing and sound perennial constitution.

Another stoloniferous species is *D. vigilis*, a prolific bloomer that bears small pale pink flowers and has softly hairy foliage. A selection called 'Jack Elliott' closely resembles the species but has slightly larger flowers.

Among the hardiest of the species is *D. fetcaniensis*, which features short spikes of salmon-pink flowers and dark green foliage covered with tiny hairs. It also spreads by stolons and develops a bushy habit over time.

Rigid twinspur (*D. rigescens*) is one of the least hardy twinspurs, but it is such a vigorous performer that it is worth growing as an annual in colder climates. The coarse, dark green, overlapping foliage of this species is quite different from that of other diascias, and the elongated spikes of coppery, dark pink flowers are very showy. Rigid twinspur is popular in Southern



California, where it only needs periodic summer watering to be a reliable perennial.

DESIGNING WITH DIASCIAS

DIASCIAS PERFORM admirably at the front of the border, and their sprawling habit makes them useful for filling gaps between annuals, perennials, and low-growing shrubs. They are equally ef-

DIASCIA QUICK COMPARISON CHART

| SPECIES/VARIETY | HEIGHT/SPREAD (INCHES) | FLOWER COLOR | QUALITIES | USDA HARDINESS, AHS HEAT |
|--------------------------------------|------------------------|----------------------------|--------------------------|-----------------------------|
| <i>D. barberae</i> 'Pink Queen' | 10/15 | rose pink | | 9-10, 8-3 |
| <i>D. barberae</i> 'Ruby Field' | 12/12 | salmon pink | mat forming | 9-10, 8-3 |
| <i>D. fetcaniensis</i> | 10-15/20 | salmon pink | cup-shaped flowers | 7-9, 9-6 |
| <i>D. integerrima</i> | 18-30/18-36 | coral pink | drought tolerant | 7-9, 9-6 |
| <i>D. integerrima</i> 'Blush' | 18/30-36 | white, tinged pink | blue-green foliage | 7-9, 9-6 |
| <i>D. integerrima</i> 'Coral Canyon' | 12-15/18 | salmon pink | long blooming | 5-9, 9-6 |
| <i>D. rigescens</i> | 18/30 | coppery pink | tall inflorescences | 8-9, 9-6 |
| <i>D. vigilis</i> | 12-18/24 | pale pink | stoloniferous | 7-9, 9-6 |
| <i>D. vigilis</i> 'Jack Elliott' | 12/15 | pink | large flowers | 7-9, 9-6 |
| <i>D.</i> 'Blackthorn Apricot' | 12/24 | apricot pink | long blooming | 7-9, 9-6 |
| <i>D.</i> 'Coral Belle' | 12-18/24 | salmon pink | | 7-9, 9-6 |
| <i>D.</i> 'Emma' | 18-24/24-36 | rose pink | mound forming | 7-10, 10-6 |
| <i>D.</i> 'Hector's Hardy' | 10-12/15-24 | deep pink | | 7-9, 9-6 |
| <i>D.</i> 'Jacqueline's Joy' | 12/36 | deep rose | low spreading | 7-9, 9-6 |
| <i>D.</i> 'Langthorn's Lavender' | 8/12 | lavender-pink | low mounding | 7-9, 9-6 |
| <i>D.</i> 'Lilac Belle' | 10/24 | purplish pink | tall inflorescences | 7-9, 9-6 |
| <i>D.</i> 'Lilac Mist' | 12-18/24-36 | silvery pink, fading white | | 7-9, 9-6 |
| <i>D.</i> 'Red Start' | 8-12/12 | watermelon red | | 7-9, 9-6 |
| <i>D.</i> 'Salmon Supreme' | 9/15-24 | pale salmon pink | long blooming | 7-9, 9-6 |
| <i>D.</i> 'Twinkle' | 8-12/15-24 | purplish pink | | 7-9, 9-6 |
| <i>D.</i> 'Wendy' | 12/15-24 | dark pink | spreading, large flowers | 7-9, 9-6 |

fective planted along shallow slopes or trailing over the edge of walls.

The salmony pink hues of diascia flowers blend well with silver-foliaged plants such as lavenders, wormwoods (*Artemisia* spp.), licorice plant (*Helichrysum petiolare*), and lamb's-ears (*Stachys* spp.). To create an intriguing contrast of color and texture, plant diascias with white-flowered plants such as daisies, and with ornamental grasses and other plants—such as irises and sisyrinchiums—that have upright habits and spiky, grasslike foliage.

Diascias can be grown in the same beds as daffodils and other early bulbs because they come into bloom just as the bulb foliage is dying back. They also make great fillers for containers and hanging baskets because they droop gracefully over the edge and bloom for long periods.

CARE AND MAINTENANCE

DIASCIAS GROW best in moderately fertile, well-drained soils and need regular irrigation during dry periods. Grow them in raised beds where drainage is poor. They flower best if deadheaded regularly and should be cut back vigorously after the first full flush of flowering to encourage re-blooming. Some selections—including *D. barberae* 'Pink Queen'—bloom into November or even year-round in Mediterranean climates such as coastal California and Australia. In regions that endure hot summers, diascias may sulk in July and August, but are likely to re-bloom in the fall.

Diascias are not prone to serious pest or disease problems, but



In containers, diascias make good companions for spiky plants such as New Zealand flax (*Phormium* spp.).

slugs can occasionally make a meal of the leaves. Fungal diseases may occur during extended periods of hot, humid weather.

THE NEW WAVE

WHAT ASTONISHING times we live in, when whole new genera of plants are emerging on the gardening scene. Three of the most ubiquitous and striking groups of plants I now grow were essentially unknown in the 1970s: the South African ice plants, especially *Delosperma* in yellow, purple, and rose reds; the agastaches of the American Southwest that set flame to the late-summer season with orange, rose red, and bronzy colors; and now diascias, which from May to well after

the first hard frosts take center stage.

Although some diascias have needed a little pampering in my Colorado garden, they are well worth the effort; I cannot imagine a garden without one or another of these long-blooming wonders. And there are exciting times ahead because wild diascias offer more colors—including purple, yellow, and white—for hybridizers to experiment with. Without a doubt, more and more new selections will prove tough enough to elbow their way into sunny borders and onto a short list of star performers in the garden.

A well-traveled plant explorer and avid rock gardener, Panayoti Kelaidis is curator of plant collections at the Denver Botanic Gardens in Colorado.

Sources

Canyon Creek, Oroville, CA. (530) 533-2166.
www.canyoncreeknursery.com. Catalog \$2.

■ *D. integerrima* 'Blush', *D. rigescens*, *D. vigilis*, *D.* 'Blackthorn Apricot'.

Digging Dog, Albion, CA. (707) 937-1130.
www.diggingdog.com. Catalog \$3.50.

■ *D.* 'Blackthorn Apricot', *D.* 'Coral Belle', *D.* 'Langthorn's Lavender', *D.* 'Red Start', *D.* 'Twinkle'.

Forestfarm, Williams, OR. (541) 846-7269.
www.forestfarm.com. Catalog \$5.

■ *D. barberae* 'Ruby Field', *D. rigescens*, *D.* 'Langthorn's Lavender', *D.* 'Red Start', *D.* 'Salmon Supreme'.

Heronswood Nursery, Kingston, WA. (360) 297-4172.
www.heronswood.com. Catalog \$5.

■ *D. integerrima*, *D. integerrima* 'Blush', *D.* 'Jacqueline's Joy', *D.* 'Lilac Mist', *D.* 'Twinkle', *D.* 'Wendy'.

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

■ *D. integerrima* 'Coral Canyon', *D.* 'Emma'.

Joy Creek Nursery, Scappoose, OR. (503) 543-7474.
Catalog \$2.

■ *D. barberae* 'Ruby Field', *D. fetcaniensis*, *D. vigilis*, *D. vigilis* 'Jack Elliott' ('Elliott's Variety'), *D.* 'Blackthorn Apricot', *D.* 'Coral Belle', *D.* 'Emma', *D.* 'Hector's Hardy', *D.* 'Lilac Belle', *D.* 'Twinkle'.

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

■ *D. barberae* 'Pink Queen'.

SECRET GARDENS

These little-known garden gems are among our members' favorites. Consider putting some of them on your travel itinerary this summer.

by RITA PELCZAR

WHEREVER I vacation, I like to investigate local public gardens. In addition to the large, well-known botanical gardens and arboreta usually located near major metropolitan areas, smaller, more local gardens often offer the enchantment of an exquisite design, a glimpse of history, a surprisingly sophisticated collection, or a unique mission expressed in an unusual manner.

Even my kids often find something that piques their interest, like the Poisonous Plant Garden behind a spider gate at the University of North Carolina's Arboretum in Chapel Hill, or the massive old-growth hemlocks that predate Christopher Columbus at Cathedral State Park near Aurora, West Virginia.

Last summer's family vacation included a visit to the Daniel Boone Native Garden in Boone, North Carolina. There, beyond the borders of plants used by early American settlers, I discovered a secluded bog garden bursting with pitcher plants, sedges, and arrowheads (*Sagittaria* sp.) that had me envisioning something similar in my own backyard.

Such small, charming public gardens are little known beyond their region. On the assumption that other AHS members possess similar insider knowledge of local public gardens, we asked readers to nominate and describe their favorite "secret gardens." The following gardens are arranged by geographic region, with highlights of a few and a listing of others on pages 28 and 29. An asterisk next to a garden's name indicates that it participates in AHS's Reciprocal Admissions Program, which offers free admission and other benefits to AHS members showing a current membership card.

NORTHEAST

THE 15-FOOT walls of nearby buildings surrounding the garden at **Merchant's House Museum** in New York City effectively block the view of it from the street, notes AHS member John



Merchant's House Museum Garden

William Rommel. Designed in a late-Victorian style, the garden complements Merchant's House, a National Historic Landmark building that was home to the prosperous Tredwell family.

"The symmetry of the original garden design allows for a slow stroll through the beds on bluestone paths," notes Rommel. "And wrought-iron benches and chairs allow visitors to spend time in this quiet space away from the city. Birds are plentiful!" According to Rommel, the garden is at its peak from May through September.

Among the highlights of the garden is what Rommel describes as "a cross between a knot garden and the 'block color' carpet bedding style, set in triangular borders of ajuga," and a three-by-25-foot planting along the rear wall of small rock garden plants that "mimics the idea of an alpine rockery." ♦ For information: (212) 777-1089. www.merchantshouse.com.

Goodstay Gardens, located on the Wilmington campus of the University of Delaware, is a historic property that dates



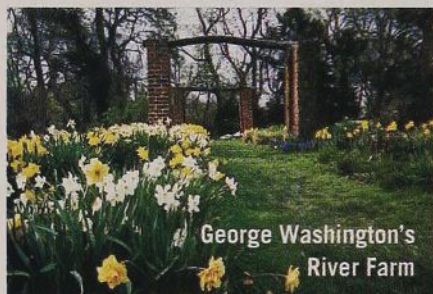
Goodstay Gardens

from about 1740; the gardens are probably among the oldest in Delaware. "Spring is a particularly lovely time," says AHS member Helen L. Eliason. The "rooms" of the colonial garden are defined by boxwoods. The Turkey Rock Garden is flanked by a variety of lilacs and includes a picturesque old tamarisk. An avenue of pink-flowered saucer magnolias leads the visitor to a circular reflecting pool surrounded by azaleas and flowering trees.

Other highlights include a peony garden, which contains many specimens planted in the 1920s, and an iris garden. The woodland garden is planted with bulbs, wildflowers, and flowering shrubs that brighten the shade of giant sycamores, oaks, and maples. ♦ For information: (302) 573-4450.

SOUTHEAST

IF YOUR TRAVELS take you to the Washington, D.C., area, the American Horticultural Society headquarters in nearby Alexandria, Virginia, is a must for your itinerary. **George Washington's River Farm** is located on a scenic stretch of the Potomac River, just north of Washington's fabled home, Mount Vernon. Several gardens provide lots of



George Washington's River Farm

ideas and inspiration for home landscapes, including the Children's Garden, a garden meadow, an azalea garden, perennial borders, and the new fragrance garden. ♦ For information: (800) 777-7931. www.ahs.org.

And as long as you're in the area, visit **Green Spring Gardens Park***, located just a few miles away, also in Alexandria, Virginia. Operated by the Fairfax County Park Authority, Green Spring covers 27 acres and includes an 18th-century manor house, visitor's center, greenhouse, and five acres of display gardens.



Green Spring Gardens Park

"This garden is truly hidden," says AHS staffer Janet Daniels. "It's behind a strip mall and a car dealership." But once you enter its grounds, the bustle of the city seems to disappear. Paved paths wind through a series of gardens that feature flowering shrubs, native wildflowers, herbs, and perennials. Also notable are the island rock garden, water-wise garden, vegetable garden, gazebo garden, woodland trail, and a series of demonstration gardens for small spaces. ♦ For information: (703) 642-5173. www.greenspring.org.



Oak Hill

Much farther south, in Rome, Georgia, lies **Oak Hill**, a 150-acre site that was the childhood home of Martha Berry, founder of Berry College. Located midway between Chattanooga, Tennessee, and Atlanta, Georgia, Oak Hill includes formal gardens and naturalized areas.

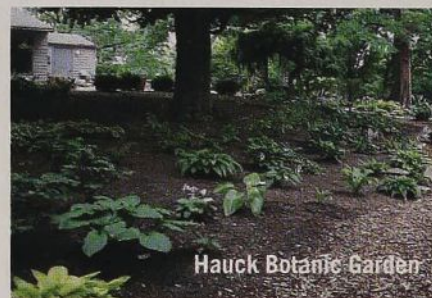
AHS member John Watkins explains that each season offers something exceptional, beginning in early spring "with literally millions of daffodils and tulips, giving way to azaleas and dogwoods in mid- to late spring." In summer, flowering annuals brighten the formal gardens, and nature trails offer cool shade. Late-blooming perennials take center stage in fall, and in winter, pansies, and ornamental cabbages and kale fill the formal gardens.

Other features include a wildflower meadow, butterfly

garden, and knot garden. Oak Hill is also an All-America Selections Display Garden, "one of only five in the state of Georgia," says Watkins. ♦ For information: (706) 238-7893. www.berry.edu/oakhill.

MIDWEST

ONE OF CINCINNATI'S best-kept secrets, according to AHS member Mary Raterman, is the **Hauck Botanic Garden**—"a little pocket of nature at its best,

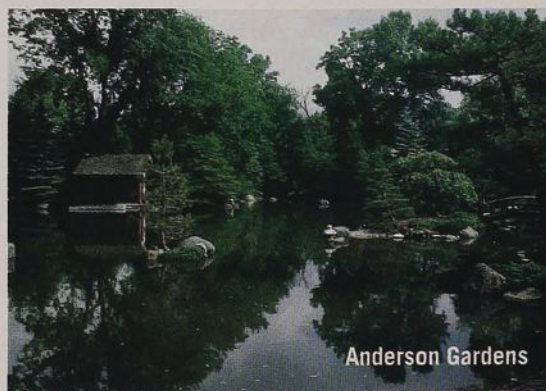


Hauck Botanic Garden

hidden away in a very urban environment." Raterman is one of a small group of volunteers who help with the development and maintenance of the gardens, which are located a short distance from downtown Cincinnati, Ohio.

"Everyone has a favorite time of the year to visit," explains Raterman. "For some, it is the early spring, when the grounds are covered in large sweeps of crocus, winter aconite, snowdrops, and Siberian squill. In early summer, the Pat Kipp Shade Garden, with its 300 varieties of hostas, is at its peak. Late in the season, the herb garden draws people with a lush display of perennials." Also located on its grounds is the Civic Garden Center of Greater Cincinnati, which includes a horticultural library containing nearly 2,200 books. ♦ For information: (513) 221-0981.

Adele Kleine names **Anderson Gar-**



Anderson Gardens

dens* as her pick for a secret garden worth visiting. The seven-acre Japanese garden “is designed to allow visitors an opportunity to stroll through a serene landscape and reflect on the tranquil beauty of nature,” says Kleine.

Located 90 miles northwest of Chicago in Rockford, Illinois, the grounds of Anderson include a large koi-filled pond, a zigzag bridge, a waterfall, and a granite pagoda. Plants included in the gardens are generally easy to find at nurseries or garden centers. According to Kleine, careful placement and exquisite pruning make this garden a valuable lesson in design for visitors. ♦ For information: (815) 229-9390. www.andersongardens.org.

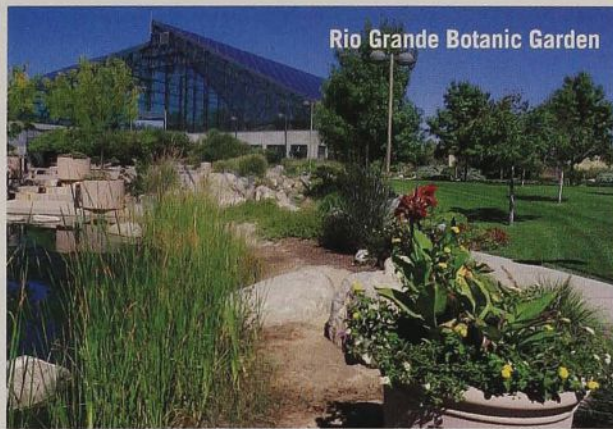
SOUTH CENTRAL AND SOUTHWEST

KATHY LITTLEFIELD tells us that the **Schultze House Gardens** located in downtown San Antonio, Texas, is “one of the prettiest gardens in San Antonio.” The gardens are leased to the Bexar County Master Gardeners, whose volunteers have developed the sites.

Garden highlights include a period garden with plants available prior to 1940, including antique roses. Also featured are herb, shade, and tropical gardens, plus the recently planted Mediterranean garden. Littlefield says the Schultze House Gardens offer residents, “a place to come and see what they can do with their own yards.”

♦ For information: (210) 229-9161.

The **Rio Grande Botanic Garden** in Albuquerque, New Mexico, has only been open since December 1996. “The garden is located at the very northern edge of the Chihuahuan desert,” reports AHS member Dale Sökkary, who notes that “the Mediterranean plant collection and the North American desert plant collection include some very unusual plants, especially when displayed in the arid high desert of the Southwest.”



Rio Grande Botanic Garden

The botanic garden features xeriscape plantings, a butterfly garden, a pollinator’s garden, and a garden railroad complete with miniature plants. “The jewel of the garden,” says Sökkary, “is a conservatory that is unique in design and construction. It has been featured in professional publications and won several awards.”

As part of the complex that includes the Rio Grande Zoo, the Albuquerque Aquarium, and the Tingley Aquatic Park, the botanical garden provides visitors with “a complete life science experience,” says Sökkary. ♦ For information: (505) 764-6200. www.cabq.gov/biopark/garden/index.html.

WEST

DESIGNED AND planted more than 20 years ago by horticulturist and iris hybridizer Constance Hansen, the **Connie Hansen Garden*** in Lincoln City, Oregon, is only about an acre in size, but AHS member Katie Stewart says the garden is “a treasure so lovely that others have seen fit to create the current nonprofit conservancy to preserve, maintain, and enhance it.”

The gardens feature native and exotic species that thrive in the cool, wet, coastal climate of the Northwest, including rhododendrons and azaleas and iris species and hybrids. The wetland



Connie Hansen Garden

areas, says Stewart, include a creek with “lavish displays of *Primula*.”

♦ For information: (541) 994-6338. www.conniehansengarden.com.

According to Al Thompson, **La Purisima Mission State Historic Park** in Lompoc, California, is home to another western secret garden. Thompson, who is the historian for the

nearly 2,000-acre park, explains that the four-acre main garden consists of plants that were used historically for daily living. Many of the plants are species that have been used by the native Chumash for thousands of years. “Others,” he says, “are plants the Spanish padres had known from the Mediterranean or plants that were brought in by trade from South America, Mexico, and other parts of the world.”



La Purisima Mission State Historic Park

The garden and adjacent buildings were restored by the Civilian Conservation Corps in the 1930s. “The garden, with its aged olive trees and plants, has matured into a state of grace no other of the 21 missions can offer,” says Thompson. ♦ For information: (805) 733-3713. ca-parks.ca.gov/south/channel/lpmshp513.htm.

No matter where your travels take you, there are many worthwhile gardens that await your discovery. The chart on the following pages offers lots more secret gardens throughout North America to explore.

Rita Pelczar is associate editor of *The American Gardener*.

LEFT: LOUISE D. SUHREY; TOP CENTER: COURTESY OF ALBUQUERQUE BIOLOGICAL PARK; BOTTOM CENTER: PENNY MARTIN; COURTESY OF THE CONNIE HANSEN GARDEN; RIGHT: COURTESY OF AL THOMPSON, LA PURISIMA MISSION STATE HISTORICAL PARK

REGIONAL GUIDE TO OUR READERS' SECRET GARDENS

Here are contact information and highlights for other nominated gardens. An asterisk indicates that the garden participates in the AHS Reciprocal Admissions Program, which offers free admission and other benefits to AHS members who present a current membership card.

NORTHEAST

| Garden and Location | Phone/Web site | Highlights |
|---|--|---|
| Bungay Jar's Gardens Wild Franconia, New Hampshire | (800) 421-0701 www.gardenswild.com | Mountainside gardens include water lily pond, stream, and woodland trails |
| Edgerton Park New Haven, Connecticut | (203) 777-1886 | Urban oasis, walled garden, greenhouses, community gardens |
| Garden in the Woods Framingham, Massachusetts | (508) 877-7630 www.newfs.org/garden.htm | New England Wild Flower Society gardens, native plants in natural groupings |
| * Park-McCullough House North Bennington, Vermont | (802) 442-5441 www.parkmccullough.org | Victorian and Colonial gardens, greenhouse |
| Shofuso Japanese House and Garden Philadelphia, Pennsylvania | (215) 878-5097 www.shofuso.org | Award-winning, two-acre Japanese garden designed by Sano Tansai |
| State University of New York Gardens Farmingdale, New York | (631) 420-2113 | Teaching garden, roses, tropicals |
| Wolfe's Neck Botanical Society Gardens Freeport, Maine | (207) 865-3428 | Organic demonstration gardens |

SOUTHEAST

| | | |
|--|---|--|
| Daniel Boone Native Garden Boone, North Carolina | (828) 264-6390 | North Carolina native plants, bog garden, rock garden |
| The Elizabethan Gardens Roanoke Island, North Carolina | (252) 473-3234 www.outerbanks.com/ elizabethangardens | Shakespearean herb garden, azaleas, roses, magnolias, gardenias |
| Fruit and Spice Park Homestead, Florida | (305) 247-5727 www.co.miami-dade.fl.us/parks/ fruitandspice.htm | Tropical fruits, nuts, spices, and herb trees and shrubs |
| Historic London Town and Gardens Edgewater, Maryland | (410) 222-1914 www.historiclondontown.com | Riverside gardens on historic site, woodlands, pond, herb garden |
| Huntsville-Madison County Botanical Garden, Huntsville, Alabama | (256) 830-4447 www.hsvbg.org | Perennials, herbs, aquatics, roses, butterfly house |
| William Paca House and Garden Annapolis, Maryland | (800) 603-4020 www.annapolis.org/paca.htm | Restored pre-Revolutionary War formal gardens |

MIDWEST

| | | |
|--|--|--|
| * Bickelhaupt Arboretum Clinton, Iowa | (563) 242-4771 www.bickarb.org | Dwarf and rare conifers, flowering trees, prairie wildflowers, hostas |
| * Botanica The Wichita Gardens Wichita, Kansas | (316) 264-0448 www.botanica.org | Native Kansas plants, butterfly house |
| * Como Park Conservatory and Japanese Garden, St. Paul, Minnesota | (651) 487-8200 www.stpaul.gov/depts/parks | Victorian-style conservatory includes palm dome, fern room, and sunken garden |
| Dubuque Arboretum and Botanical Gardens Dubuque, Iowa | (563) 556-2100 www.dbq.com/arboretum | Huge hosta collection, rose and seed-saver display gardens, irises, lilies |
| * Foellinger-Freimann Botanical Conservatory, Fort Wayne, Indiana | (219) 427-6440 www.botanicalconservatory.org | Tropical house, Sonoran Desert house |
| * Rotary Gardens Janesville, Wisconsin | (608) 752-3885 www.jvl.net/~gardens | International theme gardens |
| Topiary Garden in Old Deaf School Park Columbus, Ohio | (614) 645-0197 www.topiarygarden.org | Representation of Seurat painting "Sunday Afternoon on the Island of La Grand Jatte" in topiary; visitors become part of the art |
| Vander Veer Botanical Park Davenport, Iowa | (563) 326-7818 www.ci.davenport.ia.us/leisure/ parks/botanical.htm | Seasonal conservatory shows, roses, hostas, children's garden |

SOUTH CENTRAL AND SOUTHWEST

| | | |
|--|---|---|
| Arizona Historical Society Museum and Garden, Yuma, Arizona | (520) 782-1841 www.yumalibrary.org/ahs/index.htm | Restored garden, circa 1870, features palms, bamboos, bottlebrushes, and roses |
| Chandor Gardens Weatherford, Texas | (817) 613-1700 www.chandorgardens.com | Restored outdoor rooms designed by artist Douglas Chandor |
| Eureka Springs Gardens Eureka Springs, Arkansas | (501) 253-9244 www.eurekagardens.com | Meadow and hillside gardens around Blue Springs feature wildflowers, perennials, flowering trees and shrubs |
| Heard Natural Science Museum and Wildlife Sanctuary, McKinney, Texas | (972) 562-5566 www.heardmuseum.org | Native plant gardens and wildlife habitats, cedar arbor, redbud allée |
| Honor Heights Park Muskogee, Oklahoma | (918) 684-6302 | Roses, azaleas, lily pond, native trees |
| Living Desert Zoo and Garden State Park Carlsbad, New Mexico | (505) 887-5516 www.emnrd.state.nm.us/nmparks/pages/parks/desert/desert | Native southwestern plants and habitats |
| Will Rogers Garden Oklahoma City, Oklahoma | (405) 943-0827 | Perennial garden, rose and peony collections, azalea trail |

WEST

| | | |
|--|--|--|
| Berry Botanic Garden Portland, Oregon | (503) 636-4112 www.berrybot.org | Collections of rare plants from the Pacific Rim |
| Desert Demonstration Gardens Las Vegas, Nevada | (702) 258-3205 www.lvwd.com | Desert landscaping, 11 theme gardens |
| Elk Rock Gardens of the Bishop's Close Portland, Oregon | (800) 452-2562 www.diocese-oregon.org/theclose/ | Extensive collections of hellebores and magnolias, Olmsted design |
| Hakone Garden Saratoga, California | (408) 741-4994 www.hakone.com | Hill and pond, tea, bamboo, and Zen gardens |
| Lotusland Montecito, California | (805) 969-9990 www.lotusland.org | Exotic gardens of Polish opera star Ganna Walska |
| Luther Burbank Home and Garden Santa Rosa, California | (707) 524-5445 | Victorian garden, medicinal plants, demonstration beds, greenhouse |
| Meerkerk Gardens Whidbey Island, Washington | (360) 678-1912 www.meerkerkgardens.org | Native and exotic rhododendrons |
| The Oregon Garden Silverton, Oregon | (877) 674-2733 www.oregongarden.org | Dwarf conifers, irises, native oak grove |

CANADA

| | | |
|--|--|--|
| Minter Gardens Rosedale, British Columbia | (604) 794-7191 www.minter.org | Victorian topiaries, floral peacock, water gardens with waterfalls |
| Toronto Music Garden Toronto, Ontario | (416) 338-0338 www.city.toronto.on.ca/parks | Garden inspired by the music of J.S. Bach |

Resources for Garden Tourists

The Garden Lover's Guide to the Midwest by Paul Bennett, Princeton Architectural Press, New York, New York, 2000.

The Garden Lover's Guide to the Northeast by Paul Bennett, Princeton Architectural Press, New York, New York, 1999.

The Garden Lover's Guide to the South by Paul Bennett, Princeton Architectural Press, New York, New York, 2000.

The Garden Lover's Guide to the West Coast by Kathleen McCormick, Princeton Architectural Press, New York, New York, 2000.

The Garden Tourist, 2001 Edition (Regional editions: Northeast, Southeast, Midwest, Southwest & Rockies, West) by Lois Rosenfeld, Garden Tourist Press, Ridgewood, New Jersey, 2001.

Gardeners on the Go! Twenty Terrific Tours Around Puget Sound and Seattle by Stephanie Feeny, Cedarcroft Press, Bellingham, Washington, 1998.

West Coast Gardenwalks by Alice Joyce, Michael Kesend Publishing Company, New York, New York, 2000.



DAVID CAVAGNARO

by Donald Humphrey

All-American

Hibiscuses and their many comely American cousins add vibrant colors to summer gardens.

MALLOWS

WHEN MOST people hear the word *hibiscus*, they envision the sumptuous, flamboyant flowers of *Hibiscus rosa-sinensis*, tucked, no doubt, behind the ear of a seductive Polynesian maiden. This tropical species, which probably originated in southeastern Asia, has been widely hybridized to create glorious displays of large flowers in a range of vibrant colors.

But there are many other worthy hibiscuses and other intriguing genera in the mallow family (Malvaceae), several of which are native to North America. Hardier than their tropical cousins but just as heat tolerant, these lesser-known mallows are beginning to draw the attention of breeders and nursery owners and are deserving of consideration in our gardens for their attractive foliage and brightly colored, mid- to late-summer flowers.

NATIVE HIBISCUSES

OF THE 220-odd species in the genus *Hibiscus*, some 14 to 18 are native to North America. They are primarily herbaceous perennials, but some hover at the edge of shrubbiness, particularly in the warmer

Common mallow, above right, was used by breeders to develop striking hibiscus hybrids such as 'Disco Belle' and 'Blue River', opposite, left and right.



areas of the country. Native hibiscuses can be divided into two groups: the wetland species of the eastern half of the United States and the central valley of California; and those of dry or desert areas from southern and western Texas to Arizona, northern Mexico, and California. Only seven are readily available to gardeners, and the primary focus of this section is on those species.

EASTERN HIBISCUSES

IN THE WILD, the eastern species are found primarily along the edges of fresh- and saltwater marshes and even in shallow water, but they will thrive in full sun in a good, deep garden soil that is kept reasonably moist, particularly during the summer blooming period. Eastern hibis-

Family History

Mallows are primarily warm-temperate, subtropical, and tropical in distribution, but the large family—it includes more than 100 genera and some 1,500 species—has representatives stretching around the globe. Mallows come in a wide variety of forms, including trees, shrubs, herbaceous perennials, and annuals. Some, such as cheeses (*Malva neglecta*), are weeds, persisting around old gardens and farms.

The family has certain identifying characteristics, namely that the stamen filaments are fused to form a tube around the style; this feature is especially evident in the hibiscus flower. The five petals are essentially separate and equal in size.

From an economic standpoint, the most important member of the mallow family is the genus *Gossypium*, or cotton, which is the world's most important fiber crop. Several other mallows are sources of fibers, including *Hibiscus cannabinus*, known as kenaf. It is domesticated in West Africa, and its stem fibers are used, much like jute, for the manufacture of bags and rough fabrics.

Three members of the family are or have been fairly widely used for food. The mucilaginous root extract of marsh mallow (*Althaea officinalis*), a European native, was once used in the production of marshmallows, but artificial products have since replaced it. From northeastern Africa came okra (*Abelmoschus esculentus*), a domesticated mallow whose immature seed capsules are a popular vegetable in the American South. Another African native is roselle (*Hibiscus sabdariffa*), a multipurpose plant whose young shoots and leaves are cooked as a vegetable, while jellies, teas, candies, and even a fermented drink are made from the large, succulent red calyx. Widely grown in the Caribbean, this annual or short-lived perennial, with two-inch-wide yellow flowers, would seem to be a good candidate for gardens in our southern states. —D.H.

cuses can be found as far north as Massachusetts and New York, and westward to Minnesota and Nebraska, suggesting their garden adaptability to USDA Zone 5 and perhaps even Zone 4.

Most of these wetland hibiscuses are large plants in the six- to 10-foot range. The predominant flower colors are pink or white with a dark—usually crimson—central eye. Most feature large ovate or slightly lobed leaves, but two species—swamp hibiscus (*H. coccineus*) and *H. dasycalyx*, an endangered Texas native—have deeply lobed foliage that resembles that of Japanese maples. Some species have leaves that are softly hairy—this is particularly true of rose mallow (*H. lasiocarpus*).

Native from Maryland to Indiana and south to the Gulf Coast, common mallow (*H. moscheutos*, USDA Zones 6–11, AHS Zones 12–1) has attractive eight-inch, creamy white flowers with a red base. A subspecies with a more northerly range, *H. moscheutos* subsp. *palustris* (Zones 5–10, 11–1) has smaller, pink flowers. This vigorous species is an important component of some of the most popular hybrids of our native hibiscuses (see “Hibiscus Breeding,” page 33).

Similar in appearance to *H. moscheutos* is velvet or great rose mallow (*H. grandiflorus*, Zones 8–10, 12–8), another underrated native species that is found along the Southeast coastline. It has gray-green foliage and six-inch-wide white, pink, or rosy purple flowers with a darker eye.

One of the hardiest American hibiscuses is halberd-leaved rose mallow (*H. militaris*, Zones 3–9, 9–1), which has a native range that extends into parts of Minnesota. Its six-inch flowers are usually pink with a purplish central eye.

Swamp hibiscus (*H. coccineus*, Zones 6–11, 12–6), native to the southern coastal plain from Georgia to Louisiana, grows five to seven feet tall. Its six-inch, brilliant scarlet flowers, which bloom singly in leaf axils, are traffic stoppers in late summer when little else is blooming. The rounded seed pods

hang on into winter and are quite ornamental. Its finely divided, compound leaves are also less prone to Japanese beetle damage than those of other hibiscuses.

Rose mallow (*H. lasiocarpus*, Zones 6–9, 11–6) is primarily native to the central and southern United States, but, oddly, is also found in some sites in California. It has four-inch-wide white to pink flowers.

WESTERN HIBISCUSES

THERE ARE SEVERAL hibiscuses native to the West and Southwest, but these dry-land species are little cultivated and some can only be obtained through seed exchanges. Typically, these are low-growing plants with smallish flowers that demand sunny sites and well-drained soils, especially in winter.



American natives such as swamp mallow, top, and halberd-leaved rose mallow, above, are worthy garden plants.

I have grown both heart-leaf hibiscus (*H. cardiophyllus*, Zones 8–11, 12–7) and paleface rose mallow (*H. denudatus* var. *involutellatus*, Zones 7–10, 12–7) in Northern Virginia, but so far they have not survived our wet winters. The former, found in southern and western Texas, is a small, upright plant with beautiful heart-shaped leaves and bright red flowers set off by yellow stamens; the latter, native from Southern California to southwestern Texas, grows one to two feet tall with white to lavender flowers.

Native to deserts in Arizona, New Mexico, and eastern Texas, Coulter's hibiscus

(*H. coulteri*, Zones 8–10, 11–7) is a short-lived, shrubby hibiscus growing one to three feet tall. Though I have not grown this species, it has lemony or sulfur-yellow flowers with a maroon eye and is described as a prolific bloomer once established.

These dryland species do bloom the first year from seed, and at least in the case of *H. cardiophyllus*, it seems worth the trouble to grow them as annuals.

OTHER NATIVE MALLOWS

THE NATIVE hibiscuses may be the best known of America's mallows, but there are at least six or seven other native genera containing species that merit a place in our gardens. Four of these are at home in a good, moist garden soil. The others are better suited to dryland or xeriscape gardens.

Of the former, probably the most appealing is seashore mallow (*Kosteletzkya virginica*, Zones 6–9, 11–3), which is native



Heart-leaf hibiscus, left, is a desert species that craves full sun, but glade mallow, below, does best in shady sites.



to coastal salt marshes from Long Island to Texas. It does best in full sun and, though perfect for naturalizing in a soggy site, can be grown in regular garden soil as long as it receives a steady supply of moisture. Growing to five feet tall, seashore mallow resembles a hibiscus in its general growth form, but has smaller leaves and flowers. But what the bright pink flowers lack in

size they make up for in numbers, and with their appealing tendency to face outward or droop slightly, they are striking.

This plant's only drawbacks are an aversion to dry soils and a tendency to seed around in moist soils; the latter is easily avoided by deadheading the seed pods and pulling—or sharing—the young seedlings. A white-flowered selection named 'Immaculate' is sometimes also available.

Most mallows are grown principally for their flowers, but glade mallow (*Napaea dioica*, Zones 5–7, 8–3) is worthy of consideration for its foliage. The only member of its genus, it is rare and restricted to rich alluvial woods of the north central United States and a few eastern sites. The leaves of the basal cluster can reach nearly two feet in diameter and are deeply lobed and toothed somewhat like maple or sycamore leaves. The white, slightly fragrant flowers are only about a half-inch across but bloom in tight, ball-like clusters atop six- or seven-foot-tall stems in early summer. Glade mallow is a welcome addition to the shade garden, but it will also grow luxuriantly in full sun provided the soil is kept moist.

Iliamna is a North American genus of seven species, all but one native to the western half of the United States. The eastern species, and the only one readily available to gardeners, is Kankakee mallow (*I. remota*, Zones 5–7, 8–3), an endangered species that is found in the wild only at two localities—one in Illinois, another in Virginia. Sometimes called wild hollyhocks, these perennials are seldom grown in gardens but are well suited to native plantings and naturalistic borders. Their

Common in eastern coastal marshes, seashore mallow grows well in moist garden soil.





pink to lavender flowers are up to three inches across on stems from one to five feet tall. They are found growing mostly in moist soils, and some will tolerate considerable shade.

CHECKER MALLOWS

THE CHECKER mallows (*Sidalcea* spp.) of the western United States are found mostly in wet or seasonally moist meadows, although some species can apparently tolerate dry soils after blooming. There are about 22 species, but only three or four perennial species and a number of hybrids are commonly cultivated. They resemble miniature hollyhocks (*Alcea* spp.) but are more refined, with small flowers that bloom in dense spikelike racemes and rounded to kidney-shaped leaves. Checker mallows thrive in cool, dry climates and need moist but well-drained soils.

Checkerbloom (*Sidalcea malviflora*, Zones 5–9, 8–2) grows along the coast from Baja California to Oregon and has a number of subspecies. Growing two to five feet tall, it has pale lilac flowers and is the primary parent for many of the hybrids that have been developed, including

Sidalcea malviflora 'Elsie Heugh', top, and other checker mallows grow best in moist garden soils, while globe mallows such as *Sphaeralcea ambigua*, right, thrive in xeriscape gardens.

'Elsie Heugh' (pale pink, fringed flowers), 'Loveliness' (shell pink), and 'Party Girl' (deep pink). These hybrids are generally shorter and have a more compact habit than the species.

Farther north is another coastal species, *S. hendersonii* (Zones 5–7, 8–2), which can be found growing from Oregon to British Columbia. Its pink or rose-colored flowers are only about an inch across. Moist meadows from northeast-

ern California, Nevada, and Utah north to Idaho and eastern Washington are the domain of *S. oregona* (Zones 4–7, 7–2), which grows from one to four feet tall and has rose-colored flowers.

Another important component of checkerbloom breeding programs is *S. candida* (Zones 4–8, 8–3), which is native to mountain forests of New Mexico, Utah, Wyoming, and Colorado. Its flowers are white, and it grows to two feet tall. In my



Northern Virginia garden, it is a late-spring perennial. Another species found in the same general area from Arizona and New Mexico north to Wyoming is *S. neomexicana* (Zones 4–8, 8–2), which has handsome white or pink flowers.

DRYLAND MALLOW

THESE PLANTS OF drier, well-drained soils are found mostly in the western half of the United States. They can be grown in the East and Midwest, however, as long as they are planted in full sun and in soils that have excellent drainage.

The globe mallows (*Sphaeralcea* spp.) are widespread from the high plains to the West Coast. They have attractive downy foliage and small, cup-shaped flowers that bloom in spikes similar to hollyhocks. Most of the species are shrubby perennials that spread by rhizomatous roots, and they may be short-lived in cultivation. All are very drought resistant. There are many species—Arizona alone has 16—that are difficult to distinguish, but three of them are sufficient to give an understanding of their value in gardens.

Probably the most common species is prairie or scarlet globe mallow (*S. coccinea*, Zones 4–9, 11–3), which occurs from Alberta to Texas and Arizona. The woolly leaves are deeply lobed and divided, and the one-inch-wide flowers are predominantly orange, scarlet, or salmon. The plants seldom exceed a foot in height, blooming from May to September.

The apricot or desert mallow (*S. ambigua*, Zones 6–9, 11–2) is a one- to three-foot-tall subshrub found from Utah to the California deserts. The apricot to orange flowers are borne on graceful spikes in spring and may rebloom in summer and fall, particularly if cut back after the first flush of bloom. *S. fendleri* (Zones 5–8, 8–2) is a southwestern species with grenadine red flowers except in the variety *S. fendleri* var. *venusta*, which has clear pink flowers and is one of the showiest of the lot. I have grown it successfully in Northern Virginia, where this variety reaches four feet tall and spreads slightly wider.

ODDS AND ENDS

TURK'S-CAP (*Malvastrum arboreum* var. *drummondii*, Zones 8–11, 12–8) is found

Hibiscus Breeding

An increasing number of superior hybrids of American hibiscuses are finding their way into the horticultural trade. Probably *H. moscheutos* has been used more than any species in developing well-known hybrids such as the large-flowered 'Disco Belle' and 'Blue River II'. A cross between *H. coccineus* and *H. moscheutos* led to the cultivar 'Lord Baltimore', a large-flowered red.

A recent *H. moscheutos* and *H. grandiflorus* cross that has 12-inch, rose-pink flowers has been made in Texas by Ying Doon Moy, formerly of the San Antonio Botanical Gardens. Because *H. grandiflorus* is late flowering, such crosses should extend the flowering season in USDA Zones 8 and 9.

My own interest in hybridizing these plants began several years ago when I crossed *H. coccineus* with a red-flowered *H. moscheutos* hybrid. The result was a large-flowered, dark red form similar to 'Lord Baltimore'. Planted in a moist spot, this eight-foot-high plant blooms continuously from late June through September. In ordinary garden soil, the floral display is of shorter duration but no less spectacular.

Since that first success, I have used seven species and a number of cultivars in developing hybrids. Although I admire the huge-flowered forms of 'Southern Belle' and 'Blue River II', my own interest is in developing smaller-flowered forms that are more floriferous. Currently, I am evaluating crosses using *H. dasycalyx* and *H. leucophyllus* for their potential in gardens.

There is such a diversity of hibiscus species and crossing them is so easy that it is surprising to me that there has not been an eruption of named forms similar to that seen with daylilies and lilies. It is probably just a matter of time. Few flowers have a more commanding presence in the garden during July and August than these beautiful natives.

—D.H.



Breeders have used native hibiscuses to develop showy hybrids such as 'Southern Belle'.

from southern Texas to Florida and southward. This shrubby mallow grows three to five feet tall with large, hairy leaves that are evergreen south of USDA Zone 8. The bright, lipstick red petals of its flowers never fully open, and an elongate column of fused styles extrudes dramatically from the tightly wrapped cylinder like a fancy cocktail swizzle in a strawberry daiquiri. A white-flowered selection is sometimes offered.

From the largely Old World genus *Lavatera* comes one species, *L. assurgentiflora* (Zones 8–10, 10–6), native to the Channel Islands off the coast of Southern California. Known as malva rosa or mission mallow, it is a shrubby plant with evergreen leaves and showy pink flowers to three inches in diameter, blooming from spring to fall. Planted on the California mainland, it has naturalized along the shoreline.

CULTURAL ISSUES

HIBISCUSES AND most other mallows grow best in full sun; shade produces spindly plants with fewer flowers. Most of the eastern natives do best in moist to soggy, loamy soils, while western species generally need good drainage.

As a family, mallows do have some pest problems, and American natives are not exceptions. For instance, Japanese beetles love to munch on the leaves of hibiscuses and other mallows.

By far the worst problem for hibiscuses in the Northern Virginia area is the larvae of the hibiscus sawfly (*Aomacera decepta*). The adult, which is black with an orange thorax and long antennae, will be seen hovering over the surface of the leaves. These insects lay eggs on the underside of the leaves, and the larvae grow rapidly to about one-half inch in length before they pupate. Last summer, the leaves of many plants in my garden were completely skeletonized. In previous years, the sawflies had not been a serious problem, so I waited to see if the larvae had any predators, but to no avail. I finally applied rotenone dust, an effective but unattractive control. Other hibiscus growers have



Turk's-cap flowers make a dramatic display.

had success with *Bacillus thuringiensis* (Bt), sprayed in liquid form on the leaves.

Like their European relatives, the hollyhocks (*Alcea* spp.), checker mallows and globe mallows are prone to fungal diseases such as rust if grown in areas with high summer humidity.

COMING SOON TO A GARDEN NEAR YOU

AMERICAN MALLOWS are a large and diverse group of plants, some of which may be grown in gardens in every state in the country in soils ranging from wet to

dry and from acid to alkaline. Yet with the prominent exception of hibiscuses, they are seldom mentioned in garden books and articles. This is likely to change soon. The number of nurseries featuring native plants is growing rapidly, and regional gardening is becoming more common as gardeners realize that they need to seek out plants that grow well and look right in their particular locale.

A reliance on plants featured in English garden books is giving way to a more sophisticated understanding by American gardeners of which plants, both native and exotic, do well in places as diverse as New England, the mid-Atlantic states, the southern coastal plain, the central prairies, the intermountain west, the Southwest, and the West Coast. Garden writer Allen Lacy has written that "all gardening is local," and indeed it is. And for adventurous gardeners, there are countless wonderful regional plants to grace their gardens—the mallows among them. 🌿

Formerly manager of Green Spring Gardens Park in Alexandria, Virginia, Donald Humphrey is now devoting more time to his rock garden and his breeding work with lilies and native hibiscuses.

Mail-Order Sources for Mallows

Busse Gardens, Big Lake, MN. (800) 544-3192.
www.bussegardens.com. Catalog \$3.
Hibiscus moscheutos 'Disco Belle'; *Sidalcea* 'Brilliant', 'Elsie Heugh', and 'Party Girl'.

Plant Delights Nursery, Inc., Raleigh, NC. (919) 772-4794. www.plantdelights.com. Catalog 10 first-class stamps or a box of chocolates.
Hibiscus coccineus, *H. grandiflorus*; *Kosteletzkya virginica* and cultivar 'Immaculate'; *Napaea dioica*.

Prairie Moon Nursery, Winona, MN. (507) 452-1362.
www.prairiemoonnursery.com. Catalog free.
Hibiscus lasiocarpus, *H. militaris*; *Iliamna remota*; *Napaea dioica*.

Southwestern Native Seeds, Tucson, AZ. Catalog \$2.
Hibiscus coulteri, *H. denudatus* var. *involucellatus*; *Sidalcea neomexicana*; *Sphaeralcea ambigua*, *S. fendleri* var. *venusta*.

Theodore Payne Foundation, Sun Valley, CA. (818) 768-1802. Catalog \$3.50.
Lavatera assurgentiflora; *Sphaeralcea ambigua*.

Wayside Gardens, Hodges, SC. (800) 845-1124.
www.waysidegardens.com. Catalog free.
Hibiscus moscheutos 'Disco Belle' and 'Lord Baltimore'; *Sidalcea candida*, *S.* 'Elsie Heugh'.

Western Native Seed, Coaldale, CO. (719) 942-3935.
www.westernnativeseed.com. Catalog free.
Sidalcea candida, *S. neomexicana*; *Sphaeralcea coccinea*.

Woodlanders, Aiken, SC. (803) 648-7522.
www.woodlanders.net. Catalog \$2.
Hibiscus coccineus, *H. grandiflorus*, *H. lasiocarpus*; *H. militaris*, *H. moscheutos*; *H. moscheutos* subsp. *palustris*; *Kosteletzkya virginica*; *Malvaviscus arboreus* var. *drummondii*, *M. arboreus* var. *drummondii* forma *alba*.



SINCE 1953, the American Horticultural Society Awards Program has recognized individuals and institutions who have made significant contributions to American horticulture. **The Awards Committee is now accepting nominations for 2002.**

Members and friends are invited to nominate deserving candidates. To nominate someone for an AHS award, visit our Web site at www.ahs.org. Or, send us the nominee's name, title, address, telephone number, and achievements along with your own name and information on how you can be reached. For a list of previous award winners or more information on the awards program call (800) 777-7931 ext. 120.

Nominations must be received by August 10, 2001.

*You are invited to nominate candidates for the annual
American Horticultural Society
Great American Gardeners Awards*

Award Categories

Liberty Hyde Bailey Award. The individual must reside on the North American continent and have made significant contributions in at least three of the following areas of horticultural activity: teaching, research, writing, plant exploration, administration, art, business, and leadership.

Luther Burbank Award. Recognizes extraordinary achievement in the field of plant breeding.

Commercial Award. Given to an individual and/or institution committed to the highest standards of excellence in the field of commercial horticulture.

G. B. Gunlogson Award. Given to an individual for the creative use of new technology in home gardening.

H. Marc Cathey Award. Recognizes an individual who has enriched horticulture through outstanding and notable research.

Horticultural Communication Award. Recognizes effective communication using media and research techniques for the purpose of expanding horticultural awareness.

Horticultural Therapy Award. Recognizes significant contributions to the field of horticultural therapy.

Horticultural Writing Award. Given to a person whose excellence in writing has made a significant contribution to horticulture.

Landscape Design Award. Acknowledges an individual whose work had expanded the awareness of horticulture in landscape architecture.

Local Horticulture Award. Given to an individual or group who has contributed to the improvement of horticulture in the host city for the Society's Annual Meeting.

Meritorious Service Award. Awarded to a member or friend of the Society to recognize outstanding and exemplary service in support of the Society's goals, services, and activities.

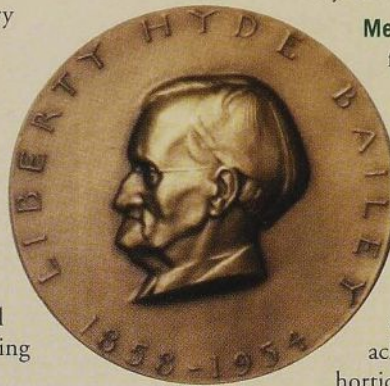
Frances Jones Poetker Award. Given for significant contributions to the appreciation of creative floral designs in publications, on the platform, and to the public.

Professional Award. Given to the director of an arboretum or botanical garden whose career achievements represent a significant contribution to horticulture.

Catherine H. Sweeney Award. Given for extraordinary and dedicated efforts in the field of horticulture.

Teaching Award. Recognizes an individual whose ability to share his or her knowledge of horticulture has contributed to a better public understanding of plants and their impact on man.

Urban Beautification Award. Given to an individual and/or an institution for significant contributions to urban horticulture.



A NORTHERN LIGHT

Plant breeder Harold Pellett has expanded the variety of cold-hardy trees and shrubs for northern gardens.

BY SUSAN DAVIS PRICE

PHOTOGRAPHS BY BILL JOHNSON

“**P**LANT BREEDERS can never get old,” jokes Harold Pellett, executive director of the Landscape Plant Development Center, headquartered at the Minnesota Landscape Arboretum, “because it takes so long to develop new plants and bring them to market.” Pellett ought to know: As a plant breeder at the University of Minnesota facility in Chanhassen for more than 30 years, he has had a hand in developing scores of hardy and beautiful woody landscape plants for northern gardens.

“He’s one of the role models for all of us in horticultural science in terms of new plant introductions, plant breeding, thinking things through, being a plantsman,” says University of Georgia horticulture professor Michael Dirr, who has collaborated with Pellett on several projects. “He understands what the market needs, what gardeners need.”

Peter Olin, director of the Minnesota Landscape Arboretum, concurs. “His introductions have been a tremendous asset to the nursery industry, adding a great deal



Of Pellett’s work ethic, Michael Dirr says, “If you were to go to see him in his office, you’d never find him—he’s that kind of guy. He always thinks forward, never backward. He never rests on his laurels.”

of variety and beauty.” For this reason, Pellett and his work have been recognized time and again. In the last decade, he has received more than 10 major awards, including the American Society for Horticultural Science Distinguished Achievement Award for Nursery Crops, the Norman Jay Coleman Award for Research from the American Nursery and Landscape Association, and the Award of Merit from the International Plant Propagation Society. Just this year, he was awarded the Garden Club of America’s prestigious Medal of Honor.

Despite all the accolades, people who know him say Pellett is not one to seek recognition. “He’s one of the great contributors to American horticulture and horticultural science, but he’s probably one of the most unassuming, quiet people in the area,” says Dirr. “But I think the fruits of his labor pretty well speak for his contributions.”

HARDY INTRODUCTIONS

PELETT’S PRIMARY focus has been on developing ornamental trees and shrubs

with tolerance of stresses such as cold and disease. He is perhaps best known for one of his earliest projects at the University of Minnesota—the development of the acclaimed “Lights” series of azaleas. In 1978, pink-flowered ‘Northern Lights’ was the first introduction in this cold-hardy series, followed by ‘Pink Lights’, ‘Rosy Lights’, and ‘White Lights’ in 1984. Continuing additions have yielded a broader range of colors, including ‘Spicy Lights’ (salmon) in 1987, and ‘Mandarin Lights’ (orange) and ‘Lemon Lights’ (yellow) in 1996. ‘Tri-Lights’—which features blossoms in a combination of pink, white, and yellow—will be available at nurseries soon, and by 2003 gardeners will be planting ‘Plum Lights’ with its pinkish purple blossoms and the highly fragrant ‘Candy Lights’, which has clear pink blooms.

Many other Pellett introductions have also become industry standards. His ‘Northern Sun’ forsythia, a large shrub that produces a spectacular spray of clear yellow flowers and is hardy to minus 30 degrees Fahrenheit, became available for gardeners in 1983. In addition, Pellett introduced ‘Cardinal’ dogwood, with winter stem color to match its name, in 1986 and the glossy-leaved ‘Emerald Triumph’ viburnum in 1994. His ‘Autumn Spire’ maple, which has showy red flowers in spring and brilliant scarlet leaves in fall, was released in 1992. Other tree introductions include ‘His Majesty’ cork tree (*Phellodendron amurense*) and ‘Princess Kay’ plum (see “The Fruits of Pellett’s Labor,” page 38).

INHERITED INTEREST

AS WITH MANY horticulturists, Pellett’s interest in plants began in childhood. In Iowa, he grew up helping his parents in their market garden operation and later their nursery. One of his fondest memories is of the summers he spent with his grandfather, who was editor of the *American Bee Journal*. “He did a lot of evaluation of nectar-producing plants, and I got to

help him,” recalls Pellett, “so I got an early interest in plants in general.”

Later, when Pellett entered Iowa State University, John Mahlstedt, a professor and horticultural researcher, took him under his wing. “When I started college, I had planned to go back into the family nursery business,” says Pellett. “But even before classes began, I met Dr. Mahlstedt and started working for him part-time. Through him my interest in research was nurtured.”

As a faculty member at the University of Minnesota, Pellett earned a name for himself through his work on cold hardiness. He did significant research on the influence of exposure on the winter injury of conifers and broad-leaved evergreens, and the effect of fall water stress on conifers. He also studied how factors such as shade, soil compaction, and soil temperature affect the growth of woody plants.

COORDINATING PLANT BREEDERS

PELETT’S WORK with woody landscape plants is notable in part because such a focus has become increasingly rare among breeders. According to Pellett, a survey of private plant-breeding programs during the 1980s identified the equivalent of 600 full-time researchers concentrating just on breeding corn. At about the same time, another survey of agricultural experiment stations, universities, and the U.S. Department of Agriculture (USDA) found the equivalent of only seven full-time scientists working on breeding woody plants. “Since that sur-

LANDSCAPE PLANT DEVELOPMENT

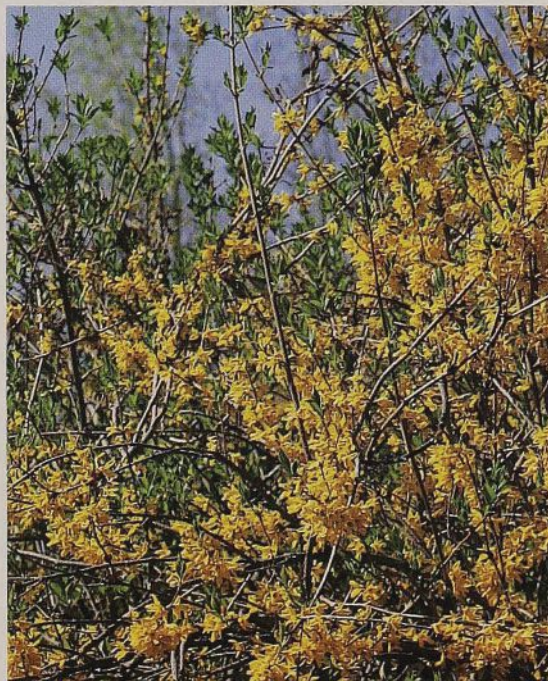
CENTER. Anyone can become a member of the nonprofit Landscape Plant Development Center (LPDC), which needs the support of gardeners nationwide to continue its valuable research on woody ornamental plants. Contact the LPDC, P.O. Box 39, Chanhassen, MN 55317, (952) 443-1504, for more information. Members joining at the \$25 or more level will receive the quarterly newsletter *Landscape Plant News*, which publicizes the center’s efforts and reports on other woody plant research.

vey was made, several universities have dropped their programs for developing ornamentals,” notes Pellett. “Though a few institutions—like Morton Arboretum in Illinois, Chicago Botanic Garden, and Holden Arboretum near Cleveland—have added breeding programs, still there has been a gradual decrease in support for breeding trees and shrubs.”

The main reason for this, Pellett says, is the long and costly turnaround time associated with breeding woody plants. The azalea project at the University of Minnesota, for example, was begun in the 1950s, but not until 1978 were cultivars produced through that project available for retail sale. By contrast, vegetable and agricultural plant breeders can realize a financial return from their research in a fraction of that time.

In the late 1980s, Pellett’s frustration with the small amount of resources allocated to ornamental plant breeding, coupled with his awareness of the tremendous potential for developing superior landscape plants, led him to seek ways to improve cooperation among plant breeders.

In a visionary move, Pellett pioneered the formation of the nonprofit Landscape Plant Development Center in 1990. The center’s primary goal: to develop improved landscape plants that are tolerant of insects, diseases, and environmental stresses often found in urban settings. “Many arboreta have nice plant collections,” he notes, “but they don’t have anybody on the staff actually doing breeding work. And university people have the skills and equipment to evaluate and test. It seemed



Opposite page, top: ‘Northern Lights’ azalea. Right: *Forsythia* ‘Northern Sun’.

THE FRUITS OF PELLETT'S LABOR

In addition to the "Lights" series of azaleas, Harold Pellett has introduced many exceptional ornamental trees and shrubs to our landscapes. Here is a sampling of his introductions, plus a few more that will soon be available. Mail-order sources, coded by number, can be found on page 39. Some plants are available only through wholesale sources.

SHRUBS

| NAME | DATE INTRODUCED | DESCRIPTION | USDA/AHS ZONES | SOURCES |
|--|-----------------|---|----------------|---------|
| <i>Forsythia</i> 'Northern Sun' | 1983 | Clear yellow flowers. 8–10 feet. | 4–8, 8–1 | 1 |
| <i>Cornus sericea</i> 'Cardinal' (red osier dogwood) | 1986 | Bright, cherry red twig color. 8–10 feet. | 3–8, 8–1 | 4 |
| <i>Viburnum</i> 'Emerald Triumph' | 1994 | Glossy, disease-free foliage. 6 by 6 feet. | 4–7, 7–1 | 4 |
| <i>Exochorda serratifolia</i> 'Northern Pearls' (pearlbush) | 1995 | Attractive white flowers; showy exfoliating bark. 8 feet. | 4–7, 7–1 | |
| <i>Pinus resinosa</i> 'Wissota' (red pine) | 1996 | Dwarf form, grows to 6 feet. | 3–6, 7–1 | |

TREES

| | | | | |
|--|------|--|----------|------|
| <i>Acer rubrum</i> 'Northwood' (red maple) | 1980 | Hardy; bright orange fall color. 50 feet. | 3–8, 9–1 | |
| <i>Aesculus</i> 'Autumn Splendor' (buckeye) | 1980 | Dark red fall color; shiny, nutlike fruits; resists leaf spot diseases. 50 feet. | 3–7, 8–5 | 1 |
| <i>Prunus nigra</i> 'Princess Kay' (ornamental plum) | 1986 | Attractive trunk and branches; sets few fruits. 10–15 feet. | 2–7, 8–1 | 2, 4 |
| <i>Acer rubrum</i> 'Autumn Spire' (red maple) | 1992 | Upright form; good red fall color. 40 feet. | 3–6, 8–1 | |
| <i>Phellodendron amurense</i> 'His Majesty' (cork tree) | 1996 | Fast-growing, open-spreading, male selection that produces no fruit. | 4–7, 7–1 | |

FUTURE INTRODUCTIONS

The following plants are now being propagated and are expected to become available within the next few years. Hardiness zones are estimates; heat zones have not yet been established. Cultivar names are unofficial.

- *Acer xfreemanii* 'Firefall' (Freeman maple). Large shade tree with outstanding fall color. Grows 40 to 60 feet tall by 30 to 40 feet wide. Zone 3–6.
- *Cornus hessei* 'Garden Glow'. Multi-stemmed shrub with dark red stems and yellow summer foliage. Grows 3 to 5 feet tall. Zone 4–6.
- *Gymnocladus dioica* 'Stately Manor' (Kentucky coffee tree). Male selection; upright form. Grows 50 feet tall by 20 feet wide. Zone 4–8.
- *Maackia amurensis* 'Summertime' (Amur maackia). Small tree with silvery leaves that mature to a rich deep green, and creamy bottlebrushlike flower spikes that bloom in late summer. Grows 18 to 20 feet tall and 12 to 15 feet wide. Zone 4–8.
- *Sorbus* selection (mountain ash). This cross between *S. alnifolia* and *S. aucuparia* is a small tree with dark green leaves, white spring flowers, and rosy fruits. Grows 20 feet tall. Zone 3–7.

to me that if we could put all our resources together, we could actually get a lot more done."

He began by asking botanical gardens, arboretums, experiment stations, and universities all over North America to contribute staff time, growing space, or plants.

"People have been eager to participate," Pellett says. "Some are involved in stress physiology research. What they learn gives us a better understanding of

the mechanisms for tolerance to different stresses. And at some of the arboreta, folks are involved in plant exploration to increase their own plant collections. That gives us access to a germplasm base, even though they may not have the resources to do the breeding themselves. Still others will 'plant out' our plants and make observations on them."

Now, 10-plus years after it was begun, the center has research participants at more

than 80 different institutions scattered across North America, Europe, and Asia, providing greatly expanded access to a wide variety of plants and experts. The newest cooperator is the Tallinn Botanic Garden in Estonia. Other distant participants are the University of Helsinki in Finland and the Botanical Garden of the Russian Academy of Science.

Perhaps the most significant landmark in the center's short history was the devel-

opment of a sister research station in the Pacific Northwest in 1999. The research station, situated on a 24-acre tract of donated land in the Willamette Valley south of Portland, Oregon, gives the center an opportunity to test plants in a climate much different from that of Minnesota.

LABOR BEARS FRUIT

THE CENTER'S breeding method is this: Use parent plants from participating institutions and make crosses between those that demonstrate exceptional tolerance to stresses with others that have desirable aesthetic qualities but may be less resistant to stress, then test the resulting plants in a variety of regional settings. The hoped-for result: development of a strong and handsome tree or shrub.

Pellett points to research on ornamental pears as an example of the center's work. "We chose pears for a couple of reasons," he explains. "Urban landscapes are in need of small, attractive trees. Also, there are a number of different species of pears that offer various valuable qualities to be used in their breeding. They have tremendous

Pyrus fauriei, part of the center's pear-breeding program, has attractive speckled fruits and fall foliage.

diversity in foliage shape and color, in their form, in their fruiting, and in their tolerance to different stresses. Typically, they are very tolerant of compacted soils, a common problem of landscapes everywhere."

As a first step, in 1991 and 1992, plants in the collection of the USDA national germplasm repository in Corvallis, Oregon, were used to cross 10 different species of ornamental pears in many combinations. These first-generation hybrids have been growing in the favorable climate of the Washington State University Experiment Station in Puyallup.

In the spring of 2000, more than 4,000 second-generation trees were planted at the center's Oregon research station. Of these, 1,000 of the most attractive and hardy trees were selected this past spring and sent to participating institutions in 11 states, from Arizona to New York. Observers at each site will note how these trees perform under local conditions. "We have some nice pear trees with silver branches and leaves that look very promising," Pellett says. "We'll be able to tell more in several seasons."

Another major project is a cooperative venture between the Morton Arboretum and the center to cross box elders (*Acer negundo*) with other maples in the hope of combining the box elder's toughness and adaptability with the beauty of other maples. Additionally, Pellett has a program under way to develop hardier "Japanese-type" maples and hardier maples with showy bark.

WHAT'S NEXT?

ASK PELLETT WHAT else he's working on, and he lists project after project: sterile spirea bushes that won't set unattractive seed heads, thornless varieties of barberry, an upright clematis with large blossoms and a range of flower colors, a mountain ash crossed with black chokeberry to resist the fungal disease fire



blight. He's hoping to expand the development of sterile cultivars of a number of species—columnar buckthorn (*Rhamnus frangula* 'Columnaris'), for example—that are useful but potentially invasive. "We need plants that are more tolerant of the stresses of urban conditions, plants that by nature are adapted to a broad range of conditions," Pellett explains. "These plants have become invasive because of this tolerance. Sterile cultivars are likely to give us the best of both worlds—that is, they would be tough, but not invasive."

The results of all his trials may be slow in coming, but even the small steps are satisfying to Pellett. "The growing season is very rewarding," he says. "There are always surprises, and you see new combinations. By the second and third generations, you have a good sense of what the possibilities are."

A phased-in retirement from other university responsibilities means Pellett will have more time for work at the center. "Much of my work lately has been administrative," he says, "so I'm looking forward to being more hands-on."

For Pellett, the rewards come in the field, and his ideas for worthy breeding projects could fill another lifetime. "Some roses could be encouraged to repeat bloom more reliably," he muses. "Also a number of shrubs and small trees bloom heavily one year, but little the next. They would be more attractive if bloom was the same each year..." Fortunately, as Pellett has noted, plant breeders can never get old.

Susan Davis Price's most recent book, Growing Home: Stories of Ethnic Gardening, received the AHS Book Award in 2001. She lives in Minneapolis, Minnesota.

Sources

1. **Arborvillage**, Holt, MO. (816) 264-3911. Catalog \$1.

Aesculus 'Autumn Splendor', *Forsythia* 'Northern Sun'.

2. **Bergeson Nursery**, Fertile, MN. (218) 945-6988. Catalog free.

Prunus nigra 'Princess Kay'.

3. **Greer Gardens**, Eugene, OR.

(800) 548-0111. www.greer-gardens.com. Catalog \$3.

Rhododendron 'Golden Lights', *R.* 'Lemon Lights', *R.* 'Orchid Lights', *R.* 'Rosy Lights'.

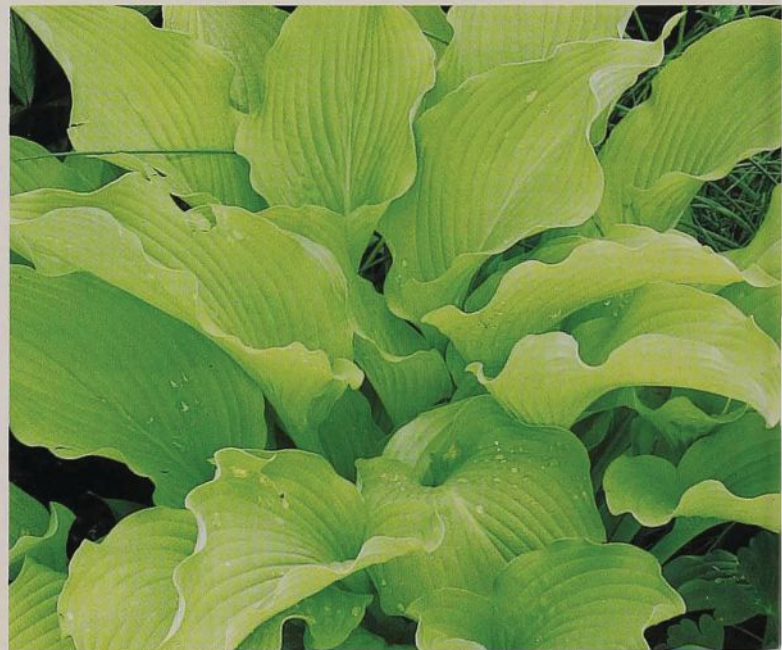
4. **McKay Nursery Co.**, Waterloo, WI.

(800) 236-4242. www.mckay-nursery.com. Catalog \$5. (Will sell mail-order on a limited basis.)

Cornus sericea 'Cardinal', *Prunus nigra* 'Princess Kay', *Viburnum* 'Emerald Triumph'.



HOSTA FEVER



With thousands of hosta cultivars to choose from, it's important to pick those best suited to your site.

BY CAROL WALLACE

ASK GARDENERS FOR a list of their most reliable perennials—plants that are beautiful, adaptable to a multitude of garden situations, easy to grow, and long-lived—and you will get quite a wide variety of answers, depending on the gardener's growing region. But one plant that appears on the top 10 favorite perennials list of gardeners almost everywhere is the hosta.

Hostas flourish in gardens from the Atlantic to the Pacific and from the Gulf Coast to the Great Lakes. Because different climates and growing conditions create challenges for gardeners around the nation, hosta hybridizers are actively trying to address regional requirements. Such efforts are resulting in improvements that allow gardeners to grow hostas with greater success in climates formerly considered too hot or too cold.

FEEDING THE FEVER

FOR MANY GARDENERS, however, the problem is not finding a hosta that will grow in their garden, but finding room to grow all the hostas they want once "hosta fever" strikes!

Native to eastern Asia—particularly Japan, eastern China, and Korea—hostas have been cultivated since somewhere between the 8th and 12th centuries. Today, there are more than 2,600 named hostas available. One would think that is more than enough to satisfy even the most demanding of gardeners, yet hybridizers and hobbyists alike are busily creating more. Which begs the question: Why?

"Boredom," says Barry Glick, owner of Sunshine Farm and Gardens Nursery in Renick, West Virginia. "Because they can," is garden writer and Mississippi Master Gardener Felder Rushing's explanation for this phenomenon.

American Hosta Society President Jim Wilkins once estimated that different combinations of the numerous characteristics found in hostas could produce more than 2 million distinct cultivars. Given some of the more recent developments in hostas—such as streaked or color-misted foliage and double and triple blooms—Clarence Falstad III of Walters Garden in Zeeland, Michigan, reckons that there are now more than 40 million different possibilities.

But do gardeners really need that many different hostas?

Although it may seem as though hosta growers rush to mar-

ket with every slight variation in foliage color, many breeders follow the rule of thumb used by Tony Avent, a hosta hybridizer and owner of Plant Delights Nursery in Raleigh, North Carolina: If a new hosta is not distinctive enough to be positively identified from 10 feet away, don't market it.

Most hybridizers are much more concerned with improving plant quality than with form—although new developments in form and color are certainly not dismissed. As Bob Solberg of Green Hill Farm in Chapel Hill, North Carolina, puts it, "We breed, in part, to create better garden plants." Serious breeding programs have very distinct goals that go far beyond producing minor variations in foliage color or patterns. "We breed for better-growing hostas, we try to enhance substance (leaf thickness), and we breed for improved flowers," notes Solberg, who developed 'Guacamole', a hosta cultivar that is one of the most popular introductions in recent years.

HYBRIDIZING GOALS

THE TRAITS BREEDERS are aiming for vary somewhat by region. In cool, wet climates where slugs and snails are troublesome, hybridizers aim for thicker leaves that are less toothsome to those voracious mollusks. In the hot, dry climate of Southern California, the goal is to create hostas that are more heat resistant. In the Southeast and mid-Atlantic regions, breeders are trying to develop plants that are more tolerant of both heat and sun.

New combinations of color and form continue to fascinate hosta breeders. Hybridizer Kevin Walek, who lives in Fairfax Station, Virginia, cites several aims: more fragrant flowers, fragrance in flowers other than white, and more miniature hostas. Dan Heims, president of Terra Nova Nursery in Tigard, Oregon, is trying to develop better and showier blooms; more red and black colors in the petioles (leaf stalks), flower stems, and leaves; ruffling; and crosses

with different species to create a whole new look. Among the goals Solberg is working on are enhanced substance, ruffled leaf margins, leaf cupping and puckers, and new forms of variegation such as streaky misting all over the leaf rather than the more typical variations that occur only in the center or on the border.

One problem that has eluded the efforts of hybridizers is deer, which tend to treat hosta gardens like all-you-can-eat salad bars.

RIGHT HOSTA, RIGHT REGION

MOST GARDENERS can tell you that hostas are incredibly easy to grow. They can go for years without division and for the most part are not terribly fussy about their location in the garden. Touted as shade plants—University of Georgia horticulturist Allan Armitage has dubbed them the "emperors of shade"—in cooler regions, many also grow beautifully in sunny spots. Those with golden foliage often need some sun to bring out their best color. Hostas grow best in relatively moist soil, which is especially critical in warmer climates. They can also be

Touted as shade plants—University of Georgia horticulturist Allan Armitage has dubbed them the "emperors of shade"—many hostas also grow beautifully in sunny spots in cooler regions.

Opposite: Hosta foliage in a few of its many dramatic guises—yellow-edged 'Regal Splendor', top; frosted blue-green 'Krossa Regal', bottom left; and chartreuse, ripple-edged 'Sun Power', bottom right.

FOILING THE FORAGERS

The chief enemies of hostas are foraging critters such as slugs, moles, voles, and deer. Here are some control methods you can employ to help combat this army of eaters.

SLUGS

Traps. Try containers of beer sunk into the ground, or put out boards that they will crawl under to escape the sun.

Barriers. Copper strips, diatomaceous earth, and wood ashes discourage slugs; the last two must be replaced after a rain.

Iron phosphate. This biodegradable bait for snails and slugs, used in products such as Sluggo, is nontoxic to other wildlife and pets and does not need constant reapplication.

DEER

Very high fencing. Fencing that is at least seven feet high seems to be the most effective solution.

Repellents. Products such as Plant Pro-Tec, a garlic-laden, biodegradable clip-on, or Hot Pepper Wax, which is especially effective in combination with the garlic clips, offend both deer's sense of smell and their taste buds.

VOLES

Repellents. Permatill and Volebloc are kiln-fired rock products that have been ground into small shards. When added to the soil, these serve as long-term soil aerators with the additional benefit of repelling voles, which cut their feet when they try to tunnel through it.

PRODUCT SOURCES

Hot Pepper Wax, 305 Third Street, Greenville, PA 16125. (888) 667-3785. www.hotpepperwax.com/.

Permatill, 217 Klumac Road, Salisbury, NC 28144. 877-PERMATILL (877) 737-6284. www.permatill.com/.

Plant Pro-Tec, P.O. Box 902, Palo Cedro, CA 96073. (800) 572-0055. www.plantprotec.com/.

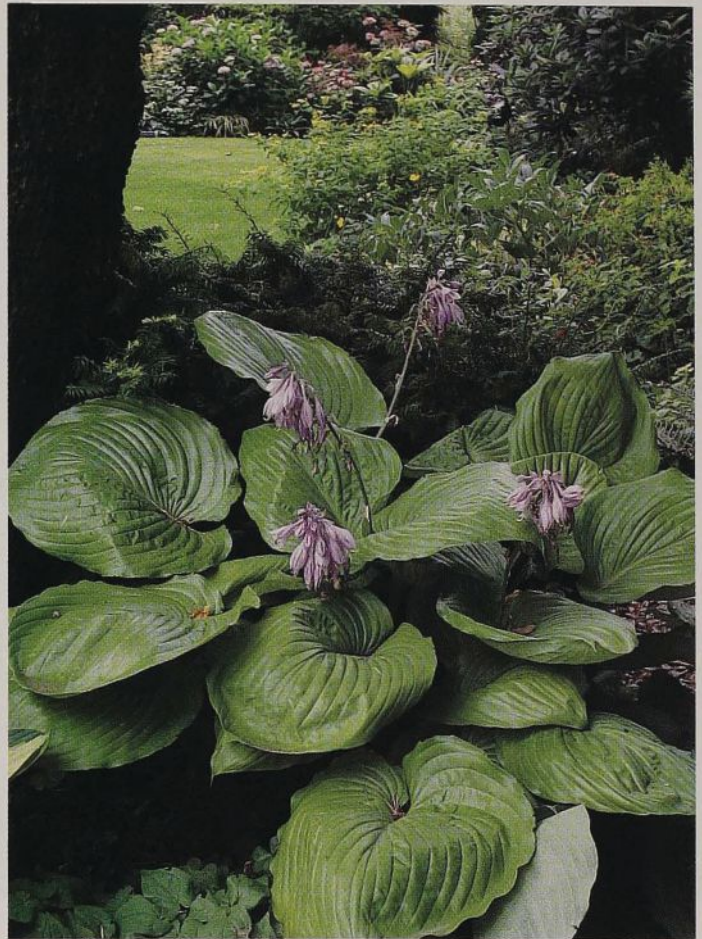
Sluggo™, Monterey Lawn and Garden Products, Inc. 3654 South Willow Avenue, P.O. Box 35000, Fresno, CA 93745. (559) 499-2100. www.montereylawnandgarden.com.

Volebloc™, Carolina Stalite Company, P.O. Box 1037, Salisbury, NC 28145. (877) 737-6284. www.volebloc.com/.

grown in containers as long as they receive regular watering.

Hostas are hardy from USDA Zones 3 to 8 and thrive in AHS Heat Zones 9 to 2. The key to success in hotter climates is providing shade and sufficient moisture. The challenge in cooler climates is to prevent frost heaving and to protect the more susceptible varieties from pests (see "Foiling the Foragers," above).

Actually, relatively few pests trouble hostas. Those with thin-textured leaves have to contend with slugs and snails, and like many garden plants, hostas are subject to underground attack by voles and aboveground grazing by deer.



The bold, pucker-edged lime green leaves of 'Sum and Substance' are accentuated in mid- to late summer by clusters of lavender flowers.

PACIFIC NORTHWEST

SLUGS INVARIABLY head the list of problems for hosta growers in the Pacific Northwest, which, according to Dan Heims, has "big slugs, small gray slugs, leopard slugs, banana slugs, small snails, big brown slugs." As Heims points out, "There is probably no need for another gold or another blue, but slug resistance is an important trait that needs to be bred into hostas."

Slugs are, well, sluggish. Chewing through a thick piece of foliage takes more energy than they are willing to expend. So the best hostas for this area of the country are those with thicker leaves, like 'Harvest Dandy'. Other good choices for the slug-infested garden include several selections of *Hosta montana*, *H. sieboldiana*, and *H. x tardiana*, as well as such hybrids as 'Sun Power', 'Sum and Substance', 'Krossa Regal', 'Regal Splendor', 'Brim Cup', and 'Abiqua Drinking Gourd'.

NORTH AND MIDWEST

AS LONG AS gardeners recognize and accommodate their winter needs, many hostas thrive in areas where winter temperatures can fall well below zero degrees Fahrenheit. As hybridizer Harvey Buchite of Rice Creek Gardens in Blaine, Minnesota, points out, hostas don't mind extreme cold. But they do suffer from the freeze-thaw cycle with the accompanying frost heave each spring.

10 BEST NEW HOSTA CULTIVARS

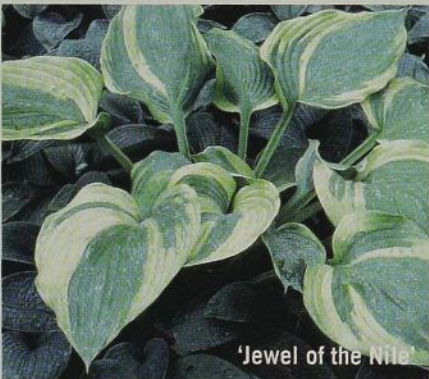
We asked nursery owners and other hosta experts from around the country to name their favorite hosta introductions from the past five years. These 10 cultivars came up repeatedly.



'Guacamole'

'Guacamole'. This variety was recommended so often that it deserves a place on this list even though it doesn't quite fit our five-year criterion, having been introduced in 1994. Large nearly white, late-summer blooms are very fragrant. Leaves are chartreuse with a wide green edge. It grows well even in the South. Clumps grow from 18 to 24 inches high, with a spread of 24 to 48 inches. "Probably the most exciting hosta to hit the market in years," says Tony Avent.

'Gilt by Association'. A fountain-shaped gold plant with white-powdered backs and a serrated edge, giving the appearance of a white edging. It has purple petioles and dark purple scapes (flower stalks) and forms a mound 12 inches high and 18 to 24 inches wide.



'Jewel of the Nile'

'Jewel of the Nile'. A large, upright mound of bright blue, heart-shaped leaves with a wide irregular gold border and streaks. Nearly white flowers with a tinge of pink bloom in June or July.

It grows 24 inches tall by 28 inches wide. Excellent substance and sun tolerance. "May be the best of them all," says hybridizer Bob Solberg.

'Revolution'. A breakthrough "misty" look in variegated hostas. Deep green foliage with cream-and-green speckled center is soft green in spring, darkening through the summer. It reaches a height of 18 inches and spreads 24 inches with 20-inch scapes of lavender flowers in midsummer.

'Fire and Ice'. Pure white leaves with very dark green—almost black—margins. Leaves have good substance. It grows 10 inches tall, 15 inches wide, and bears lavender flowers on white flower stems. A dependable plant that won't "melt out," or disintegrate, in the heat as do most hostas with white-centered foliage.



'Fire and Ice'

'Loyalist'. Beautiful white leaves with irregular, dark green margins. Plants grow 20 inches tall by 30 inches wide and produce pale lavender flowers in July. It has very thick leaves and seems to be able to withstand conditions that cause other white-centered varieties to melt out; tested as far south as North Carolina.

'Fried Green Tomatoes'. Large, rounded, frosty green leaves, shiny on both top and bottom, on plants that reach 18 inches tall and spread 24 inches across. Fragrant white to lavender flowers bloom in late summer, earlier than most fragrant hostas. Heat tolerant and tough, even in the South.



'Tattoo'

'Tattoo'. Small, rounded, bright gold leaves and a wide border of light green on plants that are only 10 inches tall and 18 inches wide. Each leaf displays the speckled outline of a maple leaf in the center—as though it had been tattooed. Light lavender flowers on 10-inch scapes in late spring.

'Dee's Golden Jewel'. Grows 24 inches tall with an 18-inch spread, producing slightly cupped, corrugated leaves and 30-inch scapes of nearly white flowers with a pink undertone in June. Has pronounced veining on the backs of the leaves. Heavy substance means this plant can withstand full sun as far south as North Carolina.



'Pandora's Box'

'Pandora's Box'. The smallest variegated hosta available, it is only 1³/₄ inches tall by 5¹/₂ inches wide. Tiny, quarter-sized leaves of blue-green with centers streaked with pure white. Excellent in a container or rock garden or perfectly in scale for planting with bonsai trees.

Sources

Green Hill Farm, Inc., Chapel Hill, NC. (919) 309-0649.

www.hostahosta.com/Retail.html.

Catalog free.

'Dee's Golden Jewel'; 'Fried Green Tomatoes'; 'Guacamole'; 'Jewel of the Nile'.

Naylor Creek Nursery, Chimacum, WA. (360) 732-4983.

www.naylorcreek.com. Catalog free.

'Abiqua Drinking Gourd'; 'Blue Angel'; 'Blue Wedgwood'; 'Brim Cup'; 'Dee's Golden Jewel'; 'Guacamole'; 'Harvest Dandy'; 'Jewel of the Nile'; 'June'; 'Loyalist'; 'On Stage'; 'Sum and Substance'; 'Tattoo'; *H. yingeri*.

Plant Delights Nursery, Inc., Raleigh, NC. (919) 772-4794.

www.plantdelights.com. Catalog 10 first-class stamps or a box of chocolates. 'Abiqua Drinking Gourd'; 'Blue Angel';

'Blue Wedgwood'; 'Fire and Ice'; 'Fragrant Bouquet'; 'Great Expectations'; 'Guacamole'; 'June'; 'Loyalist'; 'Pandora's Box'; 'Regal Splendor'; 'Revolution'; 'Sum and Substance'; 'Sun Power'; 'Tattoo'.

Savory's Gardens, Inc., Edina, MN. (952) 941-8755. Catalog \$3.

'Abiqua Drinking Gourd'; 'Blue Angel'; 'Blue Wedgwood'; 'Brim cup'; 'Fire and Ice'; 'Fragrant Bouquet'; 'Fried Green Tomatoes'; 'Great Expectations'; 'Guacamole'; 'June'; 'Krossa Regal'; 'Loyalist'; 'On Stage'; 'Pandora's Box'; 'Regal Splendor'; 'Revolution'; 'Sum and Substance'; 'Sun Power'; 'Tattoo'; *H. montana*; *H. yingeri*.

Weird Dude's Plant Zoo, Staunton, VA. (540) 885-8223.

www.weirddudesplantzoo.com/index.html. Catalog online.

'Abiqua Drinking Gourd'; 'Fragrant Bouquet'; 'Guacamole'; 'June'; 'Loyalist'; 'Regal Splendor'; 'Sum and Substance'; 'Sun Power'; *H. yingeri*.

Resources

The American Hosta Society. For information on membership, contact Carol Nance at 338 E. Forestwood, Morton, IL 61550, or visit the society's Web site: www.hosta.org.

The Hosta Library. www.hostalibrary.org. An online photo library of hostas.

The Gardener's Guide to Growing Hostas by Diana Grenfell, Timber Press, Portland, Oregon, 1996.

The Genus Hosta: Giboshi Zoku by W. George Schmid, Timber Press, Portland, Oregon, 1992.

The best remedy for frost heave is mulch, applied in autumn once the ground has frozen. Many hostas grow quite happily in full sun in this cool climate.

As for recommended varieties, it might be simpler to name those few hostas that do not thrive in this northern region. There are a few: 'Uza No Mai', 'Snow Cap', and 'Color Glory' are reported to be less hardy than some others. 'Great Expectations' is just that for many cool-region gardeners—all promise and very slow performance. This plant and *H. ventricosa* 'Flame Stitch' seem particularly fussy about the amount of light and shade they receive, which is not typical of most hosta selections.

MID-ATLANTIC

THE MID-ATLANTIC REGION offers gardeners similar freedom. According to Barry Yinger, one of the biggest challenges for this region's gardeners is "making sense of the excessive number of cultivars available and resisting the temptation to try to have too many different kinds in the landscape." Yinger, whose namesake *H. yingeri* was one of the most recent hosta species to be discovered, suggests that simple plantings are sometimes most effective. He explains, "The most beautiful hosta plantings that I have seen are mass plantings of one or two varieties contrasting with other textures and colors."

In the lower mid-Atlantic states, summer heat and low rainfall—which can result in leaf stress and scorching—pose some limitations on selection and placement. The farther south a hosta is planted, the more shade it requires. And as Kevin Walek suggests, "The greatest challenge is ensuring that hostas get adequate

water. They need water most during July through September, which is often a drought period here in northern Virginia."

Walek's 'Jewel of the Nile' is considered by some to be one of the best of the recent hosta introductions (see "10 Best New Hosta Cultivars," page 43). Other top varieties for the mid-Atlantic include 'Fried Green Tomatoes', 'Krossa Regal', 'Guacamole', 'Loyalist', and *H. 'Frances Williams'*. Judicious use of soaker hoses



'Brim Cup' has puckered leaves that resist the chewing of slugs, making it a good choice for gardens where these pests are a problem.

and careful attention to the sun tolerance of individual hosta selections are the keys to successful hosta culture in this region.

SOUTHEAST

HOSTAS that grow happily in northern full sun become shade seekers in southern regions. The waxy coating that makes many hostas look blue melts right off in exposed sites, and thinner foliage fries to a crisp.

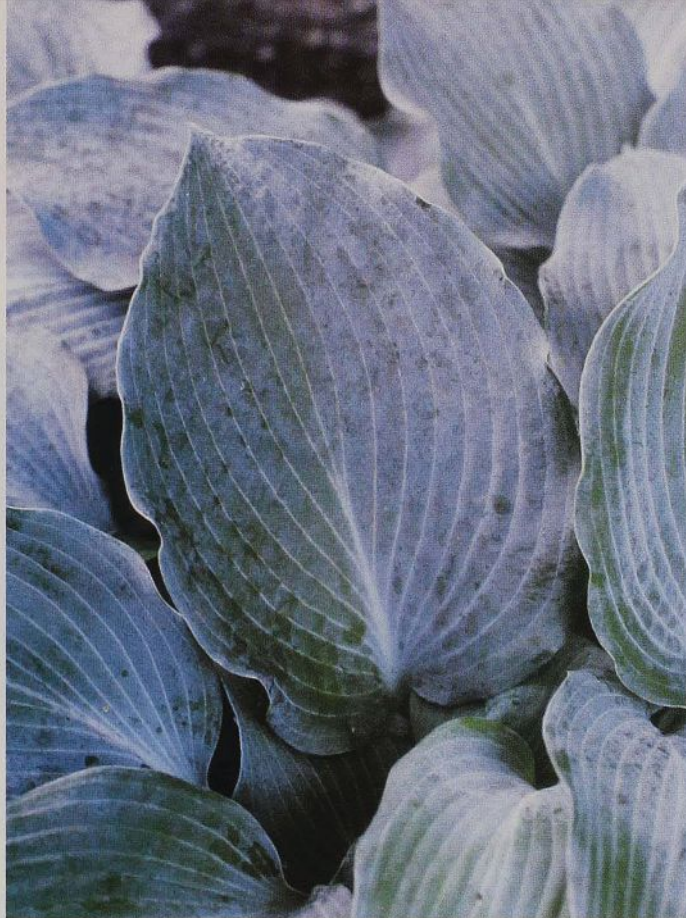
While Jay and Judy Farquar of Oleo Acres in Deridder, Louisiana, admit cultivating hostas in their sultry climate is a challenge, they successfully grow hundreds of hostas in their nursery. Planted in containers set under a 60 percent shade cloth, with a misting system set to come on once a day for 10 minutes, their hostas seem quite happy.

"It's not so much the heat and drought, but the extended length of our growing season that creates problems," explains hybridizer Bob Solberg, who grows hostas at his central North Carolina nursery. "The summer is too long for many hostas—especially the sieboldianas and tokudamas. They come out late, throw up three or four leaves per division, and finish blooming in early July. Then they have to sit and bake."

Hostas recommended for the Southeast include 'Guacamole', 'Fried Green Tomatoes', 'Sum and Substance', 'Fragrant Bouquet', 'Blue Angel', 'June', and 'On Stage', all of which handle the increased light levels and longer growing seasons of the South with aplomb.



Above: *Hosta yingeri*, one of the newest species in the trade. **Right:** 'Blue Wedgwood' is among the best hostas for hot, dry areas.



THE SOUTHWEST

IN THE SOUTHWEST, gardeners face a double dilemma. In addition to the heat, their climate is relentlessly dry, which makes it a pretty inhospitable region for hostas. Most gardeners forgo hostas and other moisture-craving plants for those better adapted to the climate.

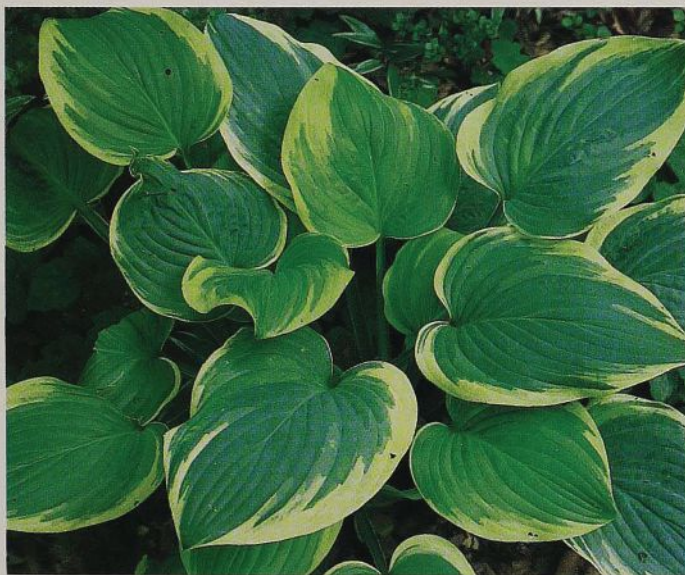
But where there's a will, there's a way. Utah gardener Julie Goodfellow grows her hostas in the shade under the deck. That protection plus daily watering allows her to grow many varieties. "I throw all of my coffee grounds and tiny, cut-up pieces of Christmas trees in this area," says Goodfellow. "I also fertilize them religiously and beg them to grow!"

Recommended selections for hot, dry areas include 'Blue Wedgwood'—a blue-foliaged hosta that does not melt—'Guacamole', 'Vanilla Cream', and 'June'; the last has golden foliage that tolerates bright light better than other colors. Providing full shade and regular supplemental moisture is the only way to keep hostas alive in this climate.

HAPPY HUNTING

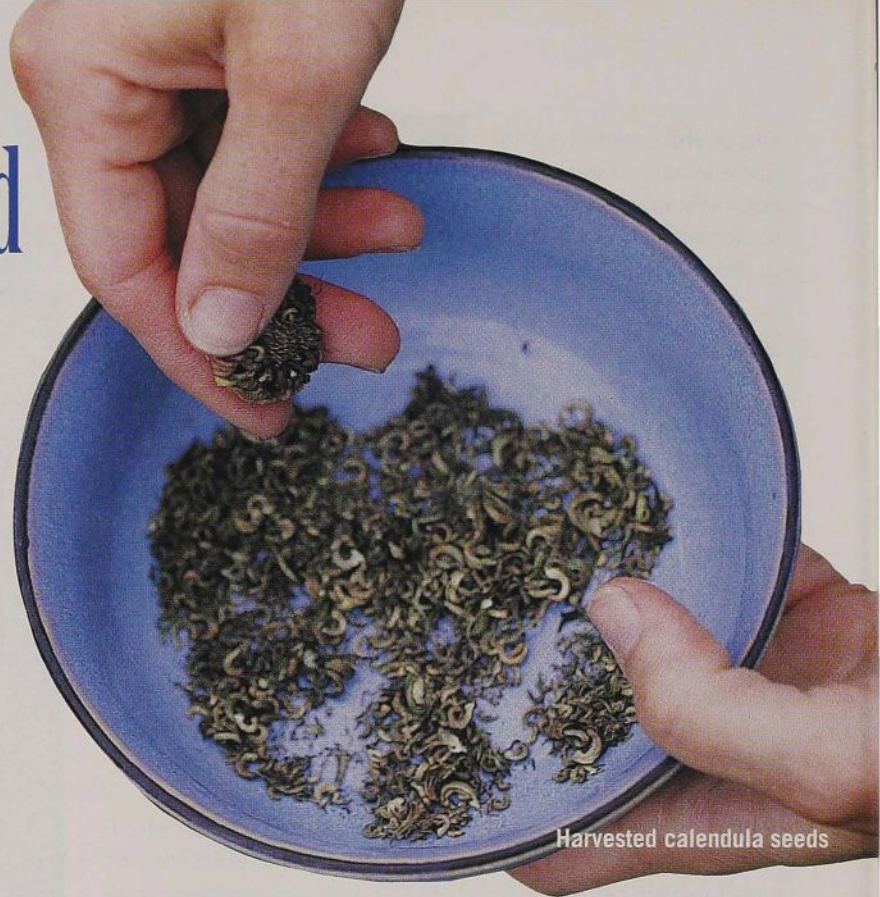
GARDENERS WILL continue to see dozens of new hosta varieties offered every year. Many will simply be beautiful, sporting variations in form, color, size, and flowering season that will tempt you to find room for yet another "must-have" variety, but look for those emerging varieties bred to suit regional gardening conditions or particular site needs. First match your hostas to your climate; then go ahead and give in to the fever.

Carol Wallace of Clarks Summit, Pennsylvania, is garden editor for the Web site Suite101.com.



'Fragrant Bouquet' thrives in the long growing season of the Southeast.

Collecting and Saving Seeds



Harvested calendula seeds

This time-honored gardening practice is easy and richly rewarding.

BY MARY YEE

PHOTOGRAPHS BY DAVID CAVAGNARO

SURE, YOU CAN buy seeds just about anywhere, and they're usually not very expensive, so why bother collecting and saving seeds from the flowers and vegetables in your garden? Well, if you have a sizable garden, you *could* save money this way, but even if this is not a concern, there might be a day when the seeds of the plants you want are no longer offered for sale or are difficult to locate, as is the case with some heirloom varieties.

2002 AHS ANNUAL FREE SEED EXCHANGE: Save seeds to share with other AHS members next January. Look for details of this program in the next issue of *The American Gardener*.

Then there's the sheer enjoyment of collecting and sharing seeds from plants that you have grown and nurtured. This, according to Janet Walker, the American Horticultural Society's director of horticulture, is the primary satisfaction AHS members get from

participating in the Society's annual free seed exchange. "It's about giving and connecting plants to people," says Walker. "This benefit far outweighs saving money."

If you've never saved seeds, now is the ideal time to be planning for what seeds you want to collect later in the season. Perhaps those beautiful hollyhocks growing by the fence, or that flavorful dill in the herb garden—or maybe both! For those early-season bloomers like foxgloves and columbines, don't wait too long, or the seeds may have dispersed before you've collected them.

NO HYBRIDS, PLEASE

YOU CAN COLLECT and save seeds from any garden plant that produces viable seeds, but avoid hybrids. Many popular annual and vegetable varieties—marigolds, petunias, impatiens, tomatoes, peppers—are hybrids, which are produced from very specific crosses made by plant breeders. Seeds of hybrids are either

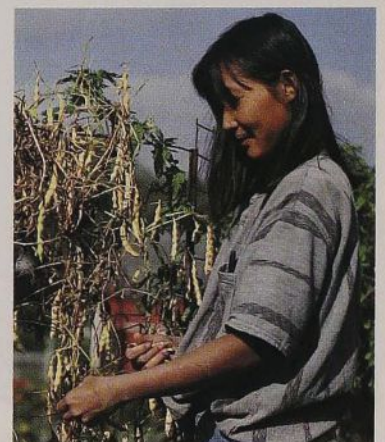
sterile or produce plants that are not "true to type"—that is, they won't resemble the parent. This problem can also occur with seeds from plants that have been naturally cross-pollinated by the wind or insects, which often happens when different species or cultivars of a plant are grown together in a garden.

SEED COLLECTING 101

THE MOST OBVIOUS requirement in saving seeds is allowing your plants time to produce them. After the flowers fade, check the plants weekly for seed formation and ripeness. Leaving dead flowers on annuals, however, can detract from the garden display during the season. "Annuals can be deadheaded until a month or so before the first expected frost," Walker says. "Leave the last flowers to form seeds, which can be collected when they are ripe."

Depending on the seed type, there are several methods you can use to separate the seeds from the plant. Most garden seeds fall into one of the three following categories:

Seeds in pods. Some seeds that form within pods—such as poppies, balloon flower, sweet peas, and beans (shown)—remain on the plant for a long time after maturity. Gather the pods after they have ripened and dried on the plant. Or cut off the stalks or stems and bring them indoors to air-dry. Break open the dried pods or remove their caps to harvest the seeds.



Seeds that scatter.

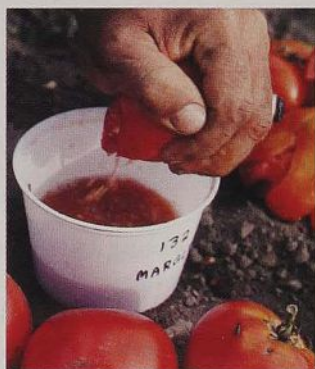
Seeds of many ornamental annuals, herbaceous perennials, and herbs—such as the foxglove shown here—disperse easily when they ripen. Inspect seed heads regularly for maturity and pick



them on a dry day if possible. Separate the seeds from the plant by shaking the seed heads in a paper bag. Another method—which is particularly useful for plants such as impatiens that have seed pods that explode, ejecting their seeds long distances—is to tie a ventilated paper bag or lightweight fabric bag around the flower heads before the seeds ripen in order to catch them when they scatter.

Seeds encased in a fleshy fruit.

Seeds of tomatoes, squashes, cucumbers, and berries need to be separated from the pulp and cleaned before they can be stored. Let the fruits become a bit over-ripe before harvesting. Use a spoon to scrape out—or just squeeze out, as shown—the fruit's seedy section, add some water, and let the mix sit for a day or two. Then put the mix in a strainer



and run water through it until the seeds are clean. Spread the seeds out on a glass or metal dish—don't use paper or the seeds will stick—and put them in an airy room to dry. Large seeds should be dry after a week; smaller seeds after four days.

Resources

American Horticultural Society Plant Propagation: The Fully Illustrated Plant-by-Plant Manual of Practical Techniques edited by Alan Toogood. DK Publishing, New York, New York, 1999.

Seed Sowing and Saving: Step-By-Step Techniques for Collecting and Growing More than 100 Vegetables, Flowers, and Herbs by Carole B. Turner, Storey Books, Pownal, Vermont, 1998.

Seed to Seed by Suzanne Ashworth. Photographs by David Cavagnaro. Seed Savers Publications, Decorah, Iowa, 1995.

TIPS FOR STORING SEEDS

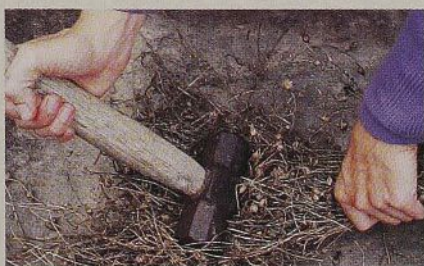
TO ENSURE that seeds will be viable the next season, store them in airtight jars in a cool, dry location. Because moisture can damage seeds, include some silica gel—a moisture-absorbing substance sold at most craft stores—in each jar before putting the seeds away for winter. Some seeds are best sown immediately after harvesting; check the germination requirements of the seeds you collect.

Once you get bitten by the seed-collecting bug, you might consider investing in seed-saving supplies. One mail-order company that offers a range of products—including seed packets, glass vials, and silica gel—is Southern Exposure Seed Exchange in Mineral, Virginia, (540) 894-9480, www.southernexposure.com.

Mary Yee is managing editor and designer of The American Gardener.

GETTING TO THE GOODS

When you harvest large batches of seed heads, a good way to ensure that you collect as much seed as possible with minimum waste is by separating them from the plant and straining them—as shown with bachelor's-buttons, below.



1. Lay dried seed heads in a collecting area, such as in a wheelbarrow, shown here, or on a piece of tarp on the ground, and use a rubber mallet or other heavy tool to gently crush the pods.



2. Rub the crushed seed heads between your hands to release the seeds. (You might want to wear gardening gloves to protect your hands from stains and splinters.)



3. Collect all of the plant material and pour it through a screen or colander to separate the seeds from the debris. Discard the debris and store the seeds in airtight, labeled containers.

No Place Like Home



Above: An English-style garden in the author's Missouri home, featuring boxwoods and perennials, still has its place, but he's found that gardening with prairie plants such as *Helianthus helianthoides* and *Liatris pycnostachya*, below, is equally satisfying and requires less work.

After years of looking to England for gardening inspiration, this Missouri gardener found true satisfaction in his own back yard.

ARTICLE AND PHOTOGRAPHS BY JERRY W. BROWN

MY CONVERSION TO the joys of gardening with the prairie plants native to the region of east central Missouri where I garden (USDA Zone 5, AHS Zone 7) did not happen overnight. For 20 years I had attempted to re-create the image of horticultural perfection I had acquired through the words and photographs of the great body of British gardening literature. In my region, these efforts required

Herculean labors: double digging and tilling; spreading tons of sand by wheelbarrow; loading, hauling, unloading, and spreading pickup loads of manure; building and turning compost piles; and battling with weeds until conceding defeat in late summer. Not to mention spending thousands of dollars on seeds, herbaceous perennials, bulbs, roses, shrubs, trees, and all the accessories needed to maintain them.





Silphium perfoliatum, *Aster praealtus*, fountain grass, and Siberian irises create a multi-level, multi-textured effect in this part of the garden.

Yet, I still could not grow many of the glorious plants I coveted in the English gardening books. The Warminster broom (*Cytisus ×praecox* 'Warminster') died in two weeks. The *Euphorbia griffithii* died in a month. Many of the yews in the hedge I tried to make died within three months. The *Clematis montana* grew to the roof in one summer and died in winter. The old garden roses stayed alive and even bloomed but never became large and robust despite lavish mulching and fertilizing. However, Siberian irises, daylilies, and *Euphorbia palustris* flourished. My garden was telling me I had not improved my hardpan clay soil enough, so it was only suitable for swamp plants!

Two trips to England to visit gardens made me even more aware of my own garden's inadequacies. The yew hedges there were green and perfect. The clematis covered whole walls with blue and purple bloom. The white 'Mme. Hardy' roses were twice as large as those in my garden. Walking through the serene beauty of such masterpieces as Hidcote and Siss-

inghurst was almost a religious experience, but also a wake-up call that in spite of the great expense of money, labor, and thought, my efforts to imitate these great gardens fell far short of the originals.

NO PLACE LIKE HOME

MY GARDENING LIFE took an entirely different direction as the result of a visit to a garden only 50 miles from my country home in Missouri. This was the Whitmire Wildflower Garden at the Missouri Botanical Garden's Shaw Nature Reserve, in Gray Summit, Missouri, 35 miles southwest of St. Louis. Here I saw my first prairie garden—a style of gardening I had

never imagined. The combination of native grasses and wildflowers was a startling revelation. Of course, the black-eyed Susans (*Rudbeckia* spp.) and the blazing stars (*Liatrix* spp.) were familiar garden plants, but I was totally ignorant of the subtle colors and textures of grasses such as big bluestem (*Andropogon gerardii*), switch grass (*Panicum virgatum*), and prairie dropseed (*Sporobolus heterolepis*). I thought rattlesnake master (*Eryngium yuccifolium*) was exotic and could not believe it was a native American plant and grew along roadsides I had traveled my whole life. Most amazing, I found the contrast of shape and color created by the pink spikes of prairie blazing star and the silvery clustered spheres of rattlesnake master as aesthetically pleasing as any plant combinations I had seen in the great gardens of England. It was at that moment that I made the decision to create a prairie garden.

That summer and fall, I worked as a volunteer and took classes at Shaw Nature Reserve. My teachers were Shaw naturalist James Trager and horticulturist Scott Woodbury. From them I

I found the contrast of shape and color created by the pink spikes of prairie blazing star and the silvery clustered spheres of rattlesnake master as aesthetically pleasing as any plant combinations I had seen in the great gardens of England.

learned to identify native grasses and forbs and how to collect their seeds from the remnant pieces of prairie that survived along local roads and rails, never taking more than 10 percent of the seeds from any given species. I read everything I could find on prairie gardening, but—compared with the vast literature of English gardening—the books and articles on prairie gardening were meager. There was some information on seed germination and establishment of prairie plants, but nothing about design.

A WING AND A PRAIRIE

IN SEPTEMBER I sprayed approximately a half-acre of a weedy fescue field on my property with a glyphosate herbicide (Roundup) and in the winter burned off the residue. I did not dig, till, or improve the soil in any way. In November and December, I cleaned and threshed the seed I had collected. The techniques of breaking up the seed heads and pods varied from smashing some with a hand sledge to rubbing others against quarter-inch hardware cloth.

Because I had not been able to harvest seeds of some of the species I wanted to grow, I ordered some seeds from two nurseries close to my home: Missouri Wildflowers in Jefferson City, Missouri, and Bluestem Prairie Nursery in Hillsboro, Illinois. I used local seed sources because most experts on prairie gardening agree it

Sources

Bluestem Prairie Nursery, Hillsboro, IL. (217) 532-6344. Catalog free.

Missouri Wildflowers, Jefferson City, MO. (573) 496-3492. www.mowildflowers.net. Catalog free.

Prairie Moon Nursery, Winona, MN. (507) 452-1362. www.prairiemoonnursery.com. Catalog \$2.

Prairie Nursery, Westfield, WI. (608) 296-3679. www.prairienursery.com. Catalog \$3.

Western Native Seed, Coaldale, CO. (719) 942-3935. www.westernnativeseed.com. Catalog free.

is important to acquire seeds that are as close to your local ecotype as possible. Not all nurseries offer locally gathered seeds, but I knew these nurseries did.

In January and February, I sowed the seeds in aluminum cake pans filled with a soilless germination mix and placed them in my unheated greenhouse. Most prairie wildflower seeds require stratification—a cool, moist period of 30 to 60 days—for proper germination. Because nearly all my sources had said that prairie seeds were notorious for low viability rates, I sowed

thickly. By spring the cake pans were bulging with tiny green seedlings. I transplanted these into trays of 38 two-inch-by-six-inch cones, and, after a few days in the greenhouse, set them outside to acclimate. By summer, more than 3,000 healthy plugs were ready to plant.

NATURALISTIC DESIGN

NOW I HAD a design problem. How could I decide where to plant what? My half-acre is a rectangle with its long axis along the driveway. Of course, the short plants would be best along the front edge and the tall ones in the back. The wet habitat species such as cord grass (*Spartina pectinata*), swamp milkweed (*Asclepias incarnata*), and sneezeweed (*Helenium autumnale*) would be best sited along the side bordering the road ditch. Following these two placement principles, I could have simply dotted the plugs about randomly since that might seem to be the way everything grows together in a prairie, but my previous gardening experience had taught me that that kind of planting produces a nervous and chaotic effect.

Planting in large groups of a single species is usually more pleasing and restful, and often plants that have seeded themselves grow in natural drifts with the plants densely grouped in the center and scattered on the edges. I decided to use this planting scheme because it also provided a way of mingling the different grasses and forbs—herbaceous perennials—where the drifts overlapped. I basically planned the planting with alternating drifts of grasses and flowers to get a 50-50 mix of each and then blended the drifts so that simultaneous bloom would create effective contrasts of color, shape, and texture.

The only maintenance that first summer was some irrigation during a dry spell, but it wasn't possible to water thoroughly or completely. Nevertheless, the survival rate had to have been more than 90 percent because at the end of the summer I couldn't find any plugs that hadn't survived. Most were large robust plants, and some of the forbs and grasses bloomed that first summer.

Eryngium yuccifolium, *Liatris pycnostachya*, and *Andropogon gerardii* grow in harmony in the author's prairie garden.



PROMISING RETURNS

THE NEXT SUMMER the prairie plants came back and flourished. Nearly all of them bloomed. Again there was no watering, no mulching, and no fertilizing. An infestation of daisy fleabane bothered me because it produced a weedy effect, so I went after the interlopers with my weed eater. I also pulled some ragweed that appeared in a few patches of bare ground.



The author acquired shooting stars (*Dodecatheon meadia*), above, from a friend's property. Top: The author waters flats of seed-propagated plants in his greenhouse.

That winter, the garden always seemed too wet to get a good burn.

The third summer, most of the plants came back bigger and better than ever. Wetland species such as the swamp milkweed, blue vervain (*Verbena hastata*), cardinal flower (*Lobelia cardinalis*), great blue lobelia (*L. siphilitica*), and sneeze-

weed had decreased, however, because they are short-lived. Some blazing stars disappeared because voles had eaten them. But the cord grass had spread, and the New England asters (*Aster novae-angliae*) and the sweet coneflowers (*Rudbeckia subtomentosa*) had increased, so the losses didn't really matter. I planted 100 or so new plugs of grasses and forbs to fill in a few gaps.

I also added shooting stars (*Dodecatheon meadia*), an amazingly beautiful prairie wildflower with starlike flowers. A friend with the good fortune to have a large native stand of these lovely plants allowed me to transplant a few from his property. The daisy fleabane and ragweed did not reappear; instead, too much tall goldenrod, boneset, and red clover caused this summer's weediness. I cut back some of the goldenrod and boneset with hedge clippers and wiped the clover with herbicide. That fall, I was able to get a good clean burn in November.

By the next spring the shooting stars had multiplied and bloomed profusely. They had prospered even though these most delicate and intricate wildflowers had received no special treatment. In the summer, I was pleased to see some of the effects I had imagined come to fruition. A long drift of sweet coneflowers flowed through hazy billows of switch grass. The pink spikes of prairie blazing star (*Liatris pycnostachya*) contrasted with the radiating petals of purple coneflower (*Echinacea purpurea*), the silver globes of rattlesnake master, the drooping curly heads of blue Canadian wild rye (*Elymus canadensis*), and the white candelabra of Culver's-root (*Veronicastrum virginicum*). Fountains of prairie dropseed sprayed along the front edge, and stately stands of big bluestem towered in the back.

That fall, the weedy tall goldenrod (*Solidago canadensis*) had not increased, but the showy goldenrod (*S. speciosa*) had. Its yellow plumes mingled with purple New England aster and big bluestem. The garden year ended with a spectacular winter prairie fire.

I have continued to diversify my prairie garden in the last couple of years, adding

some new plants that are slower and more difficult to grow and don't produce transplantable plugs from seeds in a single growing season. These include some that won't bloom for two to five years from germination, but they are worth the effort for the variety and beauty they will add to the garden: lead plant (*Amorpha canescens*), New Jersey tea (*Ceanothus americanus*), blue wild indigo (*Baptisia australis*), purple prairie clover (*Dalea purpurea*), downy gentian (*Gentiana puberulenta*), and compass plant (*Silphium laciniatum*).

Now, after four years, nine species of grasses and 44 species of wildflowers have blossomed. The only trouble my new garden has given me is some weeding, but in retrospect I think much of that work was unnecessary. The weeds probably would have decreased naturally as the prairie plants increased in vigor and multiplied.

ANTICIPATING CHANGE

I FULLY REALIZE that what I have created is an artificial reproduction of a natural plant community. And I'm aware that my prairie garden will change. Species that are not reliably perennial have continued to decline, but the most reliable and desirable grasses and flowers are flourishing. I anticipate that these changes will continue to be healthy, natural, surprising, and pleasing, not disappointing and worrisome.

And while I don't know for certain what the ultimate outcome will be, for now, cheered by the knowledge that those few remnant prairies in Missouri spared by the plow have bloomed for hundreds of years, I will take my satisfaction and my pleasure.

What I do know is that in four years I have achieved gardening success denied me in two decades of striving to develop an English-style garden, and that I accomplished this with a fraction of the labor and expense that was poured into my earlier efforts. Most important, what I have is not a poor imitation of another nation's gardening style, but an American garden that I am proud of and revere as much as I do the great gardens of England.

Although he still covets English roses, Missouri resident Jerry W. Brown is now almost completely converted to the joys of gardening with prairie plants.

Seasonal Garden Goods

What's better after a hard day's work in the garden than to sit down and enjoy the fruits of your labor? Here are a variety of garden seats from elegant to whimsical to suit your style and budget.



These light-hearted **Garden Mushroom Stools** are carved from larch wood and come in two sizes. The large stool is 17 inches high with a 20-inch diameter seat and retails for \$29.95. The small stool is 14 inches high with a 14-inch diameter seat and retails for \$24.95. Plow & Hearth, P.O. Box 6000, Madison, VA 22727-1600. (800) 627-1712. www.plowhearth.com.



Relax in style on this **Allegheny Highback Porch Swing**. Handcrafted from western red cedar by Amish woodworkers, the swing comfortably seats two adults and features wide armrests and lower back support. This swing is four feet long with a 31-inch-deep seat and 29-inch-high back and can be mounted on a porch or A-frame. The retail price is \$295. Larger sizes are also available. The Cedar Store, 1620 Route 8, Glenshaw, PA 15116. (888) 293-2339. www.cedarstore.com.

Here's a **Care-free Wicker Chair** that looks like traditional white wicker but is easier to clean and care for. Made from woven resin on sturdy rattan frames, the chair is weatherproof, never needs painting, and won't split apart. It can be cleaned with a hose or sponge and mild detergent. The list price is \$114.98. Lillian Vernon, 100 Lillian Vernon Drive, Virginia Beach, VA 23479-0004. (800) 545-5426. www.lillianvernon.com.



Take a gardening break under your favorite shade tree with this **White Cedar Tree Bench**. Left untreated, the wood will weather to a silver gray over time. The hexagonal design features seats that are 12 inches wide by 15 inches high. The bench can be assembled around a tree with a diameter of up to 24 inches. Priced at \$149.95. Alsto's, P.O. Box 1267, Galesburg, IL 61402-1267. (800) 447-0048. www.alsto.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. Send new product information to Seasonal Garden Goods, *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308.

Book Reviews

Ann Lovejoy's *Organic Garden Design School: A Guide to Creating Your Own Beautiful, Easy-Care Garden*.

Ann Lovejoy. Rodale Press, Emmaus, Pennsylvania, 2001. 280 pages. Hardcover, publisher's price: \$35.

ON MY BOOKCASE, there is a shelf devoted to books on organic gardening. It includes guides to composting and improving the soil, books on natural pest control and companion planting, and how-to manuals for growing heirloom vegetables. I've got another shelf devoted to books on design, including books on landscaping, garden structures, and planning for good color and form. Ann Lovejoy has written a book that fits exactly in between these two shelves, and it's about time.

Ann Lovejoy's *Organic Garden Design School*



Ann Lovejoy is best known in the Pacific Northwest, where she writes for the *Seattle Post-Intelligencer*. She's also written 18 books, many of them focusing on naturalistic, organic gardening techniques. *Organic Garden Design School* is clearly the result of years of work and research into the design principles and techniques that make it possible to create a garden that is inspired, creative—and, above all—natural.

Whether you're starting from scratch in a new garden or tending an established garden, you'll find something you can use in this practical and beautiful guide. *Organic Garden Design School* covers everything from water-saving techniques to composting and soil-building suggestions, to the placement of paths, walls, and architectural features. She offers suggestions for com-

binning plants that grow best in close proximity to one another, sharing common soil, sunlight, and water needs.

Her chapter "Creating a Natural Backdrop" is perhaps the clearest explanation yet of how to incorporate a garden with natural surroundings, using the principles of layering, gardening for habitat, and "editing the woods"—managing the transition between a garden and an adjacent wooded area. She treats this subject with integrity and responsibility, offering suggestions for protecting native plants and eliminating invasive weeds.

Lovejoy includes a 30-page workbook at the back of the book designed to guide gardeners through the design process. Instructions creating on site maps, identifying clutter, tracking weather events, and moving from a formal to a naturalistic design are all covered here.

The photographs in this book are a delight. The chapter on "Creating a Natural Garden" contrasts clipped, formal estate gardens with wild, overgrown flower beds. The choice is clear: Choose plants that will thrive in their natural form, or spend hours with a pair of hedge trimmers keeping a manicured garden under control. Throughout the book, images from her own garden and gardens around the world illustrate her design principles and provide inspiration.

—Amy Stewart

Amy Stewart is the author of From the Ground Up: The Story of a First Garden (Algonquin Books, 2001).

Growing Shrubs and Small Trees in Cold Climates.

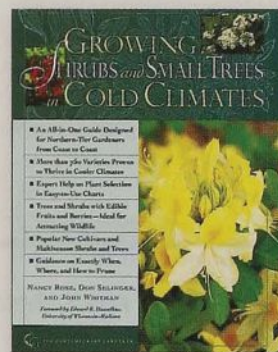
Nancy Rose, Don Selinger, and John Whitman, with a foreword by Edward R. Hasselkus. Contemporary Books, Chicago, Illinois, 2001. 431 pages. Publisher's price, hardcover: \$49.95.

EVEN WITH the exemplary credentials of this book's authors and a foreword by

Edward Hasselkus, who lends his name only to the very best of efforts, I was skeptical that the gardening world needed yet another reference book to trees and shrubs. After all, we already have "bibles" by Michael Dirr, Harrison Flint, Gary Hightshoe, and Guy Sternberg on our shelves, plus maintenance manuals and species-specific handbooks.

The book world gets a lot slimmer when one wants to understand only the country's chillier regions, such as my northwest Chicago (USDA Zone 5) garden, and small trees suitable to urban yards. Then I might refer to Bill Boon and Harlen Groe's *Nature's Heartland* or some paperbacks from Midwest universities, but that's about it. So while I was intrigued by the book title's emphasis on "cold climates," I still hesitated, thinking that it was impossible to write a more useful book on trees and shrubs than already exists.

Once I opened the book and began to read, it began to pass my reviewer's tests with flying colors. The book describes a wide range of woodies from blueberries to tree peonies and over 700 cultivars in easy-to-read charts. It offers maintenance advice that a beginner can understand ("pull by hand any weeds that appear [in the mulch]") but also includes propagation directions that an expert will appreciate ("keep seed in moist peat at room temperature for 90 days"). The authors provide professional insider tips that only professional horticulturalists working in the north understand: To survive in cold climates, redbuds should be grown from northern seed, for example, and should not be exposed to winter winds.



Best of all, the book provides sources for purchasing the plants via mail-order. I've always thought that it's not good enough to simply dangle all those tempting plants in front of us and then not tell us where to indulge our passion for buying them. Bravo to the authors for doing this extra, and much appreciated, research.

I have only two complaints. While there are ample up-close photos of flowers or buds, it would have been helpful to include more photos or even small black-and-white outlines of the entire plant of each genus or cultivar to give us a better clue to the plant's landscape placement. And I want the whole book laminated, so that I can tote it around in the wheelbarrow without damage.

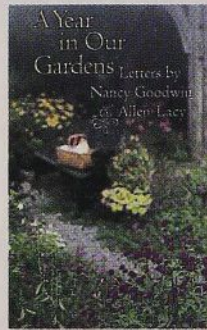
—Rommy Lopat

Rommy Lopat was the publisher and editor of *The Weedpatch Gazette*, which won the Garden Writers Association of America's 2001 Quill & Trowel award for best gardening newsletter just after she announced plans to cease publication. Her writing can be now seen at weedpatch.com.

A Year in Our Gardens.

Letters by Nancy Goodwin and Allen Lacy. University of North Carolina Press, Chapel Hill and London, 2001. 208 pages. Publisher's price: hardcover: \$27.50.

EVERYONE LOVES to read someone else's mail. Most of us, governed by conscience, do so only with permission. That's the appeal of books of compiled letters: they are there to be read.



This book contains a year's worth of letters between gardeners Nancy Goodwin and Allen Lacy. These letters are real and substantive, not just e-mail chatter. I was initially disturbed to read in the book's introduction that the letters were written with eventual publication in mind. My dismay struggled to survive the first few pages, and soon died entirely: The letters are genuine.

The letters were written with eventual publication in mind. My dismay struggled to survive the first few pages, and soon died entirely: The letters are genuine.

Nancy Goodwin and her husband, Craufurd, garden in Hillsborough, North Carolina; Allen Lacy and his wife, Hella, garden in Linwood, New Jersey. Both gardens are located in USDA Zone 7—and there, in many ways, the resemblance ends. Differences in soil, degree and duration of summer heat, available water, and so on, illustrate to perfection that the winter hardiness zone ratings are at best a loose guide. Most seasoned gardeners already know this, but it's satisfying somehow to be able to compare one's own experience with that of others. (My own garden in the warmer half of Zone 4, for instance, is covered each winter with up to 300 inches of snow; comparing notes with Zone 4 gardeners who get little snow cover makes me endlessly grateful for what I have.) Gardeners who suffer from Zone Envy (the Zone is always greener on the other side of the fence) will learn that there's always *something* lacking in other people's gardens.

One sign that these are interesting letters is that I longed to jump into the conversation: Nancy, what's the recipe for your deer spray? Allen, how do I subscribe to your newsletter? Have either of you tried vacuuming Japanese beetles? (Use a wet/dry canister vacuum with an inch or so of soapy water in the bottom. It works.) Nancy and Allen's gardening news, which is accurate but gossipy in tone, is leavened by the inclusion of other topics: the health of the writers; news of family and friends; music; memories. I was left wanting to know what happened next.

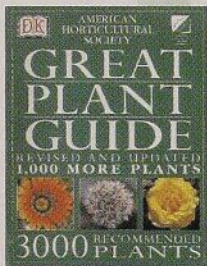
This would be an excellent gift book for a gardener recovering from an illness: it's meaty yet easily absorbed; it's physically light enough to read in bed or bath; it's entertainingly distracting, and can be read in bits and pieces or in one go, and Martha Blake-Adams's charming line drawings of scenes from both authors' gardens are additional delights. Indeed, you may wish to buy *A Year in Our Gardens* yourself and save it for that next summer cold. It's no faint praise to say that this book could stand up to the exigencies of a root-canal.

—Nancy McDonald

Nancy McDonald is a free-lance writer who divides her year between Portland, Oregon, and Grand Marais, Michigan.



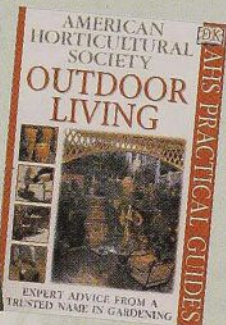
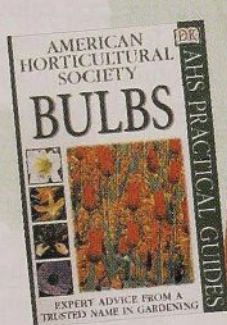
NEW the latest titles from AHS and DK Publishing



GREAT PLANT GUIDE

Revised and updated!

1,000 more plants—more than 3,000 in all, from *Abelia* to *Zauschneria*—with color photos, plant lists for special sites and uses, and full index. Just the right size to take with you to the garden or plant shopping. 670 pages. \$16.95



AHS PRACTICAL GUIDES

- Bulbs
- Outdoor Living

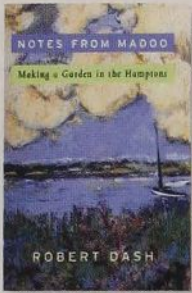
Packed with color photos, useful information, and easy-to-follow instructions. Each handy guide has 80 pages. \$8.95

Order these and other great AHS/DK books by logging onto the AHS Web site www.ahs.org and linking to amazon.com. Each time you order a book through this special link, a portion of the sales goes back to AHS to support vital programs.

Editor's Summer Reading Picks

Notes on Madoo: Making a Garden in the Hamptons.

Robert Dash. Houghton Mifflin Co., Boston, Massachusetts. 2000. Publisher's price, hardcover: \$24.



AS ANY gardener knows, creating a garden is a lifetime work in process. The essays in this book, culled from Robert Dash's biweekly gardening column in the *East Hampton Star*, represent over 30 years of

observation and experience gained in turning a nearly two-acre property on Long Island into a garden he calls Madoo.

A writer, painter, and founding patron of The Garden Conservancy, Dash's essays recount the growth and evolution of a gardener as well as a garden, from the early days of horticultural excess ("in much the same way that an art student might go berserk in an unattended art store") to the more mature vision of today. Along the way Dash has had to retrench from the devastation of a garden-destroying hurricane, puzzle over inconsistent plant descriptions in books and catalogs, and face the numerous other trials and triumphs that go along with gardening.

The essays are arranged by season, but you can open the book anywhere and start reading. You don't need to read too far before you get a taste of Dash's opinions—and he doesn't mince words. Here's his view on forsythias: "It is an absolute ass of a color, a greeny-yaller braying insult to the obscure triumph of chartreuse."

Even if you don't agree with all of Dash's likes and dislikes, it's clear he has more than a little garden dirt under his fingernails and knows what he's talking about. If you enjoy reading Henry Mitchell or Elizabeth Lawrence, this book is a good bet for you.

—Mary Yee

Chicken Soup for the Gardener's Soul: 101 Stories to Sow Seeds of Love, Hope and Laughter.

Jack Canfield, Mark Victor Hansen, Cynthia Brian, Cindy Buck, Marion Owen, Pat Stone, and Carol Sturgulewski. Heath Communications, Inc., Deerfield Beach, Florida, 2000. Publisher's price, softcover: \$12.95.

PART OF THE on-going Chicken Soup series, this anthology will appeal to any gardener who sees lessons for life in the digging of soil and watching seeds sprout and grow. The 101 essays in the book come from well-known writers such as Erma Bombeck, James Michener, and Nelson Mandela, as well as from lots of ordinary folks who share tales of events and memories that all reach the same conclusion: Gardening connects people with the cycle of life.

The stories—arranged in nine thematic chapters, including "Love in Bloom," "Making a Difference," and "The Seasons of Life"—are very short, but many pack emotional punches. There's the story of a middle-aged son and his father, who after being estranged for almost 40 years, meet again and find common ground in talking about their gardens. There's the wife of 25 years who did not care for gardening and never understood her husband's love for it until she picked butter beans with him in the last days of his terminal illness.

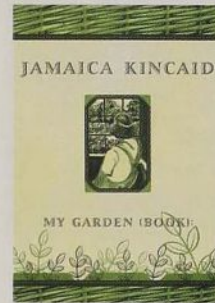
Many of the stories are tear-jerkers, but there are also light-hearted pieces, a few poems, and humorous cartoons scattered throughout.

For quick reading that can restore your optimism for the goodness of humankind and reaffirm your love for gardening, you won't miss with *Chicken Soup for the Gardener's Soul*.

—Mary Yee

My Garden (Book):.

Jamaica Kincaid. Farrar, Straus and Giroux, New York, New York. 1999. Publisher's price, hardcover: \$23.



A NATIVE of Antigua who now resides in New England, Kincaid is a novelist and professor at Harvard University. Having grown up in the Caribbean, she brings a fresh

perspective to gardening and to life in America, and she is refreshingly outspoken in her opinions. Her stream-of-consciousness style takes a bit of adjusting to, but the essays in this book are a delightful blend of her ruminations on life with descriptions of the plants she grows in her garden and the people who have influenced her.

The book is a series of essays, some of which have been previously published. They range from one detailing her emotional connection with the former owners of the house she now lives in, to a discussion of the joys of reading seed catalogs, and a description of her travails on a plant hunting expedition to China with a group of botanists and nursery owners. The essays also include Kincaid's musings on such topics as colonialism, the winter garden, Monet's garden, and the Chelsea Flower Show.

Be prepared for the dropping of many names, both plants and people. The book is perfectly readable without the services of a plant encyclopedia, but more than once I felt the urge to consult one after coming across an evocative plant description.

Not everyone will share Kincaid's opinions, but it's hard not to admire her passion for gardening and her stylish writing.

—David J. Ellis

Gardeners' Books

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

Taylor's Guide to Trees.

Susan A. Roth. Houghton Mifflin Co., Boston, Massachusetts, 2001. 408 pages. Softcover, publisher's price: \$23.

THIS LATEST TITLE in the revised series of Taylor's Guides includes color photographs of over 300 species of trees and shrubs together with brief descriptions. The encyclopedia offers more de-

tailed information on each species, its care, and related species.

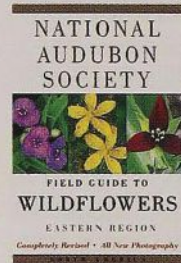
National Audubon Society Field Guide to North American Wildflowers: Eastern Region.

John W. Thieret. Alfred A. Knopf, New York, New York, 2001. 864 pages. Softcover, publisher's price: 19.95.

National Audubon Society Field Guide to North American Wildflowers: Western Region.

Richard Spellenberg. Alfred A. Knopf, New York, New York, 2001. 864 pages. Softcover, publisher's price: \$19.95.

THE FIRST part of these two completely revised titles from the venerable field guide

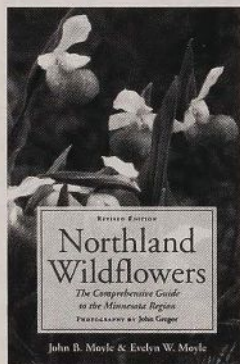


series each contains over 900 all-new color photographs arranged by flower color and shape. The remainder of each book consists of descriptive information about each plant, including its range. Includes a glossary and index.

The Spirit of the Garden

Martha Brookes Hutcheson. University of Massachusetts Press, Amherst, Massachusetts, 2001. 221 pages. Publisher's price, hardcover: \$34.95.

PART OF the Library of American Landscape Architects' Centennial Reprint Se-



Northland Wildflowers

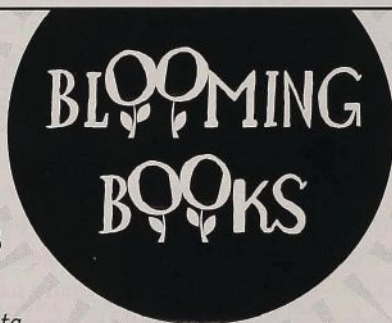
The Comprehensive Guide to the Minnesota Region, Revised Edition

John B. Moyle and Evelyn W. Moyle
Photos by John Gregor

For more than two decades the first edition of *Northland Wildflowers* has been the standard guide to wildflowers of the Upper Midwest and Canada. Now, a substantial revision presents more than three hundred species of commonly found wildflowers, all stunningly captured in new full-color photographs and organized by color of bloom. This spectacularly illustrated new edition of *Northland Wildflowers* is sure to become the key guide for gardeners and nature lovers of the North.

"This comprehensive book tells you how to select, plant, and care for 750 shrubs and small trees that can withstand supercold temperatures. Reorganized and sorted by flower color." —*Mpls/St. Paul Magazine*

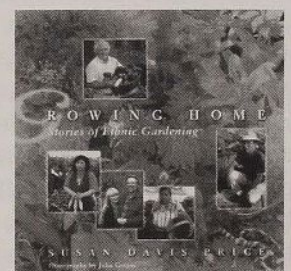
\$19.95 Paper ISBN 0-8166-3572-2
224 Pages 333 color photos, 8 line drawings, 1 figure 5 7/8 x 9



Growing Home

Stories of Ethnic Gardening

Susan Davis Price
Photos by John Gregor



Winner of The American Horticultural Society Horticultural Book Award (2001)

"This book is a delight from beginning to end. It's a book of tales, all of them true, of recent immigrants and the gardens they have created. These ordinary yet extraordinary people grow both ornamentals and edibles as links to the homes of their childhoods and the cultures they left behind. . . . This is an excellent bedtime book; each chapter is complete in itself. *Growing Home* reminds me of what gives us our greatest strength as a nation: the hybrid vigor we gain from the blend of cultures that is America." —*The American Gardener*

\$34.95 Cloth/jacket ISBN 0-8166-3305-3
208 pages 130 color photos 9-3/4 x 9-3/4

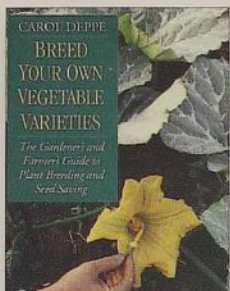
at bookstores or from
University of Minnesota Press
773-568-1550 www.upress.umn.edu

MINNESOTA

ries, this book was first published in 1923 and was widely praised for its insightful coverage of garden design principles. Many of the photographs were taken by the author, including many “before and after” subjects. These and the lively text offer the reader a special perspective on gardening and history. The introduction to this edition by Rebecca Warren Davidson, offers insight into the life and times of the author.

Breed Your Own Vegetable Varieties: The Gardener's and Farmer's Guide to Plant Breeding and Seed Saving, 2nd edition.

Carol Deppe. Chelsea Green Publishing Company, White River Junction, Vermont, 2000. 367 pages. Publisher's price, softcover: \$27.95.



IN THIS revised and expanded edition of her book first published in 1993, Deppe presents

basic techniques of plant breeding in a manner that is both interesting and easy to understand. Following the methods described, anyone can breed new vegetable varieties, and reap satisfying rewards. Deppe explains how to breed for various traits, maintain varieties, and conduct variety trials. Added to this new edition of the book are six chapters on seed saving and two chapters on sustainable gardening practices.

Weedless Gardening.

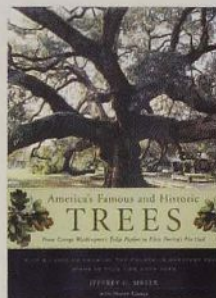
Lee Reich. Workman Publishing, New York, New York, 2001. 200 pages. Softcover, publisher's price: \$8.95.

IN THIS book, Reich details what he calls a new system of gardening—the Weedless Garden—that reduces needless labor, produces the least disturbance to the natural environment, and still yields good gardening results. Reich covers all the basics of soil testing, preparing a site, planting, watering, mulching, and composting. Includes information on growing vegetables, designing and maintaining flower gar-

dens, and planting and caring for trees, shrubs, ground covers, and vines as well as a bibliography for further reading.

America's Famous and Historic Trees: From George Washington's Tulip Poplar to Elvis Presley's Pin Oak.

Jeffrey G. Meyer with Sharon Linnéa. Houghton Mifflin, Boston, Massachusetts, 2001. 129 pages. Publisher's price, hardcover: \$30.



HISTORY BUFFS and tree enthusiasts alike will enjoy this book by the director of American Forests's Famous & Historic Trees program. Seventeen trees and their intriguing histories are recounted here, together with information on how to propagate and grow each species. Among the trees profiled are George Washington's tulip poplar, the Gettysburg Address honey locust, and Elvis Presley's pin oak.

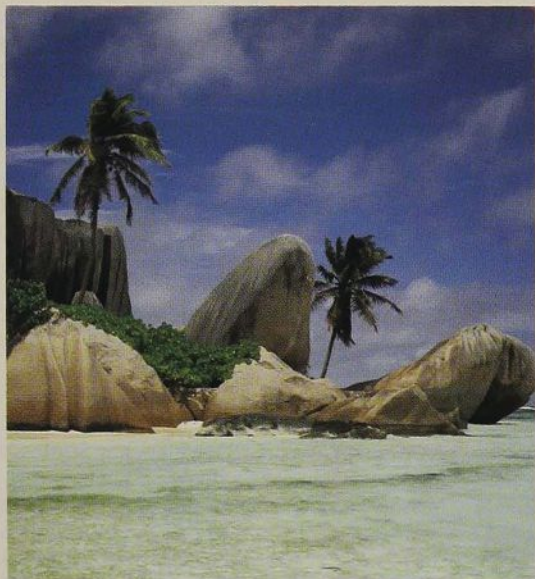


2002 American Horticultural Society **TRAVEL STUDY PROGRAM**

The Gardens of Eden: The Seychelles

On Board the Yacht M/V Callisto

February 12-24, 2002



Located in the Indian Ocean just below the Equator and some 1,000 miles east of the East African coast, the Seychelles are a chain of 86 coral and granite islands. The natural beauty of this tropical paradise, and the exotic flora and fauna it supports, will appeal to gardeners and naturalists alike. The island's gardens reflect the influences of the French and British colonists who arrived in the 18th and 19th centuries, as well as those of more recent immigrants from Asia and Africa.

Leading this program for AHS will be the American Horticultural Society Chairman of the Board of Directors, Jim Corfield, and his wife, Judy. Veteran travelers, their love of gardens and sense of adventure will make for a most memorable trip.

For complete details of the exciting 2001 schedule, visit the AHS Web site at www.ahs.org, or call the Leonard Haertter Travel Company at (800) 942-6666.

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



Regional Happenings

NORTHEAST

JULY 14. **Blueberry Blast.** Festival with food and activities. Camden Children's Garden, Camden, New Jersey. (856) 365-8733.

JULY 14. **The Secret Gardens of Amherst Village.** Amherst Village, New Hampshire. (603) 673-3747.

JULY 18 & 25. **Writing What You Love: House and Garden Journalism.** Workshop. Berkshire Botanical Garden, Stockbridge, Massachusetts. (413) 586-8642.

JULY 21. **Great Trees of Wave Hill Garden Walk.** Wave Hill, Bronx, New York. (718) 549-3200.

JULY 21 & 22. **Concealed City Gardens, Pittsfield's Hidden Heart.** A self-guided tour of eight private gardens. Pittsfield, Massachusetts. (413) 442-2680.

JULY 23-AUG. 24. **Five-Week Summer Landscape Design Intensive.** The New York Botanical Garden, Bronx, New York. (718) 817-8616.

AUG. 4. **Summer Garden Day.** Old Sturbridge Village, Sturbridge, Massachusetts. (508) 347-3362.

AUG. 5. **Sunken Garden Public Preview.** The Elms, Newport, Rhode Island. (401) 847-1000 ext. 140.

AUG. 5-11. **Aquatic Flowering Plants Seminar.** Humbolt Field Research Institute, Steuben, Maine. (207) 546-2821.

AUG. 10-12. **Northeast Organic Farming Association Annual Summer Conference.** Hampshire College, Amherst, Massachusetts. (978) 355-2853.

SEPT. 14. **Penn-Jersey District Convention.** American Rose Society. Holiday Inn, Totowa, New Jersey. (201) 440-3371.

MID-ATLANTIC

JULY 14. **The Ornamental Kitchen Garden.** Lecture and tour. Monticello, Charlottesville, Virginia. (804) 984-9822.

JULY 20. **5th Annual Conference on Woody Plants.** Scott Arboretum, Swarthmore College, Swarthmore, Pennsylvania. (610) 328-8025.

AHS Events

Events sponsored or co-sponsored by AHS are indicated by an **AHS** symbol. Expanded and updated Regional Happenings listings can be viewed on the Society's Web site at www.ahs.org.

JULY 21. **Principles of Plant Propagation.** Workshop. Monticello, Charlottesville, Virginia. (804) 984-9822.

AUG. 1. **Planting a Fall Herb Garden.** Norfolk Botanical Garden, Norfolk, Virginia. (757) 441-5830.

AUG. 11. **Seed Saving Workshop.** Monticello, Charlottesville, Virginia. (804) 984-9822.

AUG. 14. **Invasive Plants Conference.** Swarthmore College, Swarthmore, Pennsylvania. (215) 247-5777.

AUG. 25. **Native Plant Seminar.** Irvine Natural Science Center, Stevenson, Maryland. (410) 484-2413.

SEPT. 5-8. **National Urban Forest Conference.** Washington, D.C. (304) 345-7578.

SOUTHEAST

JULY 24-28. **Cullowhee Conference: Native Plants in the Landscape.** Western Carolina University, Cullowhee, North Carolina. (770) 922-7292

JULY 26-28. **Association of Professional Landscape Designers Annual Conference.** Seelbach Hotel, Louisville, Kentucky. (630) 579-3268.

AUG. 3-5. **Southern Nursery Association Convention.** Atlanta, Georgia. (770) 953-3311.

AUG. 11. **The World of Hostas.** Class. Plant Delights Nursery, Raleigh, North Carolina. (919) 772-4794.

AUG. 25. **Propagation Workshop.** Plant Delights Nursery, Raleigh, North Carolina. (919) 772-4794.

NORTH CENTRAL

AHS JULY 12 & 13. **2001 National Children and Youth Garden Symposium.** Sponsored

by AHS. Kellogg Hotel and Conference Center at Michigan State University, East Lansing, Michigan. (800) 777-7931.

JULY 14. **Down the Garden Path.** Garden tour. Wisconsin Rapids, Wisconsin. (715) 421-8440.

JULY 14. **Evening Forest Journey.** Newton Hills State Park, Canton, South Dakota. (605) 773-3930.

JULY 14. **Perennials for Shade.** Lecture and garden tour. Indianapolis Museum of Art, Indianapolis, Indiana. (317) 920-2660.

JULY 14. **Pond and Water Garden Tour.** Sponsored by the Midwest Pond & Koi Society. Chicago, Illinois. (630) 271-9875.

JULY 15. **Union County 5th Annual Tour of Gardens.** McCloud Park, Marysville, Ohio. (937) 644-8117.

JULY 25. **63rd Annual Niswaw Flower and Garden Show.** Sponsored by the Niswaw Garden Club. Lutheran Church of the Cross, Niswaw, Minnesota. (218) 568-7673.

JULY 28 & 29. **Butterfly Garden Tour.** Self-guided tour throughout the Chicago suburbs. Illinois Audubon Society, Frankfort, Illinois. (815) 469-1294

AUG. 2-4. **Art en Fleurs.** Floral arranging and horticultural exhibition. Milwaukee Art Museum, Milwaukee, Wisconsin. (414) 224-3243.

AUG. 11 & 12 **Renaissance Herb Faire.** Green Bay Botanical Garden, Green Bay, Wisconsin. (920) 490-9457.

AUG. 19. **Rose Show.** Green Bay Botanical Garden, Green Bay, Wisconsin. (920) 490-9457.

SEPT. 14-17. **2001 Watchable Wildlife Conference.** St. Paul, Minnesota. (800) 657-3637.

SOUTH CENTRAL

JULY 14. **Henry Shaw Cactus Society Show.** Missouri Botanical Gardens, St. Louis, Missouri. (314) 577-9400.

JULY 14. **Water Garden Society of Oklahoma Water Garden Tour.** Oklahoma City, Oklahoma. (405) 495-2111.

AUG. 17-19. **Texas Nursery Landscape Expo.** Dallas Convention Center, Dallas, Texas. (512) 280-5182.

AUG. 17-19. **Invasive Species and Ecological Restoration.** Texas Society for Ecological Restoration's Sixth Annual Conference, Hunt, Texas. (940) 565-4332.

AUG. 24-26. **Texas Home and Garden Show.** San Antonio, Texas. (713) 821-1194.

SOUTHWEST

JULY 9-15. **Crested Butte Wildflower Festival.** Crested Butte, Colorado. (970) 349-2571.

JULY 15. **Tesuque/Santa Fe Gardens.** Self-guided tour of private gardens. Sponsored by Santa Fe Botanical Gardens, Santa Fe, New Mexico. (505) 428-1684.

JULY 28. **Fort Collins Gardenfest.** Sponsored by Community Horticulture Center, Inc., Fort Collins, Colorado. (970) 224-2350.

NORTHWEST

JULY 14. **Anchorage Garden Club 58th Annual Flower Show.** Anchorage, Alaska. (907) 566-0539.

JULY 14 & 15. **Bainbridge in Bloom Garden Tour.** Sponsored by the Bainbridge Island Arts and Humanities Council, Bainbridge, Washington. (206) 842-7901.

JULY 22. **The West Seattle Garden Tour.** Sponsored by ArtsWest, Seattle, Washington. (206) 938-0339.

AUG. 18. **Idaho Botanical Garden Bug Day.** Festival and lecture. Idaho Botanical Garden, Boise, Idaho. (208) 343-8649.

AUG. 23 & 24. **Cracked Pots Garden Art Show.** McMenasins Edgefield, Troutdale, Oregon. (503) 669-8610.

WEST

JULY 14. **Plant Sale with Bird and Butterfly Plants.** Strybing Arboretum, San Francisco, California. (415) 661-1316.

JULY 22-25. **Annual Conference.** American Society for Horticultural Science. Sacramento, California. (703) 836-4606.

AUG. 18. **Western International Gladiolus Show.** McKinley Park Garden Center, Sacramento, California. madglads@pacific.net.

SEPT. 1 & 2. **Fern and Exotic Plant Show and Sale.** Sponsored by the Los Angeles International Fern Society. Arboretum of Los Angeles County, Arcadia, California. (626) 335-4600.

Rooftop Garden Cools Windy City

BUTTERFLY WEED, coreopsis, and coneflowers will be dancing amid Chicago's skyscrapers this summer on a newly created rooftop garden that is one of the first of its kind in North America. Perched some 220 feet above street level, the garden sits on the roof of the 11-story building that houses Chicago's City Hall.

The genesis for Chicago's Urban Heat Island Reduction project, as the rooftop garden is formally known, came after Mayor Richard M. Daley saw eco-roofs in Germany and became interested in investigating their heat-reducing capabilities in his own city.

The experimental garden is designed to demonstrate that layers of soil and foliage can act as insulators, thus lowering the building temperature and decreasing the energy used for air conditioning. There is also expected to be a resultant decrease in air pollution. With a national energy crisis looming, this investigation has taken on even greater importance.

Design and construction of the million-dollar project occurred over a two-year period. First, the City Hall roof had to be repaired and secured in order to carry the weight of the garden. Then, a nine-layer lightweight blanket that permits drainage and root growth was installed. Upon this, a lean soilless mixture containing 15 percent organic matter was laid to cover a 38,000-square-foot area.

In considering the rugged environment and remote location of the garden, the designers chose plants that will not only withstand wind, rain, and drought but also survive with minimal maintenance. Installed in a symmetrical design, the garden includes 156 varieties of tough, drought-tolerant perennials native to the Chicago area. Draping vines strategically cover the penthouse's mechanical equipment. And several birdhouses can be found nestled in two trees: a 'Prairie Fire' crabapple and a cockspur hawthorn.

In cooperation with the U.S. Environmental Protection Agency and the U.S. Department of Energy, Chicago will be studying the garden's effect on energy use within City Hall and on surrounding air temperatures. A weather station on the roof will record daily air temperature in the garden for comparison with that above the dark, heat-absorbing roof on the County portion of the building.

While there is no official public viewing area for the garden, the Chicago Department of Environment invites people interested in seeing the garden to call (312) 744-7606 to arrange a tour. For more information, visit the Chicago Department of Environment Web site at www.ci.chi.il.us/Environment/html/RooftopGarden.



The new rooftop garden atop Chicago's City Hall is an experiment in urban heat reduction.

—Adele Kleine, special to The American Gardener

SEPT. 7-9. **American Community Gardening Association Annual Conference.** Salt Lake City Utah. www.communitygarden.org.

CANADA

JULY 14. **Canadian Rose Society Miniature Rose Show.** Sheway Gardens Shopping Mall, Etobicoke, Toronto, Ontario. (416) 622-6422.

AUG. 13-15. **7th Biennial Conference on Agroforestry in North America and the Annu-**

al Conference of the Plains and Prairie Forestry Association. Regina, Saskatchewan. (306) 787-5949.

AUG. 25. **Herb Faire.** Hendrie Park, Royal Botanical Gardens Centre, Burlington, Ontario. (905) 529-2920.

SEPT. 1. **Vancouver Dahlia Society Annual Show.** Van Dusen Botanical Garden Floral Hall, Vancouver, British Columbia. (250) 584-5124.

Garden Market

CLASSIFIED AD RATES: All classified advertising must be prepaid. \$2.50 per word; minimum \$60 per insertion. Copy and prepayment must be received on the 20th of the month three months prior to publication date. Send orders to: AHS Advertising Office, 1775 Jamieson Street, Suite 210, Alexandria, VA 22314-5715. Phone (703) 518-4700; fax (703) 518-8495.



*Support our advertisers!
Tell them you saw their ad
in The American Gardener.*

IRRIGATION

DRIP-SPRAY IRRIGATION. Free 64-page color catalog, large quality selection, free design, low prices, fast service. Garden pond liners, too! Dripworks. (800) 616-8321. www.dripworksusa.com.

WATER WAND FOR APHIDS TO SPIDER MITES. High-pressure water spray is still the safest and best way to dislodge many insects. \$26.50 delivered. Cecil Stokes, 150 Lowe Dr., Mabank, TX 75147. www.waterwand-usa.com. (903) 451-2027. E-mail: roseman@ultravision.net.

NURSERY STOCK

TREE-SHRUB SEEDLINGS. Direct from grower. Plants for landscaping, wildlife food cover, timber, and Christmas tree production. FREE color catalog. Carino Nurseries, P.O. Box 538AG, Indiana, PA 15701. (800) 223-7075. www.carinonurseries.com.

UNCOMMON AND DISTINCTIVE ORNAMENTAL PLANTS FOR THE DISCRIMINATING GARDENER.

Perennials, grasses, shrubs, trees, vines, and ferns. Visit our Web site at www.bluemoonnursery.com. BLUE MOON NURSERY

PEONIES

BEAUTIFUL JAPANESE/CHINESE TREE PEONIES. Wide variety of exotic, INEXPENSIVE peonies available. Catalog \$3. All plants 3 years old and older. SMIRNOW'S SON'S PEONIES, Dept. AG, 168 Maple Hill Road, Huntington, NY 11743. Phone: (631) 421-0836.

To place your ad here, contact us:

Tel: (703) 518-4700 ext. 13

**E-mail:
npetersen@mitchellpetersen.com**



SYCAMORE CREEK
Handcrafted Copper Garden Furnishings

TRELLISES
ARBORS
PLANT STAKES
HOSE GUARDS
OBELISKS
TORCHES
TABLES

(518) 398-6393
PO Box 16A, Ancram, NY 12502
SYCAMORECREEK.COM

SeedsofItaly.com

Italian Ingredients you grow Yourself
Franchi Sementi, Bergamo, Italy (est. 1783)

SEXY NATIVES & LEGAL EXOTICS seek discriminating gardeners who enjoy unique, rare, good quality trees, shrubs, vines and perennials for fun and mutual pleasure. Catalog \$3 (refundable)

Wilkerson Mill Gardens
9595 Wilkerson Mill Rd. • Palmetto, GA 30268
WWW.WILKERSONMILL.COM



THE PERMANENT METAL GARDEN LABEL

| | |
|-------------------------------|-----------------|
| A - Hairpin Style Markers | 100 For \$29.20 |
| B - Plant/Shrub Labels | 100 For \$10.60 |
| C - Cap Style Markers | 100 For \$24.50 |
| D - Swinging Style Markers | 100 For \$22.40 |
| E - Rose Markers | 100 For \$27.20 |
| F - Tall Display Markers | 100 For \$34.15 |
| G - Tall Single Staff Markers | 100 For \$27.80 |
| H - Flag Style Markers | 100 For \$23.15 |
| J - Small Plant Labels | 100 For \$10.25 |
| K - Tie-On Labels | 100 For \$16.20 |
| M - Miniature Markers | 100 For \$20.15 |

**Special Quantity Prices Available
Prices Include Prepaid Postage**

**INTRODUCTORY OFFER:
1-Each; A,B,C,D,E,H,J and K
With Waterproof Crayon, Only \$4.00**

PAW PAW EVERLAST LABEL COMPANY
P.O. Box 93-AH
Paw Paw, Michigan 49079-0093

HARDY MAINE PERENNIALS
We provide your garden with only the best!!
Many new and hard to find.

Descriptive catalog listing over 1000 varieties \$2.50
www.FieldstoneGardens.com

Fieldstone Gardens, Inc.
620 Quaker Lane
Yassalboro, Maine 04989-9713
PH/Fax: (207) 923-3836

Hortica: Color Cyclopedic of Garden Flora
with Hardiness Zones and Indoor Plants,
8,100 color photos by Dr. A.B. Graf
Special Price \$195

Exotic House Plants: 1,200 Photos, 150 in color, with keys to care, \$8.85
Shipping additional. Circulars gladly sent.

ROEHR'S Co., 1230 Highway 33
Farmingdale, NJ 07727
Tel: 732-938-5111 Fax: 732-938-3075

Learn LANDSCAPING

TRAIN AT HOME for an exciting hobby or profitable career. Start your own spare or full time contracting business, work in the garden/nursery field or landscape your own property. We show you how! Diploma awarded. **FREE BROCHURE** describes opportunities. No Salesman.

WRITE OR CALL TODAY! 1-800-326-9221
Lifetime Career Schools, Dept: PX0151
101 Harrison St., Archbald, PA 18403

Pronunciations and Planting Zones

Most of the cultivated plants described in this issue are listed here with their pronunciations, USDA Plant-Hardiness Zones, and AHS Plant Heat Zones. These zones suggest a range of locations where temperatures are appropriate—both in winter and summer—for growing each plant. While the zones are a good place to start in determining plant adaptability in your region, factors such as exposure, moisture, snow cover, and humidity also play an important role in plant survival. The zones tend to be conservative; plants may grow outside the ranges indicated. A USDA zone rating of 0 means that the plant is a true annual and completes its life cycle in a year or less. Many plants that are perennial in warm climates are grown as annuals in cooler zones. To purchase an AHS Plant Heat-Zone Map for \$9.95, call (800) 777-7931.

A-F

- Acer rubrum** AY-ser ROO-brum (3-9, 9-1)
Aesculus 'Autumn Splendor' ES-kyew-lus (5-8, 8-5)
Amorpha canescens uh-MOR-fuh kuh-NES-senz (2-8, 8-1)
Andropogon gerardii an-dro-PO-gon jeh-RAR-dee-eye (2-7, 7-1)
Asclepias incarnata as-KLEE-pee-us in-kar-NAY-tuh (3-9, 10-2)
Aster novae-angliae ASS-tur no-vee-ANG-lee-ay (3-9, 9-1)
Aster praealtus ASS-tur pree-AL-tus (4-8, 8-4)
Baptisia australis bap-TIZ-yuh aw-STRAY-liss (3-9, 9-1)
Ceanothus americanus see-ah-NO-thus uh-mair-ih-KAN-us (4-8, 8-4)
Cornus sericea 'Cardinal' KOR-nus seh-RISS-ee-uh (3-8, 8-1)
Dalea purpurea DAY-lee-uh pur-PUR-ee-uh (9-11, 12-9)
Diascia barberae dy-ASH-ee-uh bar-BAIR-ee (8-9, 9-8)
D. fetcaniensis D. fet-kan-ee-EN-sis (8-9, 9-7)
D. integerrima D. in-teh-JER-ih-muh (7-9, 9-6)
D. rigescens D. rih-JES-enz (7-9, 9-7)
D. vigilis D. VIJ-ih-lis (7-9, 9-7)
Dodecatheon meadia doh-deh-KATH-ee-on MEE-dee-uh (4-8, 8-2)
Echinacea purpurea ek-ih-NAY-see-uh pur-PUR-ee-uh (3-9, 12-1)
Elymus canadensis EL-ee-mus kan-uh-DEN-siss (3-8, 8-1)
Eryngium yuccifolium ee-RIN-jee-um yuk-ih-FO-lee-um (4-9, 12-1)
Exochorda serratifolia 'Northern Pearls' ek-so-KOR-da seh-rat-ih-FO-lee-uh (4-7, 7-1)
Forsythia 'Northern Sun' for-SITH-ee-uh (4-8, 8-1)

G-L

- Gentiana puberulenta** jen-she-AN-uh poo-BEHR-yew-len-tuh (5-8, 8-5)
Helenium autumnale heh-LEE-nee-um aw-tum-NAL-ee (4-8, 8-1)

- Helioopsis helianthoides** hee-lee-OP-siss hee-lee-an-THOY-deez (4-9, 9-1)
Hibiscus cardiophyllus high-BISS-kus kar-dee-aw-FIL-lus (8-11, 12-7)
H. coccineus H. kok-SIN-ee-us (6-11, 12-6)
H. coultteri H. KUL-tur-eye (8-10, 11-7)
H. denudatus var. involucellatus H. deh-new-DAY-tus var. in-vol-yew-seh-LAY-tus (7-10, 12-7)
H. grandiflorus H. gran-dih-FLOR-us (8-10, 12-8)
H. lasiocarpus H. lay-zee-o-KAR-pus (6-9, 11-6)
H. militaris mil-ih-TAIR-iss (3-9, 9-1)
H. moscheutos H. mos-KEW-tos (6-11, 12-1)
H. moscheutos subsp. palustris H. m. subsp. pah-LUS-triss (5-10, 11-1)
 Unless otherwise noted, hostas generally grow best in Zones 3-8, 9-2
Hosta montana HAHS-tuh mon-TAN-uh
H. sieboldiana H. see-bold-ee-AN-uh
H. x tardiana H. xtar-dee-AN-uh
H. yingeri H. YING-er-eye
H. 'Krossa Regal' (3-8, 8-1)
Iliamna remota ih-lee-AM-nuh ree-MO-tuh (5-7, 8-3)
Kosteletzkya virginica kos-teh-LETZ-kee-uh vir-JIN-ih-kuh (6-9, 11-3)
Lavatera assurgentiflora lav-uh-TEER-uh as-sur-jen-tih-FLOR-uh (8-10, 9-6)
Liatris pycnostachya ly-AY-triss pik-no-STAKE-ee-uh (3-9, 9-2)
Lobelia cardinalis low-BEEL-yuh kar-dih-NAL-iss (2-8, 8-1)
L. siphilitica L. sih-fih-LIH-tih-kuh (3-8, 8-1)

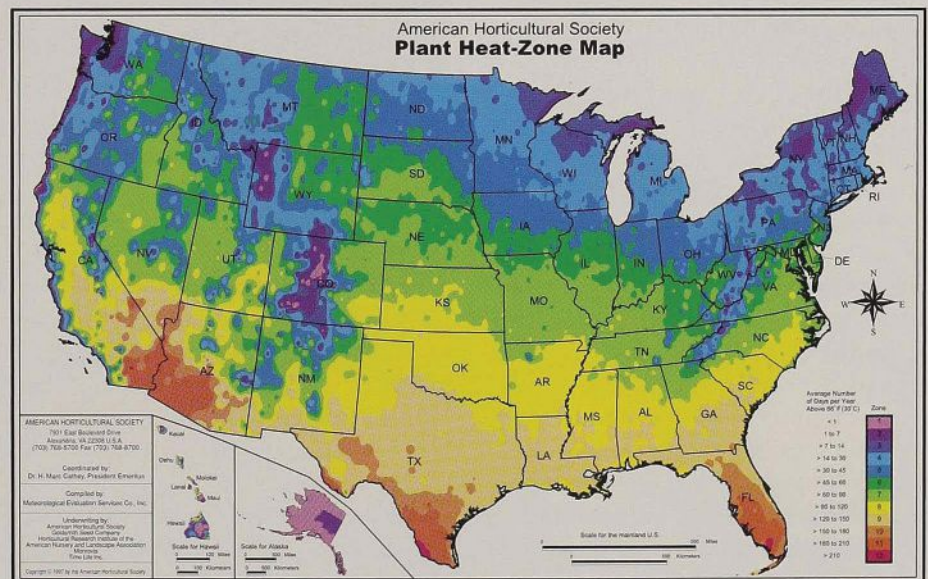
M-R

- Malvaviscus arboreus var. drummondii** mal-vuh-VISS-kus ar-BOR-ee-us var. drum-MON-dee-eye (8-11, 12-8)
Napaea dioica NAY-pee-uh dy-o-EE-kuh (5-7, 8-3)
Panicum virgatum PAN-ih-kum vur-GAY-tum (5-9, 9-1)

- Phellodendron amurense 'His Majesty'** fel-o-DEN-dron am-ur-EN-see (3-7, 7-1)
Pinus resinosa 'Wissota' PY-nus rez-ih-NO-suh (3-7, 7-1)
Prunus nigra PROO-nus NY-gruh (2-7, 8-1)
Rudbeckia subtomentosa rood-BEK-ee-uh sub-toh-men-TOH-suh (4-7, 7-1)

S-Z

- Sidalcea candida** sid-AL-see-uh KAN-dih-duh (4-8, 8-3)
S. hendersonii S. hen-der-SOWN-ee-eye (5-7, 8-2)
S. malviflora S. mal-vih-FLOR-uh (5-9, 8-2)
S. neomexicana S. nee-o-mex-ih-KAN-uh (4-8, 8-2)
S. oregona S. or-eh-GAN-uh (4-7, 7-2)
Silphium laciniatum SIL-fee-um lah-sin-ee-AY-tum (4-9, 9-5)
S. perfoliatum S. per-fo-lee-AY-tum (4-9, 9-5)
Solidago canadensis sol-ih-DAY-go kan-uh-DEN-siss (5-8, 8-4)
S. speciosa S. spee-see-O-suh (5-9, 8-4)
Spartina pectinata spar-TY-nuh pek-tih-NAY-tuh (4-7, 7-1)
Sphaeralcea ambigua sfeer-AL-see-uh am-BIG-yew-uh (6-9, 11-2)
S. coccinea S. kok-SIN-ee-uh (4-9, 11-3)
S. fendleri S. fend-LER-eye (5-8, 8-2)
S. fendleri var. venusta S. fend-LER-eye var. veh-NEW-stuh (5-8, 8-2)
Sporobolus heterolepis spor-OB-o-lus het-ur-o-LEP-iss (3-8, 10-2)
Verbena hastata ver-BEE-nuh hoss-TAY-tuh (3-7, 7-1)
Veronicastrum virginicum ver-on-ih-KASS-trum vir-JIN-ih-kum (4-8, 8-3)
Viburnum 'Emerald Triumph' vy-BER-num (4-7, 7-1)





Notes from River Farm

Thoughts on Trees

by David J. Ellis

Of all man's works of art, a cathedral is greatest. A vast and majestic tree is greater than that.

Henry Ward Beecher

AS EDITOR of a gardening magazine, I'm supposed to be an impartial advocate of plants of all kinds, but I confess to having a soft spot in my heart for trees, especially majestic, grand old trees. I like to think this stems from a childhood spent scrambling up any tree I could find, particularly those bearing fruit.

At less than a half-acre, my current garden is too small for many large trees, but I have planted a copper beech (*Fagus sylvatica* 'Riversii') and a golden larch (*Pseudolarix amabilis*) that I anticipate will be stunning—if I can live long enough to see them at maturity. But what I really crave is five or six acres of gently rolling terrain on which to create my own arboretum.

My arboretum is, for now at least, just a castle in the air, but I can console myself five days a week by vicariously enjoying the grand trees that grace River Farm's grounds. Many of the native oaks, ashes, and hickories along the river bank and the edges of the woodlands that buffer the neighboring properties probably date back to the last time this property was actively farmed or timbered, sometime around the turn of the 20th century.

But closer to the house and outbuildings, the earlier owners of this historic property planted a number of trees that have matured into wonderful specimens. The crown jewel is a massive 200-year-old osage orange reputed to have



This ancient osage orange at River Farm is reputedly a gift to George Washington's descendants from Thomas Jefferson.

been a gift from Thomas Jefferson to the family of George Washington. The cool, dark environment created by this spreading tree provides a microclimate for hundreds of shade-loving plants growing in what is known as Garden Calm and along a long border that fronts a brick wall.

Other notable trees include four southern magnolias, two ginkgos, a tulip poplar, and a row of six venerable white pines. Though past their prime and somewhat gap-toothed, these pines are an

integral component of the distinctive character of River Farm's landscape.

Caring for the existing trees and planting new trees for the enjoyment of future visitors falls on the shoulders of AHS Director of Horticulture Janet Walker, who brings a wealth of experience with trees from her days at the U.S. National Arboretum. "I want River Farm to be known for its trees," says Walker. "While preserving the open look that is so characteristic of River Farm, I'd like to plant regal trees in strategic places to provide shade and comfort for our visitors, and to showcase the diversity of trees that are available to gardeners."

Walker and her staff have already begun to diversify the tree plantings. Among the trees planted recently at River Farm are the American elm cultivar 'Princeton'—which is

tolerant of Dutch elm disease—trident maple (*Acer buergerianum*), and the redbud 'Forest Pansy'.

It seems that almost every time I walk around the grounds now, I see a new tree being planted. Having an opportunity to watch all these trees take shape will be a great help when it comes time to start my personal arboretum.

David J. Ellis is editor of The American Gardener



*Introducing the
Striped Accents™ Collection
from Weeks Roses.*

A whole new way to decorate your landscape with roses.

Now, the best-dressed gardens will be wearing stripes. Find this inspirational collection only at your local independent garden center or nursery. And be sure to visit us at www.weeksroses.com



Another Fine Company of International Garden Products.



Rockin' Robin™



Oranges 'n' Lemons



Sentimental™



Berries 'n' Cream™



Fourth of July™



George Burns



healthiest



hardiest



MONROVIA[®]

Monrovia...

Grower of Distinctively Better plants.

Stronger root systems.

Exclusively formulated organic soil mixes.

Superior patented and trademarked plants.

Meticulously handcrafted topiaries.

Our plants will thrive in your garden.

*Look for our premium plants in our
banded, green container.*



MONROVIA[®]

HORTICULTURAL CRAFTSMEN SINCE 1926

Available at fine garden centers.

For the location nearest you, call 1-888-Plant It!

www.monrovia.com



most
beautiful
plants.

MONROVIA[®]