

The American GARDENER

The Magazine of the American Horticultural Society

January/February 2001

Inspired Plantings for Walls and Fences

\$4.95 www.ahs.org



Bold New Daisies
Best Plant Picks for 2001
Success with African Violets



THE ENGLISH ROOTS OF A BEAUTIFUL GARDEN HAVE REACHED AMERICAN SOIL.

Introducing Thompson & Morgan's
new collection of annuals and perennials.

Favored by English gardeners since 1855, Thompson & Morgan is one of the world's leading suppliers of superior quality seeds. Now, we're proud to present our exquisite line of specially selected flowering plants. Developed to thrive in American soil, they add color, texture and excitement. And they're backed by our 145-year reputation for quality. So whether you're a plant collector or first-time gardener, they'll be the crowning glory of your landscape.

Our new collection is available regionally at selected garden centers and will soon be available nationwide. Look for Thompson & Morgan seeds at garden centers everywhere. For our free seed catalog, call 1-800-526-0467 or visit www.thompsonandmorgan.com

Thompson & Morgan

A Growing Tradition Since 1855.

Another Fine Company of International Garden Products.

© 2000 Thompson & Morgan Ltd. All rights reserved.

Contents

Volume 80, Number 1 • January / February 2001



page 26

FEATURES

26 NEW WAVE DAISIES

BY RAND B. LEE

A rising tide of brightly colored annual and tender perennial daisies from Africa is bringing a new look to American gardens.

32 SUCCESS WITH AFRICAN VIOLETS

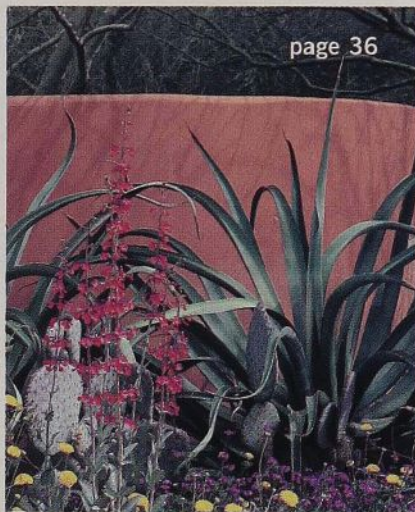
BY MORGAN SIMMONS

America's favorite houseplant will reward you with blooms year round if you follow a few simple rules.

36 INSPIRED PLANTINGS FOR WALLS AND FENCES

BY RITA PELCZAR

These often under-used architectural elements in your garden make great backdrops for colorful and innovative plantings.



page 36

42 THE HOLDEN ARBORETUM

BY CATHEE THOMAS

A majestic natural setting, notable plant collections, and cutting-edge research programs make this Cleveland public garden a required stop for plant enthusiasts.

46 THE TRANSPLANTED GARDENER

BY ROGER JOHNSON

A New Jersey gardener settling into a second home in Florida learns valuable lessons about adaptation.

ON THE COVER: A cottage-style border featuring foxgloves, coral bells, and other herbaceous perennials complements the white picket fence in this Pennsylvania garden.

Photograph by Ken Druse.

DEPARTMENTS

5 AN INSIDE LOOK

6 MEMBERS' FORUM

8 NEWS FROM AHS

Felder Rushing at spring flower show, Southern Living School, AHS awards.

10 SMARTGARDEN™

Understanding cold hardiness.

12 GARDENERS' NOTEBOOK

Disease-resistant redbud, protecting crops with kaolin, Shimizu is new director of U.S. Botanic Garden, Dirr to retire, demise of garden.com, Raven wins science award.

14 OFFSHOOTS

Surviving winters in Montana.

15 GARDENERS INFORMATION SERVICE

Bar plant, hardy hollies, century plant, star anise.

16 HABITAT GARDENING

Community involvement in Zionsville, Indiana.



page 16

18 FOCUS

Best new plants for regional gardens.

51 GARDENING ONLINE

Top Web sites for gardening information.



page 18

53 BOOK REVIEWS

Pamela Harper on gardening, guide to ferns, landscaping solutions.

56 REGIONAL HAPPENINGS

Cloister Garden Series in Georgia.

59 SEASONAL GARDEN GOODS

Italian seeds, heat mat, plant labels, fish-based fertilizers.

61 HARDINESS AND HEAT ZONES AND PRONUNCIATIONS

62 NOTES FROM RIVER FARM

Preparing for spring in winter.



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 2000-2001

CHAIRMAN	James L. Corfield <i>Geneva, Illinois</i>
FIRST VICE CHAIRMAN	Katherine McKay Belk <i>Charlotte, North Carolina</i>
SECOND VICE CHAIRMAN	Valerie L. Thomas <i>Alexandria, Virginia</i>
SECRETARY	William A. Pusey <i>Arlington, Virginia</i>
TREASURER	Charles Henry Smith Jr. <i>Middleburg, Virginia</i>
IMMEDIATE PAST CHAIRMAN	Katy Moss Warner <i>Lake Buena Vista, Florida</i>
	Leslie Ariail <i>Alexandria, Virginia</i>
	Kurt Bluemel <i>Baldwin, Maryland</i>
	Arabella S. Dane <i>Boston, Massachusetts</i>
	John Alex Floyd Jr. <i>Birmingham, Alabama</i>
	William R. Marken <i>Los Altos, California</i>
	Theodore R. Marston <i>Kirkland, Washington</i>
	Egon Molbak <i>Woodinville, Washington</i>
	Carol C. Morrison <i>Palatine, Illinois</i>
	Christine Perdue <i>Middleburg, Virginia</i>
	Albin MacDonough Plant <i>Baltimore, Maryland</i>
	Florence Rodale <i>Emmaus, Pennsylvania</i>
	William Seale <i>Alexandria, Virginia</i>
	Jeanne Otis Shields <i>Greenville, Delaware</i>
	Howard McK. Tucker <i>Alexandria, Virginia</i>
	Susie Usrey <i>Dayton, Oregon</i>
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 • Mrs. Mary Ann Charles • Mrs. Arabella S. Dane • Mrs. Peg Dunnigan • Mrs. William C. Ireland • Mrs. Dudley Morgan • Mr. and Mrs. Harvey C. White **HAUPT ASSOCIATES** Dr. and Mrs. William E. Barrick • Mrs. Betty R. Grisham • Mr. and Mrs. Robert E. Kulp, Jr. • Mr. and Mrs. Ted Marston • Ms. Carol C. Morrison • Mr. Paul H. Pusey • Harry A. Risetto, Esq. • Mrs. Helen H. Spalding • Mr. Howard McK. Tucker • Ms. Susie Usrey • Mr. and Mrs. Bruce Usrey **PRESIDENT'S COUNCIL** Mr. Martin Abel • Mrs. Karin Alexander • Mr. and Mrs. Richard C. Angino • Mr. and Mrs. John Ariail, Jr. • Mrs. Robert Avinger • Mrs. Suzanne F. Bales • Mrs. William Beckett • Mr. Daniel Bell • Mr. and Mrs. Anthony Bigos • Mr. and Mrs. C. William Black • Ms. Sylvia Black • Caroline and Peter Black • Mr. John and Mrs. Doreen Blackburn • Dr. Sherran Blair • Mr. and Mrs. Kurt Bluemel • Mr. and Mrs. Robert L. Bogle • Mr. Bruce Bordine • Mr. and Mrs. James Bradford • Mr. and Mrs. Cason Callaway, Jr. • Mrs. Susan M. Cargill • Ms. Barbara L. Carr • Ms. Sharon B.J. Casdin • Dr. H. Marc Cathey • Mr. Rafael Oliveira Cezar • Mrs. William Cooper • Mrs. Lamont du Pont Copeland • Mr. and Mrs. James L. Corfield • Mr. Edward N. Dane • Mr. Robert Danforth • Count Michel De Ganay • Mrs. Carola M. De Hoz De Ramos Mejia • Mrs. Beverley W. Dunn • Mr. Thomas J. Fannon • Dr. and Mrs. John A. Floyd, Jr. • Ms. Carolyn V. Foil • Mrs. Ethel W. Foley • Mrs. Elaine Gavina and Mrs. Pamela Corbet • Mrs. Suzanne Godec • Mrs. Marion E. Greene • Mr. George Griffith • Mrs. Joseph E. Hall • Ms. Linda D. Hallman • Mr. Gerald T. Halpin • Mrs. Richard W. Hamming • Mrs. Richard W. Hanselman • Dr. and Mrs. W. O. Hargrove • Mr. and Mrs. Max Hartl • Mrs. Shirley Heberton • Mrs. Patsy Hilaire and Mrs. Cots Mengolini • Mrs. George J. Hill, III • Mrs. Elsie Hilliard Hillman • Mr. and Mrs. Mark Holeman • Mr. Claude Hope • Mr. Philip Huey • Mrs. Rosario Moreno Hueyo • Mr. Henry Jameson • Mr. and Mrs. Mauricio Lariviere • Mr. and Mrs. Pierre Laminat • Mr. Joseph Marko • Mrs. Elizabeth Marshall • Mr. and Mrs. Randolph Marshall • Mrs. Frances B. McAllister • Mr. and Mrs. Harold McClendon, Jr. • Ms. Lillian L. McKay • Mrs. Gene 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. Marian M. Nisbet • Mrs. Nancy Palmer • Mr. Michael Panas • Mr. William G. Pannill • Mrs. Polly Pierce • Mr. and Mrs. Albin MacDonough Plant • Mrs. Joseph Poetker • Mr. William S. Poston • Mr. and Mrs. Norris Preyer • Mr. and Mrs. William A. Pusey • Dr. Julia W. Rappaport • Mr. and Mrs. Alfred G. Rindler • Mr. Alan S. Siwy • Mrs. Barbara Saenz Rosas • Mrs. Alicia Sarmiento • Mrs. Louisa S. Sarofim • Dr. and Mrs. Brian Sayer • Mr. Adolf Schoepe • Ms. Maggie R. Seeley • Mrs. Maria Luisa Segura • Mrs. Josephine M. Shanks • Mr. Emanuel Shemin • Ms. Jeanne Otis Shields • Mr. and Mrs. George O. Slaughter • Dr. and Mrs. Ralph E. Smith • Mr. William M. Spencer, III • Mr. and Mrs. Robert Spilman • Mrs. George Strawbridge • Mr. and Mrs. Gustavo A. Tavares • Mrs. Angelica Thays • Mr. John Thomas and Mrs. Valerie Thomas • Mrs. Harry J. Van de Kamp • Mr. André Vierre • Janet and Mike Walker • Ms. Katy Moss Warner • Mrs. Agnes Binder Weisiger • Ms. Jean S. Wells • Mr. John W. White, Sr. • Mrs. Marillyn 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.

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.

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. 127.

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 ADMISSION PROGRAM

The AHS Reciprocal Admission 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 the Web site at www.ahs.org.

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 Haerter 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.

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 EDITOR

Rita Pelczar

COMMUNICATIONS ASSISTANT

Margaret T. Baird

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

WALLS AND FENCES help define what horticulture is—gardening in a controlled environment or enclosed space. This step in providing a precautionary enclosure was a hallmark of the earliest known designed gardens that developed in the area we now know as the Middle East. The English word “paradise” has its roots in the Persian name—*pairidaeza*—for these early gardens.

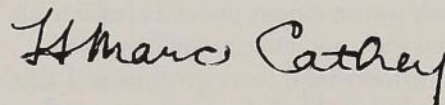
Nearly all of us have at least one wall or fence around or within our personal paradises. For the most part, these serve utilitarian purposes such as keeping animals or children within bounds or providing privacy, but some gardeners put them in to create individual garden “rooms” or to provide support for vines. Regardless of their principal function, walls and fences offer many possibilities for displaying creative plantings. In a photo essay in this issue, Associate Editor Rita Pelczar describes how to make the most effective use of these often underutilized garden features.

Because we all need something to dream about at this hiatus in the gardening year, this issue offers a particularly rich variety of articles about plants. Be sure to make space in your garden for some of the colorful and trendy new daisies, so alluringly described by frequent contributor Rand Lee, that are now making their way into American gardens. And we’ll tell you what the All-America Selections trial judges had to say about which ornamentals and vegetables tested in the last few years have been most successful in different regions of North America.

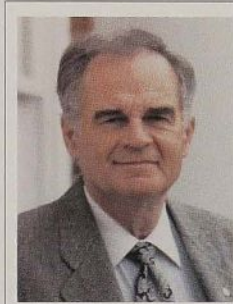
Those of you who have been frustrated with your efforts to grow America’s favorite house plant, the African violet, will want to read Morgan Simmons article on easy steps to keep these beautiful plants happy and to propagate them for friends and neighbors.

We also profile an up-and-coming public garden, the Holden Arboretum in Kirtland, Ohio, just outside Cleveland. The arboretum will be one of the tour stops at the Society’s 2001 Great American Gardener’s Annual Conference, which will be held in Cleveland June 13–16. I hope you will join me and other AHS members and staff there to celebrate the gardening wealth of the greater Cleveland region and to meet this year’s outstanding slate of AHS award winners.

Ever in green,



—H. Marc Cathey, *AHS President Emeritus*



CATHEY PRESENTATIONS 2001: H. Marc Cathey continues to promote the Society’s SMARTGARDEN™ program as part of an ongoing series of lectures at gardening events around the country. Check the list below to see if he will be in your area this year.

March 12-14. Art Blooms at the Cummer. Cummer Museum of Art & Gardens, Jacksonville, Florida. (904) 356-7530. **April 7.** Gardening 2001. Christopher Newport University, Newport News, Virginia. (757) 247-4781. **April 19.** New York Herb Society. New York, New York (location TBD). (914) 234-3124.

Members' Forum

ZONING OUT

I wanted to comment on two plants that were mentioned in separate articles in your November/December issue.

I heartily second your recommendation of *Mahonia aquifolium* in "Berried Treasures." It seems to be very widely adapted, growing nicely here in Reno, Nevada (USDA Zone 5-6), in full sun, with not much water, and exposed to wind, although it does bronze in sunny locations during the winter.

Linum lewisii, mentioned in "The Plants of Lewis and Clark," is actually lots tougher than the Zones 7-9 cited. It thrives in Reno on practically no water, reseeds enthusiastically, and is described in the *Sunset Western Garden Book* as adapted to all western zones.

Catherine Hancock
Reno, Nevada

VERTICALLY CHALLENGED

As a wholesale grower of dwarf conifers for 18 years I enjoyed the article by Susan Martin on native conifers. I did find a slight error in the chart for dwarf conifers relating to the height of *Pinus strobus* 'Sea Urchin'. I have seen the original plant—now probably around 20 years or older—at the University of Connecticut, and it is only two or, at most, two and a half feet tall and wide, not seven, as you have listed.

Otherwise it was a great issue. I also particularly liked the articles on weather trends and berry-bearing shrubs. Keep up the fantastic work.

Jim Smith
Blue Sterling Nursery, Bridgeton, New Jersey

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.

Save-the-Smoke Tree Update

EDITOR'S NOTE: In the "Member's Forum" in our March/April issue last year, AHS member Guy Sternberg, an arborist and author from Petersburg, Illinois, alerted us to a campaign that was underway at that time to save a National Co-Champion smoke tree (*Cotinus obovatus*), which was scheduled to be removed from its site at Purdue University in West Lafayette, Indiana to make way for a new building.

Thanks to the efforts of concerned people from around the country, university officials made the enlightened decision to transplant the tree rather than destroy it. Over the period of October 20 to 21 last year, the tree was moved to a new site at the south edge of the campus. The mammoth task of moving the 60-ton tree and root ball involved a special 200-ton crane and several tractor-trailer rigs. Some overhead utility wires along the route to the tree's new destination had to be temporarily removed.

The photo above shows the tree being lifted by a cable sling onto the heavy trailer used to move it to its new location. The root ball is secured by heavy cables. Now that the tree has been carefully replanted, arborists will closely monitor the tree for the next several years until it has re-established its root system and begins to resume normal growth.



Corrections

The Web site address listed in our November/December magazine for an online version of the USDA Plant-Hardiness Zone map contained a typographical error. The correct address is: www.ars-grin.gov/ars/Beltsville/nal/hardzone/ushzmap.html. A link to this site is available on the AHS Web site (www.ahs.org).

Due to an editorial error, USDA Plant-Hardiness and AHS Plant-Heat zones for sand cord grass (*Spartina bakeri*), a plant mentioned in the article on Bok Tower Gardens in our November/December issue were incorrect. The correct codes are USDA Zones 8-10, AHS Zones 11-5.



2001 Great American Gardeners Annual Conference

Join us for
special
private
garden
tours!

June 13-16 in Cleveland, Ohio

Renaissance Cleveland Hotel, Tower City Center



Stan Hywet Hall and Gardens

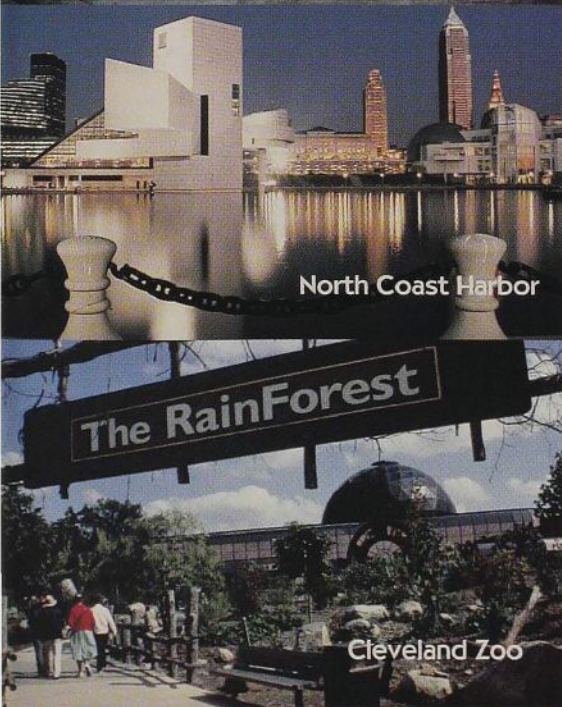


Cleveland Botanical Garden



CELEBRATE gardening excellence at the American Horticultural Society's 2001 Great American Gardeners Annual Conference in Cleveland, Ohio—home of the Cleveland Botanical Garden, Holden Arboretum, Cleveland Metroparks Zoo/Rainforest, and many spectacular private gardens.

You'll be inspired during this special three-day event by horticultural experts—including the 2001 AHS award winners—who will share their professional views and insights in lectures and panel discussions. You'll get a chance to meet other AHS members from across the country and trade a gardening tip or two. And you'll experience the charm of Cleveland's many public and private gardens in exclusive tours. Don't miss your chance to be part of the excitement!



North Coast Harbor

Cleveland Zoo

Information about the speakers and tours scheduled for the meeting can be found on the AHS Web site www.ahs.org.



News

AHS Programs and Events

AHS Presence at Southern Spring Show

FELDER RUSHING, a horticulturist with the Mississippi State University Extension Service, will represent AHS as the keynote speaker on February 28 during the fifth annual "Southern Master Gardener Day" luncheon at the Southern Spring Show in Charlotte, North Carolina. Rushing will be introduced by Katherine Belk, a Charlotte resident and first vice chairman of the AHS Board of Directors.



A specialist in consumer horticulture, Rushing lectures and writes prolifically on garden-related topics, hosts weekly radio and television programs, and appears regularly on HGTV and the Discovery Channel. He is also a member of the AHS National Children and Youth Garden Advisory Panel.

Southern Master Gardener Day will salute the horticultural contributions of Extension agents and Master Gardeners from North and South Carolina, Virginia, Georgia, and Tennessee, all of whom are invited to attend this special event. Advance registration for the luncheon and a show ticket is \$25; after February 9, registration increases to \$30.

The Southern Spring Show runs from February 24 through March 4 at the Charlotte Merchandise Mart. As a special AHS member benefit, the show will offer free one-day admission to members who present a current membership card at the entrance (free admission will not be honored on Benefit Preview Night, February 23). For more information, call (800) 849-0248 or visit the show's Web site at www.southernshows.com.

2001 Southern Living Gardening School

IT MAY BE WINTER now, but southern gardeners are already gearing up for spring. This year, AHS is once again co-sponsoring the Southern Living Gardening School, a series of hour-long gardening presentations by experts from *Southern Living* magazine. Topics include "Setting the Stage for a Magical Makeover," a discussion of basic landscaping concepts featuring favorites from the new Southern Living Plant Collection; "Color Where it Counts," which offers ideas for keeping southern gardens blooming year round; and "Dear Southern Living..." which addresses solutions for common problems faced by southern gardeners.

Many of the South's best-known botanical gardens and resorts are hosting the gardening school, which debuts March 14 at the

Birmingham Botanical Gardens in Alabama. Other school sites include Callaway Gardens in Pine Mountain, Georgia (March 23), and Myriad Botanical Gardens in Oklahoma City (March 31).

For more details about the gardening school, call (888) 992-8243, or look for the complete schedule of schools listed in the March/April issue of *The American Gardener*.

New Gardens Join Reciprocal Admission Program

DID YOU KNOW that more than 100 botanical gardens, arboreta, and conservatories in the United States and Canada offer free or discounted admission and other benefits to AHS members? These organizations are all part of the Society's Reciprocal Admission Program (RAP), which continues to add new participants from all over North America. To take advantage of this important member benefit, just present your valid AHS membership card at participating facilities. In addition to free or reduced admission, many gardens offer AHS members free parking or discounts in their gift shops.

Among the facilities that have recently joined the program are Dothan Area Botanical Garden, Dothan, Alabama; Japanese Friendship Garden, San Diego, California; Washington Park Botanical Garden, Springfield, Illinois; Dyck Arboretum of the Plains, Hesston, Kansas; Frelinghuysen Arboretum, Morristown, New Jersey; Webster Arboretum, Webster, New York; The Dawes Arboretum, Newark, Ohio; and Historic Bartram's Garden, Philadelphia, Pennsylvania.

For a complete list of participants, check the 2001 AHS *Directory of Member Benefits*, or visit our Web site, www.ahs.org.



A scene from Dyck Arboretum in Kansas, new to AHS's RAP program.

award winner IN FOCUS

Paul Ecke Jr. Wins Bailey Award

by Margaret T. Baird

PAUL ECKE JR. is this year's recipient of the American Horticultural Society's prestigious Liberty Hyde Bailey Award, given for his significant and enduring contributions to horticulture through his leadership, business, and administrative skills. Ecke is the retired chairman of the Paul Ecke Ranch in Encinitas,



California—the company largely credited with making the poinsettia such a traditional part of the holiday season, as well as the top-selling potted plant grown in North America.

After taking the reins of the family business from his father in the early '60s, Ecke was largely responsible for shifting the growing of poinsettias from open fields into the controlled environments of greenhouses—a

key improvement that allowed the Ecke Ranch to develop a vegetative cutting business. Where previously poinsettias had to be shipped as dormant mother plants via railroad, the shift to cuttings made air transport possible—and allowed for the export of Ecke poinsettias to growers all over the globe.

Ecke also assembled an expert research staff at the Ranch that improved poinsettias through such developments as extending peak color in the petal-like bracts and increasing the sturdiness of the stems. Although Ecke's son, Paul Ecke III, took over management of the Paul Ecke Ranch in 1991, Ecke continues to foster research priorities for the entire floral industry through his service on multiple advisory boards and green organizations.

"Paul Ecke Jr. has encouraged the cooperative spirit of the greenhouse industry," says H. Marc Cathey, president emeritus of AHS. "He has promoted the sharing of technological information with all growers to raise the performance and safety of floral products, while introducing new forms and colors that expand dramatic floral displays for the holiday season," says Cathey.

After serving two consecutive terms as a member of the AHS Board of Directors, Ecke rotated off the board last year but continues to play an active role on various Society committees. He also serves on boards and committees for a wide range of industry and community groups, including the Ohio Florists' Association, the Society of American Florists, three different California universities, the YMCA, and the Stevens Cancer Center in La Jolla, California.

Margaret T. Baird is communications assistant for The American Gardener.

A COMPLETE LIST OF 2001 AHS AWARD WINNERS is printed below. Additional information about the award recipients can be found in the 2001 *Directory of Member Benefits* and on the Society's Web site (www.ahs.org). All awards will be presented at the Society's 2001 Great American Gardeners Annual Conference to be held June 13–16 in Cleveland, Ohio.

2001 Great American Gardeners Award Winners

Liberty Hyde Bailey Award

Paul Ecke Jr.
Paul Ecke Ranch, Encinitas, California

Luther Burbank Award

Claude Hope (*posthumous*)

Commercial Award—Individual

Brent and Becky Heath
Brent and Becky's Bulbs, Gloucester, Virginia

Commercial Award—Institution

W. Atlee Burpee & Co.
Warminster, Pennsylvania

G. B. Gunlogson Award

Edward Gilman
University of Florida, Gainesville, Florida

Horticultural Communication Award

Doug Jimerson
Studio G, West Des Moines, Iowa

Horticultural Therapy Award

Nancy Chambers
Rusk Institute of Rehabilitation Medicine, New York, New York

Horticultural Writing Award

Jules Janick
Purdue University, West Lafayette, Indiana

Landscape Design Award

Robin Moore
North Carolina State University, Raleigh, North Carolina

Local Horticulture Award

C. W. Eliot and Linda Paine
Kirtland Hills, Ohio

Meritorious Service Award

Nancy Thomas
Houston, Texas

Frances Jones Poetker Award

Rocky Pollitz
Teleflora, Los Angeles, California

Professional Award

Brian Holley
Cleveland Botanical Garden, Cleveland, Ohio

Catherine H. Sweeney Award

Joanna McQuail Reed
Malvern, Pennsylvania

Jane L. Taylor Award

Dirck and Molly Brown
Roots and Shoots School Gardens Lexington, Virginia

Teaching Award

Marihelen Kamp-Glass
North Carolina A & T State University, Greensboro, North Carolina

Urban Beautification Award

Bette Midler
New York Restoration Project New York, New York





SMARTGARDEN™ — Understanding Hardiness

Picking plants that survive winter in your region is a key consideration.

Half the battle of achieving a thriving garden is selecting the right plants. Matching the cultural requirements of a plant with the environment in which it will grow significantly increases the likelihood of successful cultivation. Its preferences for water, light, and soil type and acidity; tolerance of wind, humidity, salt spray, and air pollution; and resistance to diseases and pests it will likely encounter are important factors in plant selection. Some aspects of the environment, such as soil pH, can be adjusted to accommodate desired plants; others such as salt spray near coastal areas or air pollution near a factory or busy highway, may be limiting factors in the selection process.

Temperature—both high and low—is an important limiting factor. Although many other considerations must be made in selecting appropriate plants, identifying those that will tolerate your garden's normal temperature range is a good place to start.

WHAT IS HARDINESS?

Winter hardiness is the ability of a plant to survive the winter conditions in a given location. Cold temperatures are an important feature of the winter environment, but several other factors influence hardiness including soil moisture and exposure to buffeting winds. For example, several perennial pinks (*Dianthus* spp.) tolerate temperatures to -30 degrees Fahrenheit but often fail to survive winters with milder temperatures where soils stay wet. And although a number of broadleaf evergreens thrive in cold temperatures, they may suffer severe desiccation if exposed to dry winter winds.

MAPPING FOR HARDINESS

To assist gardeners with identifying plants that will survive the winter temperatures in their gardens, a system of mapping and coding was necessary. The United States Department of Agriculture (USDA) Plant-Hardiness Zone Map, which was revised and updated in 1990, identifies 11 hardiness zones in Canada, the United States, and Mexico according to the average minimum temperatures experienced. The continental United States ranges from Zone 2, with an average minimum temperature from -50 to -40 degrees, to Zone 10, with low temperatures averaging between 30 to 40 degrees. There is a 10-degree difference in the average minimum temperature between one zone and the next.

Thousands of plants have been assigned USDA Plant-Hardiness Zone codes according to their cold tolerance. By knowing the hardiness zone of your garden it is easy to select plants that are likely to survive there.

Also considered in the rating is any cold requirement a plant may have. Many plants need a certain amount of exposure to cold in order for their buds to break dormancy in the spring. So the hardiness rating is usually expressed as a range from the coldest zone in which the plant will survive to the warmest zone that satisfies its cold requirements. For example, the American holly (*Ilex opaca*) has a USDA hardiness range of 5 to 9; it can withstand average low temperatures of -20 to -10 degrees, and its requirement for cold will be satisfied in regions with average minimum temperatures between 20 and 30 degrees.

COMPLEXITIES OF TEMPERATURE

Winter temperature is not the only factor that affects hardiness, but it is an important one. The influence of temperatures on plant survival, however, is more complicated than simply the low temperature experienced by the plant. Factors such as the rate of temperature drop, the duration of the cold, the amount of temperature fluctuation, and the snow or mulch cover on the soil surrounding the plant also affect its ability to survive winter conditions. And many gardens contain an area that represents a microclimate—it may be more protected by a hedge, or warmed by its proximity to a building or stone wall; or it may be more exposed to prevailing winds, or located in a low-lying frost pocket. The experienced gardener learns to identify these areas and select plants for them accordingly.

USING ZONES TO SELECT PLANTS

Identifying plant hardiness zones is a logical first step in matching a plant's suitability to your site. If a plant is not hardy in your zone, and if you are not willing to take extra measures to protect it—such as bringing it indoors for winter—you should choose another plant.

True annuals—plants that grow, flower, produce seed, and die in a single growing season—have a hardiness zone of zero because they are not around to face the cold winter temperatures, and hardiness is not an issue.

In our next issue, we will explain how the AHS Plant-Heat Zone Map and coding system completes the circle of identifying plants suited to your regional temperature range by offering a guide to adaptability to summer temperatures.

Rita Pelczar, Associate Editor

For a link to an interactive USDA Plant-Hardiness Zone Map, turn to page 6, or visit the AHS Web site (www.ahs.org).

www.SmithandHawken.com

Shop online, by catalog, or in stores

Gardener's Notebook

Horticultural News and Research

NEW DISEASE-RESISTANT REDBUD

A DISEASE-RESISTANT selection of Chinese redbud (*Cercis chinensis*) will be available to gardeners in the near future. Developed by the Floral and Nursery Plants Unit at the U.S. National Arboretum in Washington, D.C., the new cultivar is named 'Don Egolf' in honor of a respected plant breeder who worked at the arboretum for more than 30 years. The new redbud was recently released to commercial growers for propagation.

The tree has a compact, vase-shaped structure, abundant rosy purple flowers, and dark green leaves that turn yellow in autumn. It is sterile, but is easily propagated by cuttings. Most significantly, it has a high tolerance to *Botryosphaeria dothidia* canker, a common, lethal disease that infects native redbuds in many parts of the United States.

Cercis chinensis 'Don Egolf' is hardy in USDA zones 6-9, tolerates heat in AHS Zones 9-3, and is recommended for use as a specimen, part of a mixed planting, or as a focal point at the edge of a wooded area.

Wholesale growers anticipate making the new cultivar available to retailers in spring 2002.



Cercis chinensis 'Don Egolf'

CLAY PRODUCT PROTECTS FRUITS AND VEGETABLES

RESEARCHERS FOR THE U.S. Department of Agriculture in cooperation with Engelhard Corporation of Iselin, New Jersey, have demonstrated that use of processed kaolin—a type of clay—is effective in protecting fruit trees, grapes, and vegetable crops from many diseases, insects, and even sunburn damage. The clay coats the plants with a film that physically obstructs pests, pathogens, and harmful sunrays.

Michael Glenn, who has been working with kaolin for several years at the USDA's Appalachian Fruit Research Station in Kearneysville, West Virginia, says kaolin effectively protects peppers—which are prone to sunscorch—by diffusing ultraviolet wavelengths that can otherwise damage developing fruit.

According to Glenn, kaolin film also blocks infrared rays, which can cause undesirable levels of heat to build up in fruit. Its use has resulted in a tremendous increase in the yield of apples at the research station. During the drought year of 1999 the yield increase was 18 percent.

Kaolin films are also useful carriers for pesticides, providing a more even distribution of chemicals than other carriers, and thus reducing the active ingredient needed by 50 percent or more.

Kaolin is currently available—under the name Surround Crop Protectant—for use against pear psylla, a serious insect pest of that fruit. New formulations for homeowners and expanded applications are anticipated in the near future.

NEW DIRECTOR FOR U.S. BOTANIC GARDEN

HOLLY SHIMIZU was recently appointed the new director of the U. S. Botanic Garden (USBG) in Washington, D.C. Shimizu, who for the last four years served at the managing director for Lewis Ginter Botanical Garden in Richmond, Virginia, began the transition to her new

position in early November, and assumed the USBG post in December.

For Shimizu, the appointment means a return to the Washington area, as well as to the U.S. Botanic Garden where she previously served as the assistant executive director and chief horticulturist from 1991 to 1996, and as public programs officer from 1988 to 1991. "I had this great sense of coming home," she comments.



Holly Shimizu in front of the U.S. Botanic Garden in Washington, D.C.

From Ginter she brings four years of experience of managing gardens in transition, which should serve her well as she prepares for the opening of the botanic garden's renovated conservatory, scheduled for this coming fall.

DIRR TO RETIRE

MICHAEL DIRR, the University of Georgia horticulture professor whose *Manual of Woody Landscape Plants* has become the bible of trees and shrubs for countless gardeners, students, and professional horticulturists, is planning to retire from his teaching duties effective this fall. Dirr, who won the American Horticultural Society's Teaching Award last year, began his academic career at

the University of Illinois in 1972 before moving to the University of Georgia's Athens campus in 1981.

"Thirty years is a long time to do anything," he says. "It's been a great ride, a great journey and there are no regrets, no negatives at all; I just felt it was time." Dirr, who will be 58 by the time he hangs up his teaching hat, says he already has many plans for his time, including "my own garden. I want to be a plantsman again, like I was during my sabbaticals, and I miss having time with my wife." His wife, Bonnie, to whom he's been married since 1969, illustrates his *Manual*. He will doubtless also find time to work on new publishing projects, including updates to the CD-ROMs of plant photographs that are popular accompaniments to his *Manual*.

Dirr says he will need to find a new home for the thousands of seedlings he's been growing at the university, and that his departure won't be an abrupt one because he's serving on several committees and needs to usher his final graduate students through the process. "But I won't be tied to the office," he adds.

EXIT: GARDEN.COM

IT IS TIME to update your "book-marked" Web sites. One of the trend-setting Internet-gardening enterprises, Garden.com, went out of business as of December 31, 2000. "The investment community's wholesale rejection of the e-commerce space played a big role in the decision to close the doors," reports Doug Jimerson, who headed the Garden.com editorial staff.

Garden.com originated in 1995 with the mission of providing "the ultimate destination for gardening information, products and services in the gardening industry." In addition to offering a wide range of plants and gardening-related products, the Web site included an online magazine, a landscape planner, a search engine for obtaining details on a wide variety of gardening topics, access to plant experts, and "chat" groups with other gardeners. Its headquarters were located in Austin, Texas, with offices in Northern California and Iowa.

Though many gardeners considered Garden.com a valuable resource, and it

received numerous awards for both its information service and retail operations, it apparently was not able to turn a sufficient profit for investors.

RAVEN AWARDED NATIONAL MEDAL OF SCIENCE

PETER H. RAVEN, director of the Missouri Botanical Garden and professor of botany at Washington University in St. Louis, was one of 12 distinguished scientists and engineers selected by President Clinton to receive the National Medal of Science. The medal, presented to Raven at a ceremony held December 1 last year, is the nation's highest scientific honor.

Raven is recognized as one of the world's leading authorities on plant evolution and systematics. He has authored 550 books and papers and, with his colleagues, introduced the concept of co-evolution. Under Raven's watch, the Missouri Botanical Garden has become an important national center for the study of plant diversity and conservation. Raven was the 1996 recipient of the American Horticultural Society's Liberty Hyde Bailey Award.



2001 American Horticultural Society TRAVEL STUDY PROGRAM

The Great Gardens of London and the Royal Chelsea Flower Show

May 19-26, 2001



A very special collection of gardens awaits your visit on this trip: Barnsley House, home to Rosemary Verey; Great Dixter, home garden of Christopher Lloyd; and Sissinghurst, created by Vita Sackville-West and Sir Harold Nicolson. Included in the public garden itinerary are the Royal Horticultural Society's garden at Wisley and the Marchioness of Salisbury's Hatfield House. The timing of this program allows inclusion of one of the spring's great horticultural events—The Royal Chelsea Flower Show.

Leading this program for the American Horticultural Society will be AHS Board Member Kurt Bluemel and his wife Hannah. Kurt is the founder and owner of Kurt Bluemel Inc., one of the country's largest suppliers of ornamental grasses and perennials. The Bluemels' warm personalities and love of horticulture are the perfect addition to this exceptional tour.

For complete details about 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.

Offshoots

Winter Mania in Montana

by Raven Kargel

YOU HAVE TO HAVE at least a couple of screws loose if you garden in Montana. It's a sickness that sneaks up on you. It begins with a couple of petunias, then you hear that evil voice deep within say, "Aren't those just pretty?" So you decide to make your flowerbed just a *tiny* bit bigger—and before you know it, every

patch of grass has been taken over by the addictive, pretty things.

This happened to me. Before I knew it, I had surrendered my soul to plants. Now they have taken over my mind; they enter my thoughts constantly.

This craziness really begins to set in around October. The snow begins to fall, the flowers die, and my soul shrivels with them. Then, to top it off, the trees just stand there naked, and the ground becomes a white blanket.

I *try* to pretend the snow is not there. I lie in my lawn chair, where once I smelled the fragrance of lavender and roses, and the lilacs beckoned to my every sense. Then I come to the realization that they are all gone. "No, no!" I cry. "I *can't* face another long, cold, colorless winter!"

December comes, and I begin to call every plant distributor I can find. I play on their holiday spirit and generosity. I beg, "Send me your flower catalogs now. I have to save up! I need time to plan!" Sometimes I elicit enough pity to get a catalog early.

When one of them arrives, I immediately begin coveting every new plant that I see. "I want this one, and of course, that one, and this one's new this year. But how to fit all these new plants in my yard—I just don't have much room left... *Maybe* window boxes, or planters, or maybe we could just get rid of the garage. No one really uses it, anyway!"

In January, I'm ready to take my trusty shovel outside, thinking to myself, "It's only 20 below zero. The soil next to the house has got to be thawed by now." When no one is looking, I whisper to my shovel how much I've missed it. But when I set it to the ground, it just bounces off the tundralike soil.

Thwarted, I toss and turn every night, dreaming of all those gorgeous flowers and how they will look come spring. I draw diagrams, maps, and plans; I know exactly where I will put each plant. It's so perfect it scares me.

February—the tension rises. I look out at my sterile white yard in frustration. I decide to close the curtains and lose myself in



daydreams. When my husband asks, "How was your day?" I answer, "A red rose and maybe a new lilac bush."

I begin to notice that no one calls or comes to visit. Some of my friends have the nerve to accuse me of being obsessed with gardening. Even my own mother refuses to come over if I'm just going to show her the new lilies on page six again.

What is wrong with these people? I mumble to myself. They must need some artificial light!

March arrives. I find myself subscribing to every garden magazine I can find. Whoever invented the garden magazine

probably lives in Zone 10! Someone with a malicious nature who wants to torture us Zone 3 gardeners during our nine months of winter. What kind of sick mind would tease the less fortunate with such lusty, tantalizing pictures of gloriously blooming gardens?

By the time we reach the end of March, I am sure the ground must be thawed. I put my ski coat on, my face-mask, snowpants, and gloves. I kiss my shovel and head outside, ignoring a kill-joy neighbor who yells, "The ground is still frozen!"

With all my force I jump on my shovel. What do you know—it goes into the ground a half an inch. Add a little boiling water, and I'll be digging like a gopher!

April arrives, the ground has finally thawed, and my husband leaves for work. I waste no time calling a construction crew to take down the garage. Now if I can just get all of these flowers planted before my husband comes home, I think deliriously, he will surely see how beautiful they are and won't miss the garage.

May finds my husband has gone to live with his mother. Oh, well—it just means I have more time to garden now. I put in more orders for plants and anxiously anticipate the postman's arrival, because I know he soon will be bringing my mail-order lovelies.

At long last the daffodils and tulips begin to pop up, and I laugh with only a trace of hysteria. I have endured another Montana winter, and am only a *tiny* bit crazier than I was last year.

I laugh in your face, Mr. Winter. I have triumphed!

Raven Kargel is a free-lance writer living in Belgrade, Montana.



Gardeners Information Service

GROWING BAT PLANT FROM SEED

Can you tell me how to germinate seeds from a plant commonly referred to as bat plant (*Tacca chanteri* and *Tacca nivea*)?

E.G., PALM HARBOR, FLORIDA

The seeds of *Tacca*—a genus of 10 or so herbaceous perennials from the subtropical forests of West Africa and Southeast Asia, grown for their handsome foliage and unusual flowers—should be sown in the spring on the surface of a porous soil mix at 70 to 80 degrees Fahrenheit. Keep the seed evenly moist. Bat plants can also be propagated in spring by dividing their rhizomes; be sure each section contains a bud.

The plants require a moist, warm environment, and if grown outdoors they will need some shade. Since they are not hardy—the minimum temperature at which they will survive is 55 degrees Fahrenheit—they are often grown in a greenhouse.

WANTED: HARDY HOLLIES

Are there any hollies that are hardy in USDA Zone 4 or 5 that I might be able to grow in my Minnesota garden?

N.H., EDINA, MINNESOTA

Though most evergreen hollies (*Ilex* spp.) are cold hardy in Zones 6 to 8, a few are hardy in Zone 5, including some of the blue hollies (*Ilex × meserveae*) known for their dark, bluish, evergreen foliage and red berries.

Many deciduous hollies are hardy in USDA Zone 4, including inkberry holly (*Ilex glabra*), so called because of its black fruit. It is pest and disease free and is excellent in mass plantings or for naturalizing.

Another candidate is winterberry holly (*Ilex verticillata*), hardy to Zone 3. This, too, is deciduous but bears red-orange berries that are striking against snow, making it a good specimen plant. There are many cultivars of both the above species, almost all hardy in

Zone 4. Almost all hollies are dioecious—male and female flowers are borne on separate plants—so you will need plants of both genders to produce fruit.

It is often possible to grow plants that are slightly outside of your normal hardiness range by taking advantage of protected areas that create a microclimate. If you try this, be sure to water the plant thoroughly in the fall before the ground freezes, mulch well, and provide protection from wind.

Another precaution that often helps marginally hardy plants survive the winter is to surround the plant with burlap stapled to stakes and fill the burlap enclosure with dry leaves.

REJUVENATING A CENTURY PLANT

I recently moved to Alabama. In the back area of our new lot I found a century plant that is seven to eight feet high and 10 to 12 feet wide. Is this size unusual? Its lower leaves are dried and shriveled—can I remove them? Would it be safe to remove surrounding vegetation?

D.W., MOBILE, ALABAMA

There are about 200 species of century plant (*Agave* spp.), most of which are monocarpic—they die after flowering—but some are perennial. The monocarpic varieties usually bloom after 10 to 12 years—not a century, but a long time to wait for a flower. Some are very large, with the flower stalk reaching 20 feet or more, but some grow no higher than two feet.

Of the 50 or so varieties grown in the United States, most are native to the southwestern states and Mexico. It sounds like you may have *Agave americana*, sometimes called American aloe, the crown of which can reach six to 10 feet, with individual leaves up to six feet long. Because it is monocarpic, it probably won't live very much longer. It will, however, produce a spectacular bloom when its time comes.

Pruning the dried leaves is advisable to improve air circulation and reduce the chance of disease. It is also safe to remove any other vegetation around the plant, but do this in stages to prevent a sudden change of exposure to wind and sun. Spread a two- to three-inch layer of stones or chunky bark mulch under the plant to suppress weeds. Agaves tolerate poor soils and drought conditions, so don't fertilize or water. This is the quintessential low-maintenance plant in its native or an adapted habitat. Just sit back and wait for the show.

A useful and authoritative new reference on agaves is *Agaves, Yuccas and Related Plants: A Gardener's Guide* by Mary and Gary Irish, published last year by Timber Press.

A TREE CALLED STAR ANISE

I used to buy a spice called star anise at the local health food store. I believe it was actually the dried seed head of the plant. What is the "real" name of the plant?

VIA AHS LISTSERVE

Star anise (*Illicium verum*) is a magnoliolike evergreen tree native to Japan, China, and India. Its glossy brown seedpods are star shaped and have a very pronounced aniselike fragrance, hence the common name. In its native environment, the seed pods are burned like incense to scent homes, and they are chewed after meals to freshen breath. The seed pods are also used as a seasoning in Asian cooking and are an ingredient in Chinese five-spice powder.

The tree may grow to 60 feet in height and is hardy in USDA Zones 7 to 9 and heat tolerant in AHS Zones 9 to 7. It bears small, star-shaped flowers with yellow tepals—petals and sepals that are indistinguishable—in early summer.

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.

Habitat Gardening

A Community Makes Room for Wildlife

by Margaret T. Baird

IN THE SMALL SUBURBAN TOWN of Zionsville, Indiana, the road to habitat recovery can be traced to a serendipitous meeting five years ago between two of its residents: one human, the other avian. Lucky for that feathered creature, its sharp-eyed human neighbor was Elizabeth Mueller, the future founder of Habitat C.P.R.—Creation, Preservation, and Restoration—Zionsville’s now celebrated conservation effort. As she was leaving the local mall, Mueller happened to glance into a drainage ditch,

where she witnessed the pathetic sight of a great blue heron—a species seldom seen in Zionsville—foraging for food among bits of trash. Though moved to tears, Mueller was also stirred into action. “I became determined to let people know that we had taken everything from this magnificent bird,” says Mueller, “and we needed to start giving back.”

Although Mueller was already an active environmentalist—as a Master Gardener, she gave presentations pushing for landscaping with more native plants and fewer pesticides—it wasn’t until 1998 that she found the means to rally her entire community around her. That was when she first read about the town of Alpine, California, and its certification as the National Wildlife Federation’s (NWF) first-ever Community Wildlife Habitat. “Alpine’s demographics sounded similar, so I thought, hey, we can do this here in Zionsville,” says Mueller. She registered Zionsville, a small community of 13,000 located just north of Indianapolis, for the NWF program later that year. On September 22, 2000, Zionsville was officially recognized as the country’s second Community Wildlife Habitat.

It Takes a Community

Community Wildlife Habitats are an extension of NWF’s popular Backyard Wildlife Habitats program, started in 1973, which encourages individuals to turn their yards and gardens into wildlife-friendly environments. Landscapes that provide the four basic elements—water, food, cover, and places to raise young—and demonstrate resource conservation practices, such as a reduced lawn area and organic pest control, are certified as official



The backyard habitat of Zionsville residents Judy and Michael Kojetin includes butterfly favorites such as purple coneflower, butterfly bush, and verbena.

Backyard Wildlife Habitats and may display a colorful sign in their yard identifying them as such. To date, there are nearly 27,000 such certified sites nationwide. As offshoots, NWF also certifies Schoolyard and Workplace Wildlife Habitats.

Particularly given the destructive effects of suburban sprawl on wildlife habitat, involving entire communities was a natural next step, says David Mizejewski, manager of the Backyard Wildlife Habitats program at NWF. “The community certification was an effort to broaden the concept of Backyard Habitats, and to make the program more sustainable,” he says. “With more segments of the community invested into it, it will last into the future.”

In the two years since Habitat C.P.R. began, Zionsville has

had more than 100 habitats certified by NWF, including some 85 backyards, three of the town's six schools, several municipal areas and businesses, and all three of the town's nurseries.

At Altum's Horticultural Center and Gardens in Zionsville, Dana Altum has witnessed the positive effects of a communal conservation approach on her customers' plant choices. "People are inquiring more about native plants and making more informed decisions about their landscaping," she says. Popular requests now include native viburnums and other berry-producing shrubs, grasses, and herbaceous perennials that attract birds and butterflies, such as purple coneflower (*Echinacea purpurea*) and swamp milkweed (*Asclepias incarnata*).

Painting the Town Green

Over the long term, Habitat C.P.R.'s overarching goal is to increase the community's awareness of habitat loss and encourage residents to reclaim space for wildlife. Already, that goal appears to have met its mark. "We've exceeded our expectations, because the spirit of volunteerism and pride in this community is very high," says Mueller. "The program has been popular with newer residents as well as those who have been here for 40



Myrene and Darron Brown welcome butterflies to Zionsville with a well-placed feeder and water source, as well as nectar-producing plants.

or 50 years. I recently helped an 89-year-old resident fill out his application and get his backyard certified," she says.

Short-term projects for the Habitat team have included giving presentations about the NWF programs to encourage participation and educate people about the needs of plants and wildlife. "The Zionsville certification is just the beginning of the next phase," says Mueller, who's booked through the spring for presentations all over the Indianapolis metropolitan area. "There's enough momentum now for the program to go on its own."

Margaret T. Baird is communications assistant for The American Gardener.

HOW TO CERTIFY YOUR COMMUNITY

Having your town or city certified as a Community Wildlife Habitat by the National Wildlife Federation (NWF) is probably easier than you might think, and the rewards from sharing the results with friends, neighbors, and visitors to your community—human and otherwise—are naturally priceless. Communities currently working towards certification include South Riding, Virginia; Tukwila, Washington; and Canastota, New York. Reston, Virginia, was certified in December.

While NWF adheres to an organized set of steps towards certification, the process is loose enough to invite plenty of creativity from participants. If you think your hometown has what it takes, here's an overview of the steps involved:

1. Form a Habitat Team.

Pulling together a dedicated group of individuals from several facets of the community is paramount to the project's success over the long term. NWF recommends forming a team of four to seven individuals who represent schools, local businesses, garden clubs, civic organizations and the like.

2. Develop a Vision Statement and Basic Plan of Action.

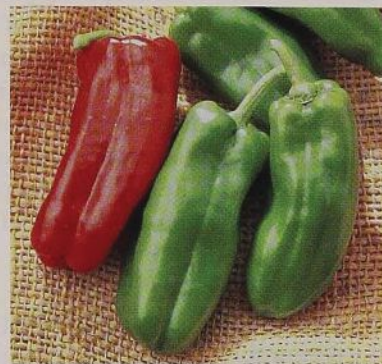
Get your goals down on paper. How will the community meet the criteria for Community Wildlife Habitat certification? What are the biggest environmental challenges your community faces? What are the short-term (one to two years) and the long-term (five years and beyond) goals of the project?

3. Register Your Community Project with NWF.

Because the process from registration to certification can take as long as two to five years, it's best to register your project right from the start so that NWF experts can offer their knowledge and support along the way. To register, complete the Community Wildlife Habitats Registration Form available on the NWF Web site (www.nwf.org), or request a copy by calling the program office at (703) 790-4434. The registration fee is \$25.

4. Certify Your Community.

To become certified, your community must meet the required criteria and complete five elective projects. According to NWF guidelines, "a substantial percentage of community members [must] be involved in the project in a direct way, primarily through the creation of habitats at their homes, schools, workplaces, or other community sites." The Habitat Team sets the community's numeric goals according to its demographics; for example, having at least one Schoolyard Habitat, a certain percentage of single family and town homes with Backyard Habitats, and so on. For elective projects, your community is limited only by its imagination. Suggested projects include holding workshops to help homeowners create habitats, working to make your community's weed ordinances more native plant friendly, and working with local nurseries to make native plants readily available to participants.



Top Regional Performers

Battle-tested flowers and vegetables for your garden

BY RITA PELCZAR

EVERY YEAR the pages of seed catalogs are punctuated with new and improved varieties of plants for home gardeners—plants that resist a particular disease or insect; flowers that last longer in the garden or in the vase, or that sport a different color or form; vegetables that are more productive, taste better, or are better for us.

New is fairly simple to establish, in spite of the fact that sometimes a “new” variety offered by a company is only new to their listings, having been available previously from another source. But “improved” is far more subjective. After all, beauty is in the eye of the beholder, and flavor is, well, a matter of taste. And the

value of a variety’s tolerance to environmental stress—humidity, drought, high/low temperatures, etc.—depends upon the specific environment.

How do you know if a new variety represents an improvement for your garden? The description in the seed catalog is a good place to start. But many seed companies distribute nation-wide and the information is therefore rather generic in nature. An All America Selections (AAS) award winner is a likely bet for reliable garden performance (see “AAS Testing Grounds,” page 23) because it has undergone trials across the country and has been evaluated and recognized as superior—

with respect to certain characteristics—to other varieties of the same plant.

While AAS winners have proven to be well adapted to a wide range of conditions, other varieties that have demonstrated outstanding garden performance in certain—but not all—regions may be among the best plants for the conditions in your garden.

Regional Wrap-up

With this in mind, we asked experienced

Star performers for 2001 include, above, clockwise from left: ‘Aztec Lavender’ verbena; ‘Giant Macaroni’ pepper; ‘Morella’ geranium.

trial judges from regions that represent vastly different growing environments to give us their recommendations for varieties—new in the past few years—that have demonstrated winning garden performances in their particular regions. Here's what the judges had to say.

Northeast

A short growing season doesn't daunt New England gardeners. In many areas, such as Albion, Maine, where the grounds of Johnny's Selected Seeds serve as an AAS Trial Garden, cool summer weather can limit planting options. *Antirrhinum* 'Kim Mix' (USDA Zone 7–9, AHS Zone 9–1), a dwarf snapdragon, however, thrives in the cool summers. There are 11 colors in the mix, six of which have earned the Award of Garden Merit from Britain's Royal Horticultural Society.

Two more ornamentals that stood out in the Albion trials are valued for their late-season display and tolerance to early frosts. *Salvia viridis* 'Marble Arch Mix' (Zones 10–11, 12–1) produces insignificant flowers but showy pink or purple bracts from summer through much of the fall, withstanding light frosts. 'Tokyo Mix' ornamental cabbage (11–12, 8–1) provides color in the garden into December. "The centers of the green heads will begin to turn pink, red, or white once nights are consistently below 50 degrees and will deepen with each frost," says Virginia Kristl, Johnny's flowers program manager.

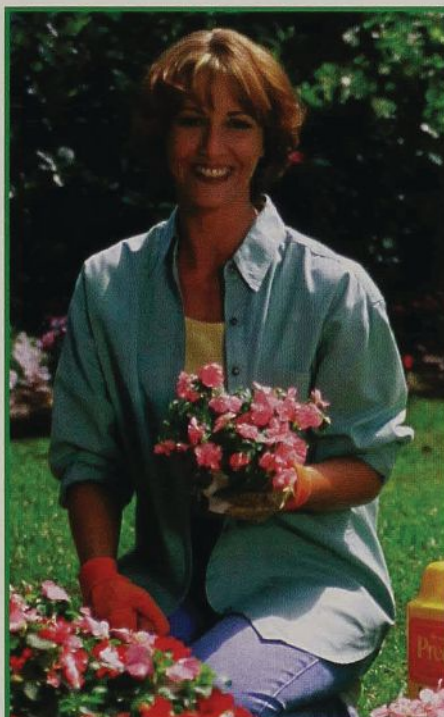
Vegetables that show particular promise for northeastern gardeners include 'Sun Jewel', an Asian melon (0, 12–3) that is sweet, productive, and most importantly, extra early—maturing in 68 days. Early blight is a common problem in the Northeast, so a new F1 (first generation) hybrid tomato currently known only as 'JTO-99197' that displays strong tolerance to the disease is generating some understandable excitement.

Southeast

Hot humid summers are typical in the Southeast and several new ornamental an-



'Sun Jewel' melon



To Laura Johnson, the really beautiful thing about Preen is what she doesn't see.

Like most gardeners, Laura hates weeds. Which is why she loves Preen. With **Preen**, she never even sees them—**Preen** prevents weeds, before they even start, around nearly 200 bulbs, flowers, roses, shrubs, trees and vegetables.

And there's **Preen 'n Green**, which prevents weeds **and** fertilizes your existing plants. There's also new **Preen for Ground Covers**, a unique weed preventer created specifically for use with ground covers, like daylilies, pansies, ice plant and pachysandra.

They couldn't be easier to use—just sprinkle the granules into the soil or mulch, then gently water in. No mess, no mixing, and no weeds for up to three months—guaranteed! And if you already have weeds, it's not too late—simply get rid of your existing weeds and then apply **Preen**.

So if, like Laura, your idea of a beautiful garden view doesn't include weeds, look for **Preen** products at your local gardening retailer. And discover the joys of weed-free gardening.



©1999 Greenview Lebanon PA

www.preen.com

nuals and herbaceous perennials have demonstrated suitability for such conditions. AAS trial judge Susan Hamilton at the University of Tennessee in Knoxville suggests *Melampodium* 'Showstar' or 'Medallion' (11-12, 12-1) for their outstanding tolerance to heat and drought.

A couple varieties of sunflowers (*Helianthus annuus*, 0, 12-1) were showstoppers in the Tennessee trials. "We evaluated and compared 19 different cultivars," says Hamilton. "Pacino' was our favorite at only three feet tall." Another sunflower that stood out was 'Renee's Golden Pheasant', notable for its double, bright orange flowers.

Among the growing ranks of vegetatively propagated annuals, Hamilton cites several varieties of sun coleus (*Solenostemon scutellarioides*, 11-12, 12-1) as outstanding performers in her garden, including: 'Stained Glass', 'Pineapple Queen', and 'Solar Sunrise.' All thrive in full sun.

At Callaway Gardens in Pine Mountain, Georgia, which is home to another AAS Trial Garden, trial judge Helen Phillips took

note of several strong annual varieties, including *Salvia mexicana* 'Limelight' (Zones 9-11, 12-1), which has chartreuse bracts and brilliant blue flowers. *Tithonia rotundifolia* 'Fiesta del Sol' (11-12, 12-1) is a past AAS winner from 2000, which tops out at only three feet and features brilliant orange flowers from summer through fall.

Heather Will-Browne, an AAS trial judge at Walt Disney World's trial gardens in Lake Buena Vista, Florida, highly recommends the multiflora petunia 'Strawberry Sundae' (9-11, 12-1) for gardeners in the South. It has a dense, spreading



habit and bears pale pink blooms marked with red venations that, according to Will-Browne, "give it the appearance of a star in the center of the bloom."

North Central

AAS judge Jim Nau is the trial and varieties manager for Ball Seed Company in West Chicago, Illinois. Among Nau's favorites last season was the vegetatively propagated *Impatiens* 'Fanfare Fuchsia' (0, 12-1), a trailing selection. "This is one of my 'gotta-have' varieties," he reports. It is part of a new class of impatiens that has the deep green foliage of a New Guinea impatiens but a more mounding habit.

Other standouts in the Ball gardens were *Dianthus* 'Purple Bouquet' (7-9, 9-1), and *Verbena* 'Aztec' series (5-11, 12-1); both are well adapted to the Chicago climate.

Pentas 'Butterfly Red' (10-11, 12-1) was selected as an outstanding performer by both Nau and Lori Yanny, an AAS flower trial judge who works at the Boerner Botanical Gardens in Hales Corner, Wisconsin. Yanny likes the entire 'Butterfly' series. The plants are well branched and bloom all season. They thrive in hot, sunny locations.

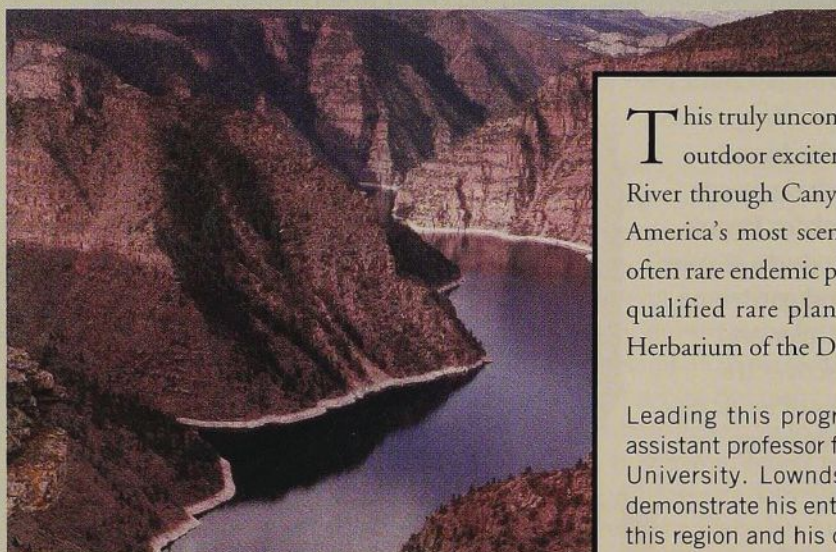
Yanny has found *Asclepias curassavica* 'Silky Gold' and 'Ribbon' snapdragon (both



2001 American Horticultural Society TRAVEL STUDY PROGRAM

The Natural Gardens of the Canyonlands

June 9-17, 2001



This truly uncommon travel/study program for seekers of more rugged outdoor excitement features an expedition by raft down the Colorado River through Canyonlands National Park. Enjoy the splendor of one of America's most scenic wilderness areas while searching for beautiful and often rare endemic plants while in the company of one of the region's most qualified rare plant specialists, Wendy C. Hodgson, curator of the Herbarium of the Desert Botanical Garden in Phoenix, Arizona.

Leading this program for AHS is horticulturist Dr. Norm Lownds, assistant professor for the Department of Horticulture at Michigan State University. Lownds, formerly of New Mexico State University, will demonstrate his enthusiasm for exploring the flora and other wonders of this region and his dedication to "having fun!"

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

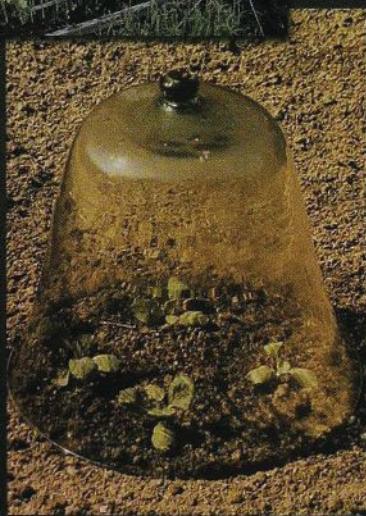
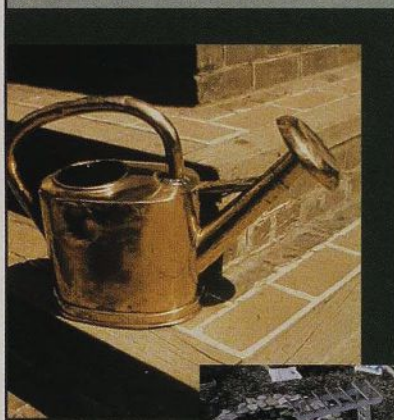
No member dues are used to support the Travel Study Program.

Williamsburg Institute

COLONIAL WILLIAMSBURG

55th
Garden Symposium

PRACTICAL GARDENING
IN A CHANGING WORLD



Co-sponsored by the:



April 22-24, 2001

Williamsburg, Virginia

For registration
information, contact the
Williamsburg Institute:

Registrar, *Garden Symposium*
Williamsburg Institute
Colonial Williamsburg Foundation

Post Office Box 1776
Williamsburg, VA 23187-1776
Telephone (800) 603-0948
Fax (757) 565-8630
tkinhead@cwvf.org

Sources

Seeds for many of the plants listed are available from the following companies. Some of the listings are based on last year's catalogs, and offerings may have changed. Some selections may only be available locally through garden centers.

W. Atlee Burpee & Co. (800) 888-1447. Tomato 'Jolly'; Pepper 'Giant Marconi'; *Angelonia* 'Angel Mist Purple Stripe'.

Johnny's Selected Seeds. (207) 437-4301. Sunflower 'Ring of Fire'; 'Pacino'; Snapdragon 'Kim Mix'; Ornamental cabbage 'Tokyo Mix'; *Salvia viridis* 'Marble Arch Mix'; Tomato 'JTO-99197'; Melon 'Sun Jewel'; *Melampodium* 'Showstar'.

www.germaniaseed.com. *Melampodium* 'Medallion'; *Coleus* 'Solar Sunrise'; *Tithonia* 'Fiesta del Sol'; *Nicotiana* 'Avalon Bright Pink'.

Park Seed Co. (800) 845-3369. *Zinnia* 'Profusion Orange'; *Eustoma* 'Forever Blue'; *Portulaca* 'Margarita Rosita'; *Asclepias* 'Silky Gold'; 'Red Butterfly'; Sweet corn 'Honey Select'; Onion 'Super Star'; *Pelargonium* 'Maverick Star'.

Territorial Seed Co. (541) 942-9547. Pumpkin 'Magic Lantern'; Tomato 'Legend'.

Zones 9–11, 12–1 well suited to the conditions at Boerner. The first bears yellow flowers on tall sturdy stems. 'Ribbon', which is available in several colors and as a mix, is a medium-height snapdragon that doesn't require staking. It blooms all summer and in-fall in Wisconsin.

South Central

Oklahoma City experienced unusually high temperatures last May, followed by a mild June and July that gave way to scorching heat and drought in August. AAS judge Haldor Howard at the University of Okla-

2001 AAS Winners

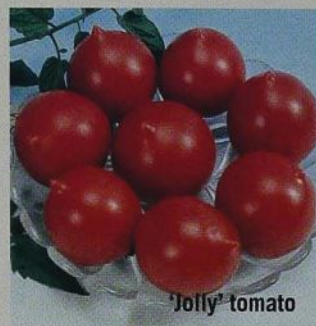
VEGETABLES

■ **'Honey Select' sweet corn**, unlike other supersweet corn varieties, does not need to be isolated from other corn pollen. A mid-season variety, it matures in 79 days.

■ Pink, peach-shaped **'Jolly' tomato** bears its tasty 1½-ounce fruit in clusters on indeterminate vines, ripening in 70 to 75 days from transplanting.

■ **'Giant Marconi' pepper** from Italy produces sweet, tapered, six to eight-inch, green peppers that turn bright red and are great for grilling. Harvest begins about 72 days after transplanting.

■ **'Super Star' onion** is suited for all spring gardens in North America, because it is day-length neutral—it needs neither long nor short days to produce bulbs. Onions can weigh up to a pound or more, maturing in about 100 days.



'Jolly' tomato

FLOWERS

■ ***Portulaca* 'Margarita Rosita'** bears large semi-double rosy pink flowers on compact plants that spread 12 to 14 inches, with a mounding habit. (O, 12–1)

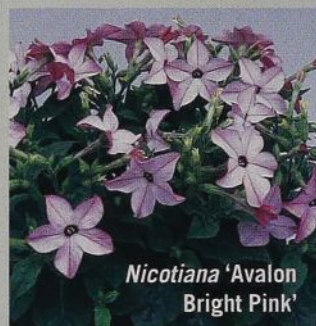
■ ***Eustoma* 'Forever Blue'** bears 2½-inch single flowers on dense, well-branched 12-inch plants. (8–11, 12–1)

■ ***Nicotiana* 'Avalon Bright Pink'** is free flowering, compact, and heat tolerant. It grows to 10 inches and spreads 10 to 12 inches. Good for containers or massing in beds. (11–12, 12–1)

■ **'Ring of Fire' sunflower** (*Helianthus* sp.), grows four to five feet tall and produces bicolored flower heads that are golden at the outer edge, with a vibrant red ring that surrounds a chocolate brown center. (O, 12–1)

■ ***Zinnia* 'Profusion White'** won the AAS Gold Medal Flower Award for 2001. It bears 2½-inch single white flowers on plants that spread 12 to 24 inches. It is resistant to powdery mildew and flowers well into fall. (O, 12–1)

—R.P.



Nicotiana 'Avalon Bright Pink'

homa recommends three new varieties that, he says, "have now shown themselves to be especially solid performers here in at least two very challenging gardening years." *Celosia* 'New Look' (Zones O, 12–1), an AAS winner in 1988, seemed to defy the elements in producing a stunning performance with its intense red flowers and deep burgundy foliage. "The Victory series of vinca (*Catharanthus*, 9–11, 12–1)," says Howard, "demonstrated an impressive tenacity. And *Zinnia* 'Profusion Orange' (O, 12–1) produced a continuous display of flowers and tidy, mildew-free foliage all season long."

Rocky Mountains and the Northwest

At Colorado State University in Fort Collins, AAS judge James Klett conducts his trials under challenging gardening conditions that include high light intensity, periods of drought, erratic weather, and large temperature fluctuations between day and night. Klett has identified several new varieties that are undaunted by such an environment. *Angelonia* 'Angel Mist Purple Stripe' (Zones 9–10, 10–9) proved vigorous, with a pleasing, open growth habit and abundant purple and white flowers.

AAS Testing Grounds Winners

Since 1932, All America Selections (AAS) has provided a means for impartial evaluation of new selections of flowering annuals and vegetables for home gardeners. Judges, approved by the AAS board of directors, are volunteers from the seed industry, universities, and botanical gardens, whose respective organizations have donated space and labor for the trials. There are currently 47 trial gardens throughout the United States and Canada that represent a wide range of growing conditions.

Each year, new selections of flowers and vegetables are sent to a central AAS office by plant breeders, both private and commercial, where they are assigned a number. Using this coding system to assure unbiased evaluations, seed is distributed to the judges for trial.

After the plants have been evaluated, the judges' scores are sent to the AAS central office, where they are tallied. The seed producers of the highest-rated selections have three years to produce sufficient seed to meet market expectations. At that time, the award is announced.

To help promote the awarded varieties and allow home gardeners a chance to see them perform in a garden setting, AAS has developed a network of 200 display gardens throughout the United States and Canada. These are often botanical gardens, but they also include universities, colleges, garden centers, shopping malls, resorts, and state fair grounds. River Farm, the headquarters of the American Horticultural Society, is one of six AAS Display Gardens in Virginia. Visit the AAS home page (www.all-americaelections.org) to find the display garden nearest you. —R.P.

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

SPRAY ON WILT-PRUF®



AND SPRAY ON PROTECTION!

against water stress and winter kill on broad-leaf evergreens. Also great for keeping Christmas trees and wreaths green and healthy looking.

THE PROVEN ANTI-TRANSPIRANT FOR OVER 50 YEARS.

Write for free literature

WILT-PRUF® PRODUCTS, INC.
P.O. Box 469 • Essex, CT 06426-0469

<http://www.wiltpruf.com>
e-mail: wiltpruf@wiltpruf.com

Pelargonium 'Morella' (II-12, 12-1), a zonal geranium, tolerates the high alkaline soils of Colorado, presenting pure red flowers against bright green foliage. The tall snapdragon 'Rocket Cherry' resists lodging—stems falling over—even in the high mountain winds. Petunia 'Storm Lavender' tolerates the region's clay soils, flowering profusely throughout the growing season. and *Verbena* 'Aztec Plum' grows as well in Colorado as it does in Chicago.

Another AAS trial garden is located at the headquarters of Territorial Seed Company in Cottage Grove, Oregon. Diseases often limit successful vegetable production in the Pacific Northwest, but Research Manager Joel Reiten is enthusiastic about 'Magic Lantern' pumpkin (O, 12-2), a medium-large variety that matures in 95 days. "This past fall," says Reiten, "'Magic Lantern' had the highest percentage of ripe fruits and nearly no powdery mildew problems."

'Legend' tomato (Zones O, 12-1), developed by Jim Baggett of Oregon State



University, is very early—maturing in 68 days from transplanting—with large fruit, and most significantly, bears resistance to the fungal disease, late blight. "Here in the Northwest," says Reiten, "many gardeners cannot grow tomatoes because of the disease." With 'Legend', Northwest gardeners may now find growing backyard tomatoes substantially more rewarding.

West and Southwest

Much of the Southwest is drier and warmer than other areas of the country.

Tilly Holtrop is a plant breeder for Goldsmith Seeds in Gilroy, California, as well as an AAS judge. Among her best performers in recent trials was *Zinnia* 'Profusion White', which was awarded an

AAS Gold Medal this year. Another plant that performed particularly well was *Pelargonium* 'Maverick Star'.

Santa Barbara Botanic Gardens in Santa Barbara, California, has been selecting and introducing outstanding cultivars of native California plants for 35 years. One of their recent introductions is *Verbena lilacina* 'De la Mina' (Zones 10-11, 12-5), which is fast growing, drought tolerant, and bears dark purple flowers that attract butterflies. It stays in bloom almost year round in southern California.

Regionally Yours

So regardless of where you live, there are new varieties that will perform like stars in your garden. The key is to approach selection from a regional perspective. Look for varieties that are adapted to *your* environment; you are likely to find them both easy and rewarding to grow.

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

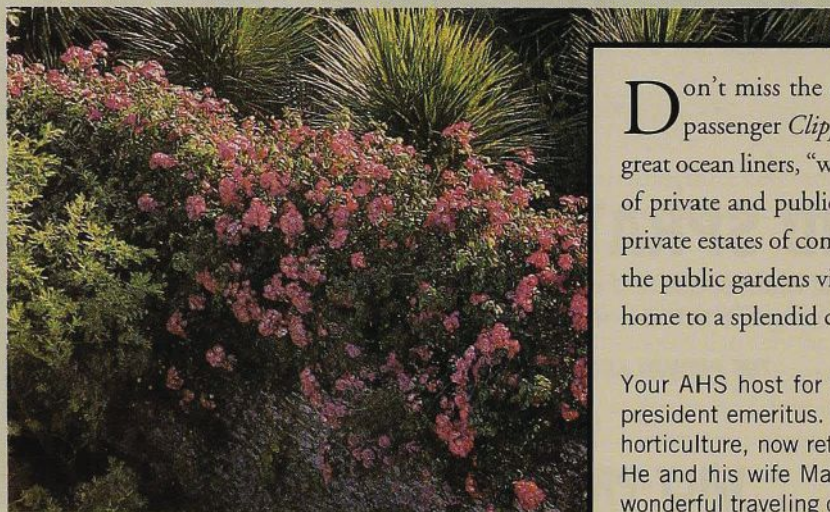


2001 American Horticultural Society TRAVEL STUDY PROGRAM

Coastal Gardens of Iberia, France, and Belgium

May 2-16, 2001

On board the M/V Clipper Adventure



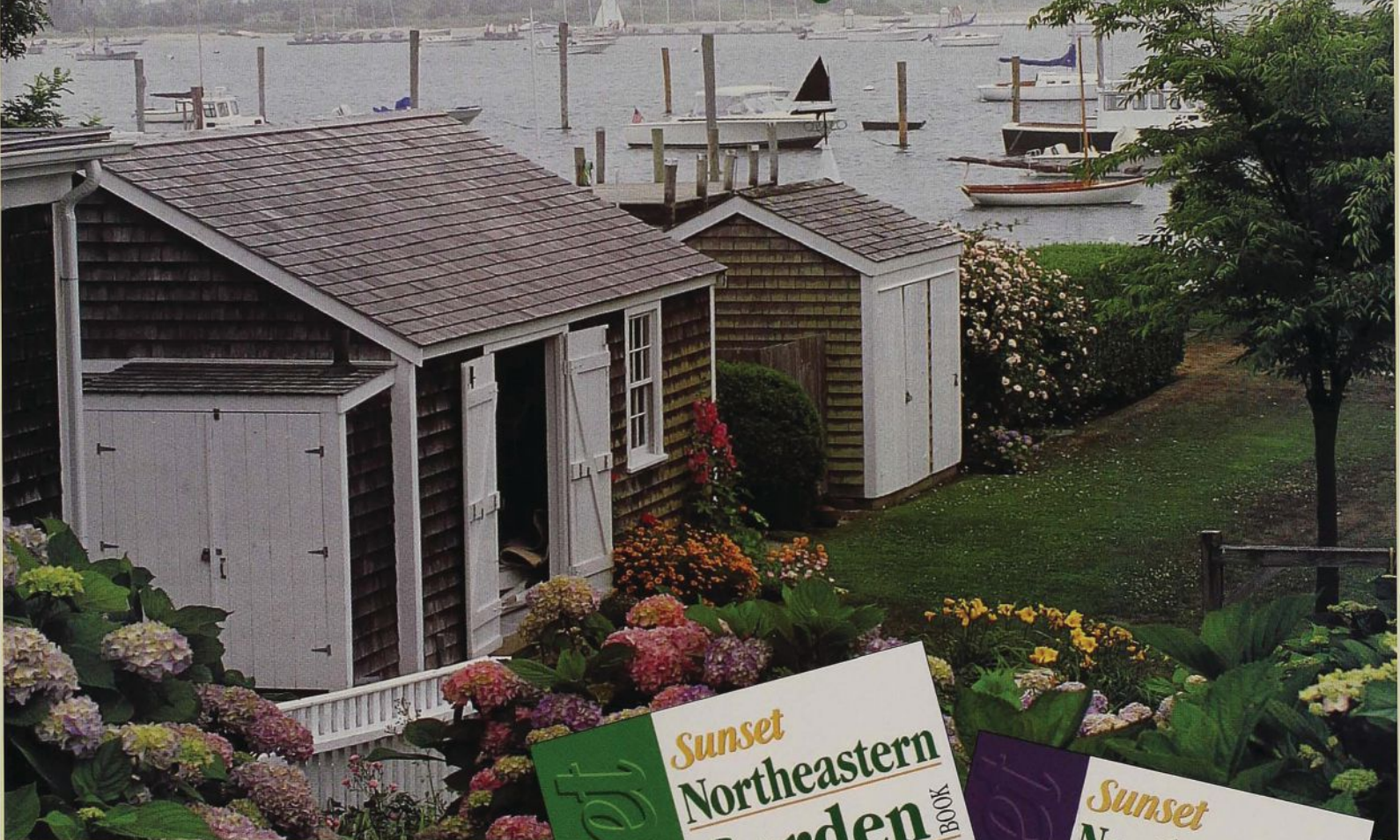
Don't miss the chance to take a European cruise on board the 122-passenger *Clipper Adventurer*—a vessel reminiscent of the days of the great ocean liners, "when ships were ships"—and visit an exceptional variety of private and public gardens along the way. Scheduled stops include the private estates of composer William Christie and Princess Sturdza. Among the public gardens visited will be Lisbon's wooden lath house, Estufa Fria, home to a splendid collection of tropical and subtropical plants.

Your AHS host for this travel/study tour is Dr. H. Marc Cathey, AHS president emeritus. Cathey is a noted author and lecturer in the field of horticulture, now retired after a respected career as a research scientist. He and his wife Mary have visited gardens around the world and make wonderful traveling companions.

For complete details about 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.

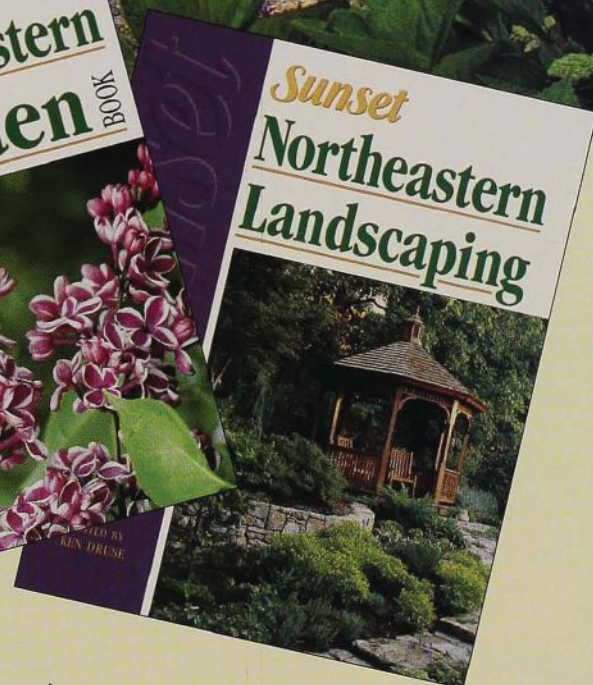
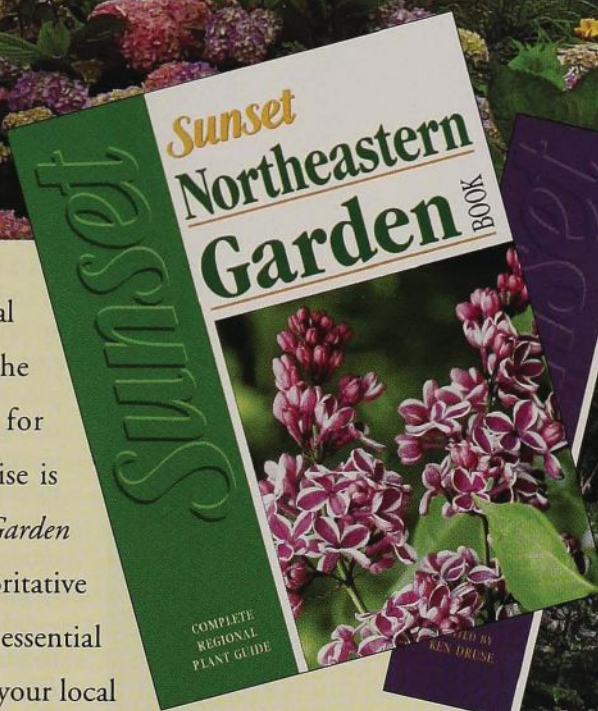
Exclusively Yours



BECAUSE YOU GARDEN in a very special part of the world, take a look at the best books ever produced by and for Northeastern gardeners. Regional expertise is exclusively yours with the *Northeastern Garden Book*. With 560 colorful pages of authoritative gardening know-how, this is the one essential guide to the plant varieties best suited to your local climate and growing conditions.

And for the ultimate in garden design for your region, you simply can't do better than *Northeastern Landscaping*. Your neighbors will thank you.

Sunset . . . planting gardening wisdom for generations.



Sunset
BOOKS

Available at home and garden centers and bookstores. Or visit our website at www.sunset.com.

by Rand B. Lee

NEW WAVE DAISIES

A rising tide of brightly colored annual and tender perennial daisies from Africa is bringing an exuberant new look to American gardens.



THERE IS SOMETHING so universally appealing about daisies that it is with reluctance I admit to finding myself growing less enthralled with some of the daisylike flowers, such as asters, Shasta daisies, coneflowers, and zinnias, most commonly grown in American gardens.

These plants are all worthy in their own right, but let's face it—they're everywhere! Over the last several years I have been delighted to discover a host of annual and tender perennial daisies with African roots that combine delicacy of form with a range of colors as exotic as Kente cloth. Some bloom in blue, mauve, purple, or ice-white. Others glow pale yellow, gold, orange, or rust. Many possess contrasting rings or streaks of color reminiscent of tie-dyed shirts. And most are garbed in soothing gray-green to silver foliage, which is so welcome in the summer border. All are drought tolerant, extraordinarily floriferous, and easy to grow on a sunny, well-drained site.

Most gardeners are familiar with at least a few of these daisies, which belong to genera such as *Arctotis*, *Dimorphotheca*, *Gazania*, *Gerbera*, and *Osteospermum*. Though most of the species are winter bloomers in the Southern Hemisphere and thus tend to flag in regions with hot summers, plant hunters and breeders are bringing us hybrids better suited to temperate gardens than the original species—and even some fairly cold-

The large, bright, and implausibly perfect flowers of *Gerbera* daisies are nearly irresistible to impulse buyers.

DAVID CAVAGNARO



hardy selections. And Sunbelt dwellers are finding that, like snapdragons and pansies, African daisies can be planted in fall for winter and early spring bloom.

DEFINING A DAISY

AT THIS POINT you may be ready to quibble with my use of the term “daisy.” The original daisy is *Bellis perennis*, the humble English daisy, which got its common name from the Old English words for “day’s eye,” in reference to its flowers, which open only in daytime.

But all the African “daisies” listed above are—like *Bellis perennis*—part of the huge plant family formerly known as the composites (Compositae), but now called the aster family (Asteraceae). The 1,100 genera and 20,000 or so species in this family are linked mainly by the distinctive combination of disk and ray florets that make up their inflorescences. In composite flowers, hundreds of tiny tubular “disk” flowers are crowded together in a central receptacle, surrounded by the strap-shaped “petals” of

the ray florets. The receptacle is usually circular in outline but varies in shape from flat—as in asters—to conical—as in coneflowers. And like the English daisy, these African composites—with the exception of *Gerbera* spp.—are diurnal; their flowers open and close in concert with the sun.

NOT YOUR GRANDMOTHER'S DAISIES

AMONG THE MORE popular African daisies are *Osteospermum* and *Dimorphotheca*, two closely related genera of annuals or shrubby evergreen perennials native to grasslands, rocky mountain slopes, and forest verges of tropical and southern Africa and parts of the Arabian peninsula. In fact, the latest word from the taxonomists is that all the species are now to be gathered under the umbrella of *Dimorphotheca*, but you are likely to find plants listed under either genus for some years to come.

Members of both genera are sometimes referred to as African daisies or Cape marigolds. The species are mostly annuals or tender perennials, but some of the

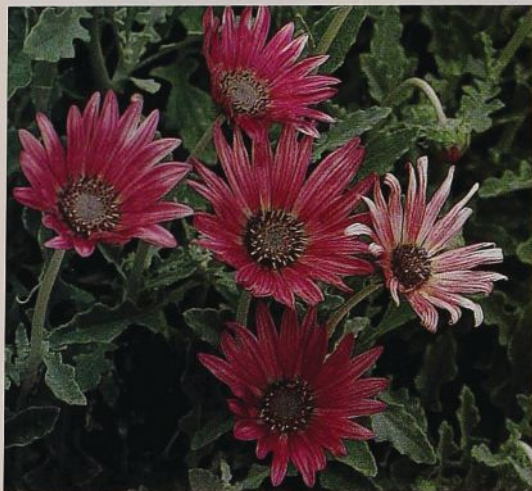
newest introductions are hardier and more heat tolerant than their forebears. Among the most popular are mat-forming selections that are ideal as ground covers or for the front of borders. They bloom in mid-to late summer in temperate regions, but are valued for winter and early spring color in mild climates such as California.

Osteospermum ecklonis (USDA Zones 9–11, AHS Zones 7–1) is a South African subshrub that in the wild can grow two to five feet tall and up to four feet wide, bearing large, gleaming white flower-heads with indigo undersides and metallic blue centers. In cultivation, it flowers at about a foot high the first year from seed and is usually grown as an annual.

A trademarked cultivar, Lavender Mist, was introduced in 1998 through the Plant Select program coordinated by Denver Botanic Gardens and Colorado State Uni-

Top: The flowers of *Osteospermum ecklonis* exhibit a striking combination of gleaming white petals around metallic blue centers. **Above right:** A new osteospermum introduction, ‘Purple Mountain’, is hardy to USDA Zone 6.

versity. This selection, which has proven hardy into USDA Zone 5, opens white and fades to soft lavender pink. Another hardy Plant Select introduction is 'Purple



Mountain', a selection of *O. barberiae* var. *compactum* (Zones 6–10, 8–1).

Dimorphotheca pluvialis is called rain daisy or weather prophet in its native South Africa and Namibia, because its flowers possess the charming faculty of closing when rain is imminent. This upright 12- to 16-inch-tall annual has oval, toothed, or feathery leaves and striking flowers two or more inches in diameter that are borne one per stem. Like those of *Osteospermum ecklonis*, the ray "petals" of the rain daisy are gleaming white above and blue-violet beneath, but the rain daisy petals feature a purplish violet band around the bronze-colored center.

Another annual, *D. sinuata* (sometimes listed as *D. aurantiaca*)—known as star-of-the-veldt in South Africa—is the main parent for a host of compact, mounded hybrid seed strains such as 'Pastel Silks' and 'Salmon Queen', all of which bloom their heads off in shades ranging from white, cream, and buff yellow to apricot, salmon, orange, and dark raspberry. Some have yellow centers, some purple. These selections are often listed under *Osteospermum*.

Osteospermums and dimorphothecas are best massed or grown in groups of at least three plants, so the airiness of their slim stems and the delicacy of their little flowers can be shown to best advantage. Good companions for them are spiky, compact, summer-blooming plants in the pink to violet range, such as *Salvia x sylvestris* 'Mainacht', which blooms indigo-purple; *S. x sylvestris* 'Rose Queen', with

pink flowers and gray leaves; and silver speedwell (*Veronica spicata* subsp. *incana*), with silver, felted foliage and purple-blue wands. These African daisies naturalize effectively in a xeriscape garden to fill in around shrubs or the rigid, ascending leaves of plants such as yuccas and agaves.

They grow best in well-drained loamy or sandy soils and thrive in regions that have cool summer nights. Deadhead them regularly to promote repeat flowering. Fungal diseases such as powdery mildew can be a problem in regions prone to summer rainfall or high humidity.

ARCTOTIS

ANOTHER GENUS of African daisies is *Arctotis*, which includes 50 annual and



Top left: *Arctotis* hybrids such as 'Wine' are valued for the contrast between their silvery foliage and trendy pastel colors of the flowers. Above: *Arctotis venusta* is fittingly known as blue-eyed African daisy.

evergreen perennial species native to rocky or sandy sites in southern Africa. The tender perennial species are cold hardy only to Zone 9, but all the species are fairly heat tolerant. The genus is characterized not only by its cheery dai-

sylike flowers but by attractive gray-green to silvery lobed foliage covered in soft woolly hairs. Like the osteospermums, the flowers of *Arctotis* often close in late afternoon and on overcast days, although this tendency is less pronounced in the newer hybrids.

Arctotis fastuosa, the Cape daisy or monarch-of-the-veldt, is the first arctotis I ever grew and remains one of my favorites. It makes a rather lolling, soft-stemmed, branched, one- to two-footer with stems and leaves entirely covered with a soft white felt. The voluptuous flowers are three to four inches across, with two distinct rows of petals stacked one on top of the other, which is why in the horticulturally incorrect privacy of my back yard I call them "double-decker daisies."

The species has brilliant orange ray florets marked near the base with two distinct bands of color—one black-violet, the other orange-red—that form rings around the violet center. A hard-to-find cultivar called 'Zulu Prince' has creamy white flowers with the same color bands. Bees love the flowers of monarch-of-the-veldt, which possess a soft, pleasing, tangy scent. The plants are sturdy enough to be used as specimens here and there throughout a mixed border and to provide stunning contrast to sword-leaved plants such as irises, crocosmias, and gladioli.

The blue-eyed African daisy or gousblom (*Arctotis venusta*) is a true annual that grows to two feet tall with narrow, hairy, gray leaves that are sometimes toothed and twisted, sometimes feathery. Bluish white flowers with gray-blue centers—each on its own ribbed, wiry stem—bloom from early summer through fall if deadheaded regularly. The ray florets are narrower, more sharply pointed, and slightly more widely spaced than in many daisies; these qualities, combined with their almost metallic luster, lend the blossoms an eerie grace. Try interplanting it with white sweet alyssum (*Lobularia maritima*),



Above: *Gazania* 'Daybreak Yellow' is available as a single color or as part of the mixed-color 'Daybreak Series' **Right:** Introduced in 1998, *Gazania linearis* Colorado Gold is hardy into USDA Zone 5.

mignonette (*Reseda odorata*), and medium-sized white pansies such as *Viola x wittrockiana* 'Clear Crystals White' for a lovely multi-layered effect.

A number of hybrids have been developed through crosses between *A. fastuosa* and *A. venusta*. Like most hybrids, these are considered more vigorous than the species and are likely to provide more consistent garden performance. The hybrids are usually grown as annuals but may overwinter in Zones 9 to 11. Among these are mixed-color seed strains that produce 12- to 18-inch-tall plants. Select color forms from some of these series are also sold individually as plants—these must be propagated from cuttings to perpetuate true flower colors.

If planted in full sun in a well-drained site and deadheaded regularly, arctotises will bloom all summer. In mild climates they can be sown or planted out in late fall for spring and early summer bloom. Because they are drought tolerant, they also make great container plants, combining well with showy-flowered tender perennials such as diascias (*Diascia* spp.). As with osteospermums, downy mildew and other



fungal diseases can be problems in areas with wet summers or high humidity.

TREASURE FLOWERS

THE TREASURE FLOWERS (*Gazania* spp.) are the harlequins of the daisy tribe; I cannot imagine a wilder bunch of daisies this side of Wonderland. A genus of 16 annual and perennial plants native to elevated grasslands and coastal areas of tropical and southern Africa, gazanias are largely represented in horticulture by a host of hybrids, many of which are derived in some way from the sprawling South African species *G. rigens* (USDA 9–11, AHS 12–3). In the wild, *G. rigens* forms dense mats of basal leaves that are green above and whitish beneath. Rising to about a foot in height on short stems,

How to Grow African Daisies from Seed

For spring bloom, seeds of all the daisies profiled here, except gerberas, should be started about six weeks before the last frost date in your area. If you live in USDA Zones 8 to 11, sow the seeds outdoors in fall for winter and early spring bloom.

The seeds of both *Osteospermum* and *Dimorphotheca* sprout in one to two weeks if lightly covered with soil and kept at 70 degrees Fahrenheit. After germination, keep seedlings at 60 to 65 degrees. After hardening them off—gradually exposing them to longer periods outdoors in a protected site—plant seedlings in late spring after danger of frost has passed.

Arctotis seeds sprout effortlessly if barely covered with soil and provided with bottom heat. Plant outdoors only after the soil has warmed up in late spring, or they will sulk. *Arctotis* can also be propagated by stem cuttings in late summer.

Cover gazania seeds with a quarter-inch layer of soil and keep them at about 70 degrees. Given these conditions, the seeds will sprout in one to two weeks. Plant outdoors once danger of frost has passed.

Since most gerberas take six months to a year to bloom from seed, temperate zone gardeners will find it easier to purchase mature plants. Some of the newer seed strains—including 'Dwarf Pandora Mix' and 'Rainbow Mix'—promise dependable germination within 15 to 25 days and bloom within three to six months. Sow the seeds in early winter, uncovered, on a rich, moist, sterile medium at temperatures between 70 to 75 degrees. Once the seeds have sprouted, grow the plants at a cooler temperature—about 60 degrees—with good air circulation and harden them off gradually before moving them outdoors permanently.

—R.B.L.

AFRICAN DAISY CULTIVARS

Below are cultivars and selections of African daisies that are available in the trade. Plants with o (zero) in place of a USDA Plant-Hardiness Zone are true annuals. Plants marked by an asterisk (*) indicate varieties that are available only as plants.

Selection	Flower Color	Height	USDA/AHS Zones
<i>Arctotis</i> 'Harlequin Hybrids Mix'	multicolored	12-18"	9-10, 8-1
<i>Arctotis</i> 'Harlequin New Hybrids'	mixed multicolored	12-18"	9-10, 8-1
<i>Arctotis</i> 'Thompson & Morgan Hybrids'	multicolored	18"	9-10, 8-1
<i>Arctotis</i> 'Apricot', 'China Rose', 'Mahogany', 'Pink'	various color strains	12-18"	9-10, 8-1
<i>Arctotis fastuosa</i> 'Zulu Prince'	white/orange with black center	12-24"	10-11, 11-2
<i>Dimorphotheca pluvialis</i> 'Glistening White'	white with purple center	12-16"	0, 8-1
<i>Gazania</i> 'Daybreak Series'	multicolored	8-10"	10-11, 11-1
<i>Gazania</i> 'Daybreak Pink Shades'	rose with green ring	8-10"	10-11, 11-1
<i>Gazania</i> 'Harlequin Hybrids'	multicolored	15"	10-11, 11-1
<i>Gazania</i> 'Sundance Mixed'	red and yellow with stripes	10-12"	10-11, 11-1
<i>Gazania</i> 'Talent Mixed'	multicolored; silvery foliage	8"	10-11, 11-1
<i>Gazania linearis</i> Colorado Gold	deep yellow	4-6"	5-9, 11-1
<i>Gerbera</i> 'Californian Giants'	single, multicolored flowers	18-24"	10-11, 7-1
<i>Gerbera</i> 'Dwarf Pandora'	single, multicolored flowers	10-12"	10-11, 7-1
<i>Gerbera</i> 'Rainbow Mix'	multicolored	8"	10-11, 7-1
<i>Gerbera</i> 'Rumba Mix'	double, multicolored flowers	18-24"	10-11, 7-1
<i>Osteospermum ecklonis</i> 'Silver Sparkler'	white with blue center	12"	9-10, 7-1
<i>Osteospermum</i> 'Cannington John'	deep purple	6-12"	8-10, 7-1
<i>Osteospermum</i> 'Cannington Roy'	purple, fading to lavender	6-12"	8-10, 7-1
<i>Osteospermum</i> 'Pastel Silks'	multicolored, gold center	12-16"	0, 8-1
<i>Osteospermum</i> 'Salmon Queen'	salmon, orange; dark center	12-16"	0, 8-1

its flowers feature bright, clear orange ray florets marked with black near the base. This creates a rough black ring around the orange-brown center.

Hybridization has shortened the plants and expanded their flower color range to include white, yellow, burnt sienna, and pink—many with contrasting rings or stripes. Easiest to find are mixed color series, but desirable individual color strains are also being offered. Plants bloom most prolifically in spring and early summer and some of the newer introductions bloom through to fall. As with other African daisies, the flowers of gazanias close in cloudy weather or at night. Most of the hybrids will survive light frosts and winter over in milder regions.

A truly hardy selection of *G. linearis*, trademarked as Colorado Gold, was introduced in 1998 through the Plant Select introduction program mentioned earlier. I have not grown this plant, but it is reputedly cold hardy in USDA Zone 5 to 9 and has performed well in the Rocky Mountain region. In areas with hot, humid summers, site it where it will receive mid-afternoon shade.



Give gazanias a warm, dry, well-drained soil in full sun. Do not mulch them, unless it is with crushed rock or gravel; like dianthus, treasure flowers will develop crown rot in conditions of standing moisture. They are admirably suited to the front of the border but are also useful on slopes and in containers. Try them with companions such as the dwarf snapdragon 'Montego Orange Bicolor'; yellow, salmon, white, or scarlet annual phlox (*Phlox drummondii*); and the intense, gentian-blue California bluebell (*Phacelia campanularia*).

GERBERAS

THE GENUS *Gerbera* is the aristocratic arm of the African daisies. It's impossible not to be moved by the color-saturated, three- to five-inch-diameter flowerheads arising from handsome basal foliage on

Gerbera daisies come in an array of colors, including the author's favorite, crayon red.

sturdy, erect or slightly curved stems.

The genus includes some 40 species of clump-forming herbaceous perennial plants native to temperate and mountainous regions of Africa and Asia. Most form a basal rosette of softly hairy leaves from which single flower stalks rise and bloom in succession. Though many of the species are hardy to USDA Zone 8, the hybrids won't take a frost and in most of North America must be grown as annuals or in containers that can be wintered over in a cool greenhouse or cold frame. In general, gerberas are even less tolerant of heat and humidity than the other African daisies I have mentioned.

My main gripe with gerberas is that the potted specimens that tempt me in the supermarket never seem to stay in bloom for very long, and they quickly attract pests such as whiteflies and spider mites or succumb to powdery mildew. Many also take anywhere from six months to a year to bloom from seed, so that method of propagation is not very practical for temperate zone gardeners. Apparently these drawbacks are on the way to being corrected, and some of the newer hybrids are easier to grow, given the right conditions (see sidebar on germination, page 29).

The gerberas available to American gardeners are mostly hybrids of the Barberton daisy (*G. jamesonii*), and *G. viridifolia*. Best are the singles, which come in various shades of white, yellow, orange, pink, and red—including a deliciously saturated crayon red that is my favorite gerbera color—but most are sold as seed strains in mixed colors.

Gerberas are wonderful in tubs interplanted with sweet alyssum (*Lobularia maritima*) or purple and white Swan River daisy (*Brachycome iberidifolia*), another fine daisylike flower from the Southern Hemisphere. They are also lovely massed at the front of the border with blue flax (*Linum perenne*) and annual baby's breath (*Gypsophila elegans*). The huge-blossomed daisies are unparalleled for cutting; for best results, cut them as soon as they have fully opened and make an inch-high slit in the bottom of the stem before placing them in water.

Plant gerberas in full sun in free-draining soils—or a raised bed—making sure the crown of the plant is above ground level. Water deeply and infrequently and

Sources

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

Gazania 'Daybreak Pink Shades'.

Chiltern Seeds, Bortree Stile, Ulverston, Cumbria LA12 7PB, England. 00 (44) 01229-581137. E-mail: www.edirectory.co.uk/chilternseeds/. Catalog \$5 cash.

Arctotis 'Harlequin New Hybrids Mix'; *A. fastuosa*; *A. venusta*; *Dimorphotheca pluvialis*; *Gazania* 'Talent Mix'; *Osteospermum ecklonis*.

Heronswood Nursery Ltd., Kingston, WA. (360) 297-4172. www.heronswood.com. Catalog \$8. (Plants only.)

Arctotis 'Apricot', 'China Rose', 'Mahogany', 'Pink'; *Osteospermum* 'Cannington John', 'Cannington Roy'.

High Country Gardens, Santa Fe, NM. (505) 438-3031.

www.highcountrygardens.com. Catalog free. (Plants only.)

Gazania linearis Colorado Gold; *Osteospermum barbariae* var. *compactum* 'Purple Mountain'; *O. ecklonis* Lavender Mist.

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

Arctotis hybrida 'Wine'; *Osteospermum ecklonis* 'Silver Sparkler'.

Park Seed, Greenwood, SC. (800) 845-3369. www.parkseed.com. Catalog free. *Dimorphotheca pluvialis* 'Glistening White'; *D. sinuata* mix; *Gazania* 'Daybreak Series'; *Gerbera* 'Rainbow Mix', Rumba Mix'.

Stokes Seeds, Buffalo, New York. (800) 396-9238. www.stokesseeds.com. Catalog free.

Arctotis fastuosa 'Zulu Prince'.

Thompson & Morgan, Jackson, NJ. (800) 274-7333. www.thompson-morgan.com. Catalog \$2.25; free if you order seeds.

Arctotis 'T & M Hybrids'; 'Talent Mix', 'Harlequin Hybrids', 'Sundance Mix'; *Gerbera* 'Dwarf Pandora Mix'; *Osteospermum* 'Passion Mix', 'Giant Mix'; *Osteospermum* 'Pastel Silks', 'Salmon Queen'.

fertilize regularly when in active growth, making sure to avoid flushing soil or water around the crown. If you have a suitable place for potted gerberas to winter over—a cool room or greenhouse where they will receive filtered bright light—be sure to keep them just moist and watch out for the pests to which they are prone.

BEDAZZLING DAISIES

LEAVE IT TO AFRICA, mother of so many of our horticultural treasures, to breathe life back into the humble daisy

and enrich it with all the colors of an African sunset. And just in case all this profligacy of hue and bloom makes you a bit nervous, remember: Africa's new wave daisies will not only add an exotic touch to your gardens, they can still, as daisies, be counted upon to tell you if your amour loves you or loves you not.

A resident of Santa Fe, New Mexico, Rand B. Lee is president of the North American Cottage Gardening Society. His most recent book is Pleasures of the Cottage Garden, published by Friedman/Fairfax.

SUCCESS with AFRICAN VIOLETS

America's favorite houseplant will reward you with colorful blooms year round if you follow a few simple rules.

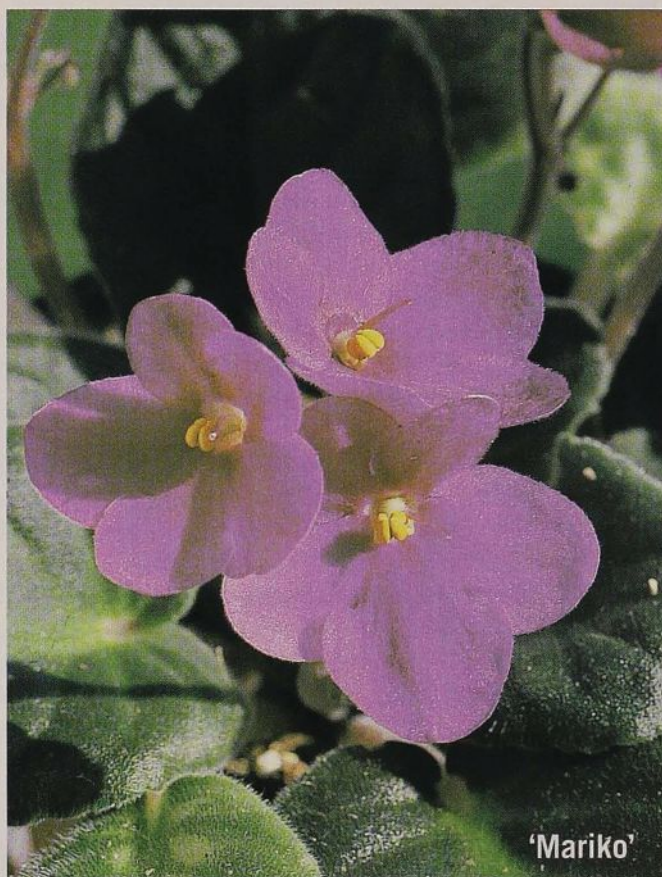
BY MORGAN SIMMONS

I DOUBT IT will surprise you to learn that the African violet is America's most popular houseplant. With their fuzzy, oval leaves merrily circling a cluster of dainty blooms, African violets are tough to resist and are often an impulse buy at the supermarket or garden shop. Many people also get them as passalong plants from friends. But these charming plants are among the most misunderstood and mistreated of plants, and every year countless African violets are consigned to the compost pile. For those of you struggling with one now or willing to give these rewarding plants another try, I offer this short primer in African violet culture.

FROM TROPICAL FORESTS

THE NAME "African violets" is a source of confusion to some, because they are not true violets but rather belong to the genus *Saintpaulia*, a member of the gesneriad family (Gesneriaceae). They are African in origin, however, hailing from tropical woodlands in the region of eastern Africa that is now Tanzania and Kenya. They were first brought to the attention of European gardeners in 1892 by Baron Walter von Saint Paul, a German who discovered them growing on his vanilla plantation. The original single, lavender-flowered plants were reminiscent of the common violet often seen in nosegays, and thus were dubbed African violets.

Knowing something about their native habitat is essential to successful African violet cultivation. According to violet expert



Jon C. Lovett, in the wild, African violets are exposed only to flecks of sunlight breaking through the rain forest canopy. They grow in dappled shade on damp rocks and tree boles, where just enough organic matter has accumulated to support roots. Thus the two basic elements for optimum growing conditions are filtered light and good drainage.

LIGHT—NATURAL AND ARTIFICIAL

MANY PEOPLE satisfy the first requirement by growing their violets on windowsills; an eastern or northern exposure is best. If these conditions are not available, a sheer curtain can be used to filter light from a south- or west-facing window. Many serious growers use fluorescent tubes mounted on a light stand. The exact combination of bulbs types—Gro-lux, cool white, etc.—varies from grower to grower. Typically, lights are kept on for 10 to 12 hours per day—longer for reluctant bloomers. I use one cool white and one Gro-lux bulb per 48-inch fixture. No matter what the light source, it is important to turn the plants regularly to assure good symmetry of growth.

If your plants do not receive sufficient light, you are likely to see few if any blooms develop, the petioles (leaf stems) tend to elongate, and leaves become darker and smaller in size. If you provide your plants with too much light, leaves become pale or bleached, center leaves appear stunted and twisted, and outer leaves may curl downward.

DRAINAGE AND HUMIDITY

TO ACHIEVE proper drainage, use a light, soilless mix. A good basic medium includes milled peat moss, vermiculite, and perlite in a ratio of three to two to one. Prepackaged potting soils formulated for growing African violets are available, but these are improved by the addition of more perlite. To maintain a pH near 6.5, at which African violets thrive, you may need to incorporate some ground dolomitic limestone into the mix.

Maintaining the proper humidity in the growing areas is also critical. There are a variety of ways to add moisture, including using a humidifier, particularly in the dry winter months; capillary matting for those who use a wick system to water; or the time-tested solution of elevating the pots on stones or pebbles in a shallow tray of water. Ensuring good air circulation around African violets will head off problems such



as powdery mildew. This can be accomplished by allowing space between plants and placing them in a room where a ceiling or rotating fan can be left on slow speed.

FOOD AND WATER

A CONSTANT-FEED regimen provides nutrients in small doses each time you water the plants and will en-

sure your plants get the nourishment they need. Use a fertilizer formulated for African violets or mix approximately a quarter teaspoon of a complete fertilizer containing a higher ratio of phosphorus—such as 15-30-15 or 12-36-14—to a gallon of water. Look for a fertilizer that has a low urea count in its nitrogen formula. I add a drop of SUPERthrive®, a commercial plant vitamin and hormone supplement, to each gallon of fertilizer mixture.

Water only often enough to keep the growing medium slightly moist, never soggy. Since African violets are sensitive to temperature extremes, set the water out overnight so it reaches room temperature before use. Some growers prefer a wicking system, where water is drawn up to the soil from a reservoir. To rid the soil of excess salts that may build up over time, flush it regularly. This can be done with tepid distilled water by placing the pot in a sink and watering the soil until the water runs out the bottom.

GROOMING AND REPOTTING

THOUGH ONE OF THE MOST common tips for growing African violets is to avoid wetting the leaves, from time to time your plants will benefit from a good bath with tepid distilled water. Just be sure excess water is blotted from the crown of the



Resources

The African Violet Society of America (AVSA), with more than 300 chapters worldwide, provides an excellent window into the world of the genus *Saintpaulia* through its bimonthly publication the *African Violet Magazine*. Membership in the African Violet Society of America (\$20 per year) and the location of an affiliate club in your area can be obtained by contacting AVSA headquarters: 2375 North Street, Beaumont, TX 77702. (409) 639-4725. www.avsa.org.

2001 AVSA National Convention will be held from May 27 to June 3 in the Chicago area at the Sheraton Arlington Park Hotel, Arlington Heights, Illinois. The displays will be open to the public on Saturday, June 2. For further information, call (409) 839-4725 or visit the Web site: www.avsa2001.org.

African Violets: Gifts from Nature by Melvin J. Robey. Cornwall Books, Cranberry, New Jersey, 1988.

African Violets: The Complete Guide by Joan Hill and Gwen Goodship. The Crowood Press, Marlborough, England, 1995.

plant—where the above-ground portion of the plant meets the soil—immediately afterwards and that the plant is not returned to full light until it is dry. In intervening weeks between washings, brushing the leaves—gentle strokes away from the petiole or stem—with a soft natural-bristle brush will keep the plant clean and add luster to the foliage.

The Joy of Growing African Violets

Growing African violets is like eating potato chips—one is never enough! Once you get the knack of African violet cultivation, you may soon find your windowsills insufficient to accommodate your growing collection. The estimated 40,000 or so cultivars include a wide



choice of colors, bloom and leaf formations, and growth habits: standards, semi-miniatures, miniatures, micro-minis, and trailers. Standards make handsome show plants and can have a leaf span up to 24 inches. Big does not necessarily mean better, although I am presently drawn to these cultivars. People with limited space and those who like to grow a large number of violets take delight in semi-miniatures—not to exceed eight inches in diameter—and miniatures—not to exceed six inches.

The cultivars are derived from 21 wild species, some discovered as recently as 15 years ago. Many violet fanciers are becoming increasingly interested in species violets. Important collections of species violets include the Mathier Collection at Iowa State University and the Uppsala Botanical Gardens collection in Sweden. I have had very good success with *Saintpaulia orbicularis* var. *purpurea*, a prolific bloomer that thrives in my cool growing space.

ALL COLORS BUT ELUSIVE YELLOW

African violet flowers range in color from the blues often associated with violets to vibrant reds and elegant whites. There are delicious pinks and all manner of shades in between, as well as variegations and stripes. Petals may also be streaked or spotted with a deeper shade or an entirely different color; plants that display this type of bloom are called “fantasies.”

The one color that has eluded and frustrated African violet breeders is yellow. “The yellow African violet has been both a joy and a curse,” writes Jeff Smith, an African violet expert who chairs the science department at Indiana Academy in Muncie. “‘Joy’ because this long looked-for color was finally obtained in the early 1990s. ‘Curse’ because it has been a very difficult and disappointing trait for hybridizers to work with. The flowers are usually only partly yellow...are often distorted in shape, don’t last long when open, and are predisposed to browning.” Smith suggests that genetic engineering offers new hope for the development of a yellow violet.

In the meantime the thousands of African violet cultivars available today should offer enough choice to keep you busy.

—M.S.

Other regular housekeeping chores include removing spent blossoms, suckers, and tired outer leaves, and repotting plants as necessary—at least once a year. Plastic pots are the best containers since they do not absorb moisture like clay. African violets thrive when they are somewhat pot-bound, so the ratio of plant to pot is important; the mouth of the pot should be approximately one third the diameter of the leaf span. Thus a three-inch pot is the appropriate size for a nine-inch plant.

When plants need repotting, use a fresh growing medium and either a newly purchased pot or one that has been soaked in a disinfectant solution—one part bleach to 10 parts water—for at least 30 minutes. To repot, add enough soil to the new container to ensure the root ball will sit approximately a quarter inch below the rim of the pot. Place the violet in the container and add fresh growing mixture—do not pack the growing mixture around the roots. Instead, tap the bottom of the pot several times on a flat surface to settle the growing mixture sufficiently to support the plant. Water thoroughly. If the plant has produced a “neck”—an extended trunk without leaves—remove the bottom portion of the root ball and, after gently scraping the neck with a sharp knife, bury the remaining roots and neck in fresh growing mix.

DEALING WITH PESTS AND DISEASES

THE BEST CONTROL METHOD for any pest or disease is prevention. When introducing a new plant into your collection, keep it isolated from the other plants for at least six to eight weeks, and check it regularly for signs of pests and diseases. But even the most fastidious grower who practices good plant hygiene encounters problems from time to time. One of the most common pests to plague African violets is blossom thrips. Infested flowers often fail to open completely, are distorted in shape, or drop prematurely. Frequently, pollen grains spill from the anthers in the process of the thrips’ feeding and are visible on the flower petals. Orthene® spray will help rid your plants of a thrip infestation, though repeated applications may be required. Neem—a botanical insecticide and repellent—is an effective preventative.

A more serious problem is cyclamen mites, tiny pests that usually attack the tender new growth in the center of the crown, resulting in a grayish, hairy, stunted, and distorted center. Strong chemicals are usually needed to kill these invaders, but sometimes multiple applications of an insecticidal soap at three- to four-day intervals can be effective. If a plant does not respond to treatment, don’t hesitate to discard it from your collection before the problem spreads.

Powdery mildew, referred to earlier, can often be controlled by the use of household Lysol® spray. When spraying, hold the can at least 18 inches away from the plants, because the aerosol propellant can freeze the leaves. Fungicides such as Benomyl or Physan can be used for particularly recalcitrant cases, but be sure to follow manufacturers’ directions for safe use.

A retired church musician, Morgan Simmons has been growing African violets for almost 40 years. He is an advanced judge for the African Violet Society of America and serves as president of the Lake Shore African Violet Society in suburban Chicago, Illinois.

STARTING A NEW AFRICAN VIOLET PLANT FROM A LEAF

One of the charms of growing African violets is the ease with which they can be propagated. Here is one easy way to increase your own collection or share a favorite variety with a friend.

—Rita Pelczar, Associate Editor

WHAT YOU'LL NEED:

- Scissors
- Razor
- Small pot
- Potting medium
- Pencil or dibble
- Clear plastic bag and stakes
- OR clear cup



1. Select a healthy leaf from the middle row of a mature plant—older, outer leaves may lack vigor; young center leaves lack maturity. Remove the leaf with sharp scissors, leaving at least 1½ inches of the petiole (stem).



2. Re-cut the petiole with a sharp razor to ensure a clean surface at a 45-degree angle that tapers away from the blade.



3. Fill a small pot with a moistened potting medium. Make a hole with a pencil or dibble and insert the petiole. Firm the medium around the petiole.



4. To speed up rooting and plantlet formation, cover the pot with a clear plastic tent supported with stakes, or use an inverted clear plastic cup. Remove the covering occasionally to provide air circulation and reduce the risk of disease.



5. Place the potted leaf in indirect light. Water as necessary to keep the medium slightly damp, but do not overwater. Roots usually form in six to eight weeks and plantlets begin to appear about two months later. To encourage plantlet formation after roots have developed, you can cut the mother leaf in half.

6. Once plantlets appear, begin to fertilize with a dilute solution. As plantlets develop, gradually remove the plastic covering. When plantlets have a minimum of four leaves and are 1½ to 2 inches tall, remove the mother leaf by cutting it away at the base of the petiole. Variegated plantlets may need a bit more time before removing the mother leaf because they do not contain as much chlorophyll as all-green leaves. Transplant the new plant to a larger container when the roots fill the pot.

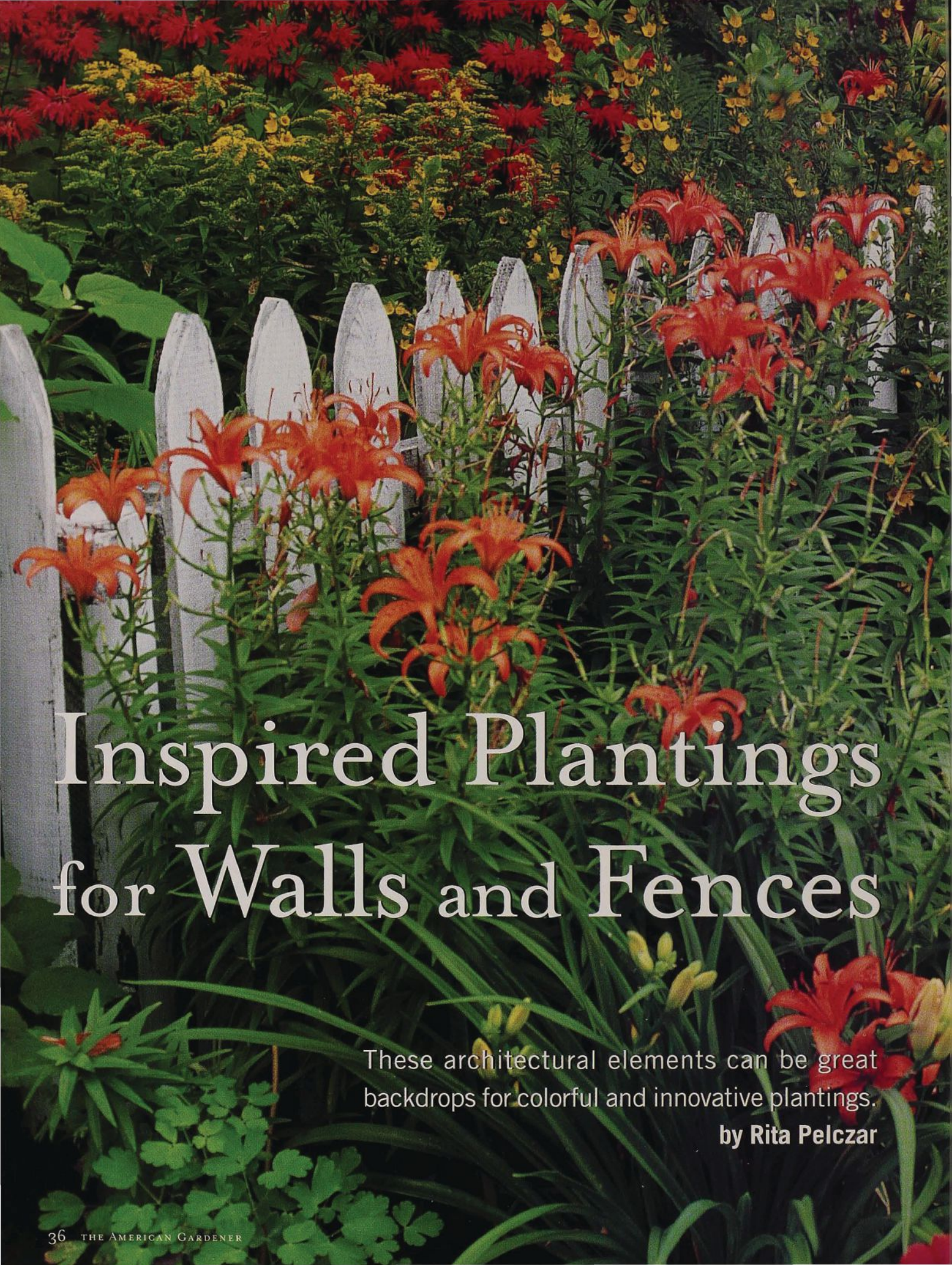
STARTING AFRICAN VIOLETS IN WATER

African violets can also be easily rooted in water:

Fill a small dark colored container with water, leave about an inch of head space.

Cover the surface of the container with aluminum foil with a small central hole. Insert the petiole through the hole so the blade is supported by the foil and the petiole barely touches the water. Add water as necessary to maintain this level. When roots reach about a half inch in length, pot the leaf in a growing mix.






Inspired Plantings for Walls and Fences

These architectural elements can be great
backdrops for colorful and innovative plantings.

by Rita Pelczar



A melange of brilliant perennials, including beebalm (*Monarda didyma*), goldenrod (*Solidago* sp.), *Lilium* 'Enchantment', and butterfly weed (*Asclepias tuberosa*) shows up to advantage along this white picket fence.

WITH APOLOGIES TO ROBERT FROST, it seems to me that good fences make good gardens. And the same can be said for walls. From rural pastures to bustling cityscapes, walls and fences separate spaces, define boundaries, and provide some protection or privacy for the areas they enclose. And in a garden they do much more: Contrasting with the growth and seasonality of the plants, walls and fences confer a sense of solidity and continuity. They also offer a variety of growing options: sturdy supports for vines or espaliers, backdrops for plants with distinctive architectural profiles, or varying growing levels that afford plants the space to cascade, ramble, or creep as their wandering habits dictate.



In this Phoenix, Arizona, garden designed by Stephen Martino, a serpentine wall of sunset orange, planted with a row of acacia trees, reflects the warm desert environment. The orange adobe offers a dramatic backdrop for the sensuously curving leaves of a large agave and the vivid blooms of a variety of desert ephemerals.

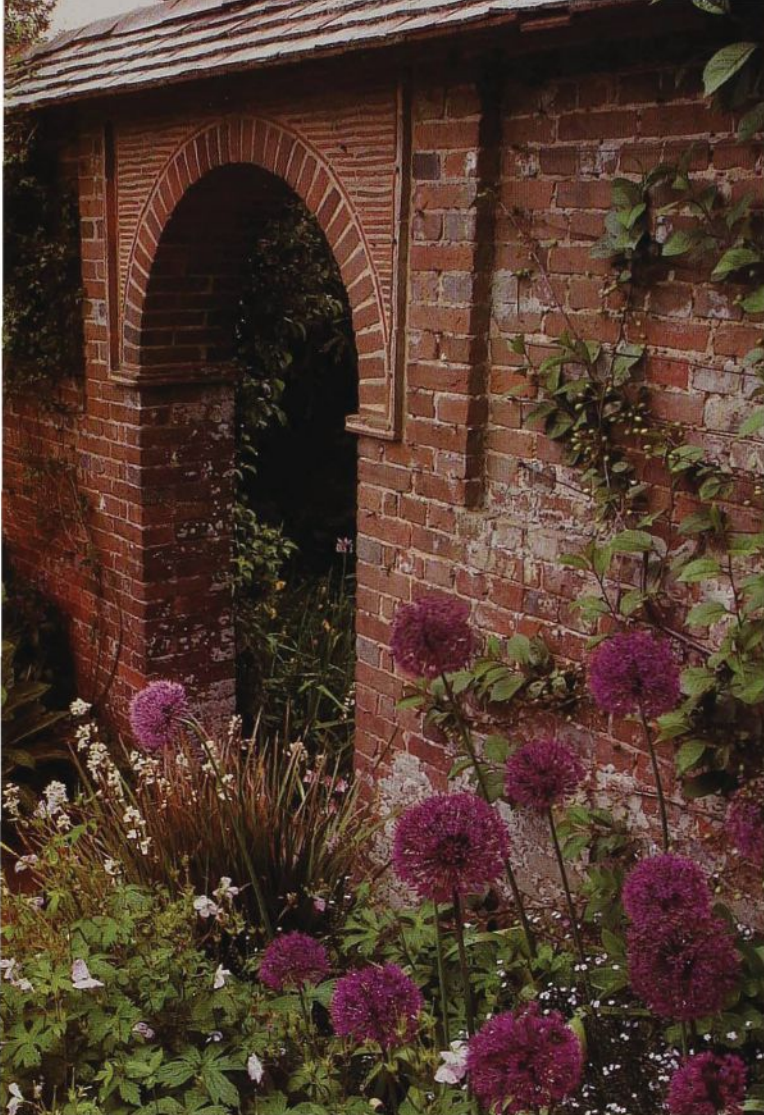
Walls and fences can become integral garden features. The key is to incorporate them into your landscape with appropriate plantings and to design the plantings to make the most of the structures. Some fences and walls are attractive in their own right and are most effective when combined with widely spaced, artistically arranged plantings. Others, more modest in character, serve as uncluttered backdrops that invite extravagant garden displays. You can deck them with herbaceous borders, frame them with arching trees and shrubs, weave them with vines, and playfully tuck an assortment of plants into their crevices. A wall or fence is a bare canvas begging to be painted with a seasonal kaleidoscope of garden plants.

FRIENDLY FENCES

FENCES VARY IN HEIGHT AND LENGTH, but rarely have any width to speak of. A fence takes up little of your garden space and, depending on its placement within your property, can often be planted on both sides. Most fences are made of wood; wrought iron; or chain link of galvanized wire, plastic, or vinyl mesh. If you are contemplating installing a new fence in your yard, consider which material and style best suit the purpose of the fence, the style of your garden and house, and your budget. If you already have a fence, creative use of plants can better tie it into the landscape so that it is an asset both functionally and visually.



Depending on their height and composition, wooden fences provide varying degrees of enclosure. This rustic Craftsman-style fence at Wave Hill in New York City offers only implied enclosure of the exuberant garden within, yet is sturdy enough to support roses.

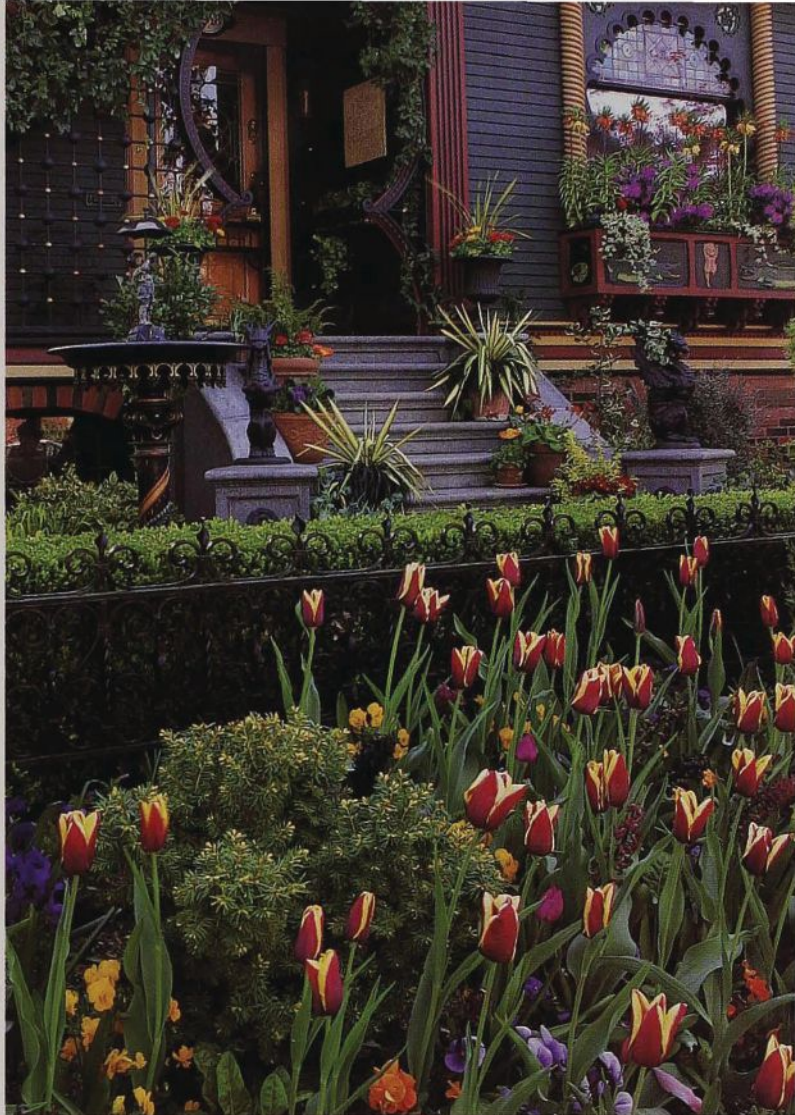


Brick walls can be lightened with openings that allow air, light, and traffic to pass through. Masonry walls have an advantage over wood fences in their ability to support vines with clinging roots such as climbing hydrangea, English ivy, and creeping fig, which trap moisture that could damage the wood.

Wooden fences blend easily with today's informal landscapes, and they satisfy a variety of functions. Solid board fences are often the best option to enhance privacy in a backyard. Using them as a support for a vine is a simple way to link the fence and the garden. Landscape architect John Herbst of Portland, Oregon, suggests that by offsetting the vertical boards of a wooden privacy fence to allow a bit of space between them, vines can more easily attach themselves, and air circulation in the garden is improved.

Nan Norseen, a landscape designer and consultant in Bolton, Massachusetts, says that a careful selection of climbing plants can accommodate both the shady and sunny sides of a post-and-rail fence. She suggests planting clematis on the shady north side of the fence and a climbing rose on the sunny south side to fulfill its higher light requirement. The clematis roots will benefit from the cool shade, while its stems clamber up the rose canes to capture their share of sun. The needs of both plants are well met and the results can be spectacular, although pruning can be tricky.

Wrought-iron fences are expensive but provide a formal elegance that complements ornate Victorian gardens and homes. Because iron is prone to rust, these fences are often elevated on



A wrought-iron fence is the perfect complement to a Victorian-style garden such as this one in Seattle, Washington, designed by Glenn Withey and Charles Price. A clipped boxwood hedge backs the ornate fence, while the area between the fence and the sidewalk is planted with 'Gavota' tulips and orange and blue pansies.

brick or cement to keep them off the damp ground. Wrought-iron fencing was particularly popular during the 19th century and today old wrought-iron gates or sections of fence can often be picked up in antique shops. Mindy Mymudes, a horticulturist with the landscape design firm Wandsnider and Associates in Menomonee Falls, Wisconsin, suggests incorporating these recycled treasures in the garden. They can be installed against a blank wall, where the castoff is transformed into garden art, or placed in a bed to support a climbing plant.

A chain-link fence may not be the most aesthetically pleasing option, but it is functional and relatively inexpensive. Black chain link is less conspicuous within a garden setting, according to Sally Boasberg, a Washington, D.C., landscape designer. To further minimize its presence, Boasberg suggests planting vertical accents nearby to divert attention from the fence. Tall columnar evergreens such as 'Sky Pencil', a cultivar of Japanese holly (*Ilex crenata*), and the English boxwood selection 'Graham Blandy' are particularly effective.

Mymudes views existing chain-link fencing as an opportunity for growing a number of vines. Kiwi (*Actinidia* spp.),

clematis (*Clematis* spp.), Boston ivy (*Parthenocissus tricuspidata*), Virginia creeper (*P. quinquefolia*), and climbing roses will add color and texture to the garden while at the same time camouflage the fence.

WELCOMING WALLS

GARDEN WALLS are thicker and more permanent than fences by nature and can generally be classified as one of two types: free standing or retaining. Both sides of a freestanding wall are exposed; a retaining wall is exposed on one side while the other side is hidden, supporting a rise in ground level. Most garden walls are built of stone, brick, or concrete block that may be covered with a veneer of stucco or stone.

If you inherit a wall when you purchase property, Norseen advises that you consider what it's dividing and what the spaces are like on either side of it. "Walls create microclimates that very much determine what kind of garden you would want and what type of plants you will use," she explains. The north side of a wall will likely be cool, shady, and damp—suitable for hostas, ferns, and other species with similar cultural requirements. A south side will benefit from the radiant heat trapped by the wall, and will accommodate plants that thrive in warm, sunny, drier conditions.

In New England, which boasts lots of old stone walls, Norseen has observed a renewed interest in an old-fashioned wall treatment. Tucking creeping thyme into niches along the top surface of a low stone wall creates a "sitting wall;" when you sit on it, the thyme not only cushions your seat, it also surrounds you with its aroma. To make this work, says Norseen, you need to place a small amount of soil in crevices and depressions on the top surface of the wall where you will plant the thyme.

Brick walls lend a formal, well-heeled appearance to a garden. Bricks can be arranged in an endless array of patterns, and they are available in a range of colors. Boasberg finds the rosy hue of old brick works well with most flower colors. "I am particularly fond of blues and purples, silvers and grays against it," she says.

Stuccoed block, poured concrete, and adobe walls, featured in many southwestern and California gardens, are great for silhouetting plants with strong architecture and vibrant color and showcasing displays of garden art against their uniform or textured surface. Sometimes the walls themselves are painted in vivid colors, adding a dramatic dimension to the landscape.

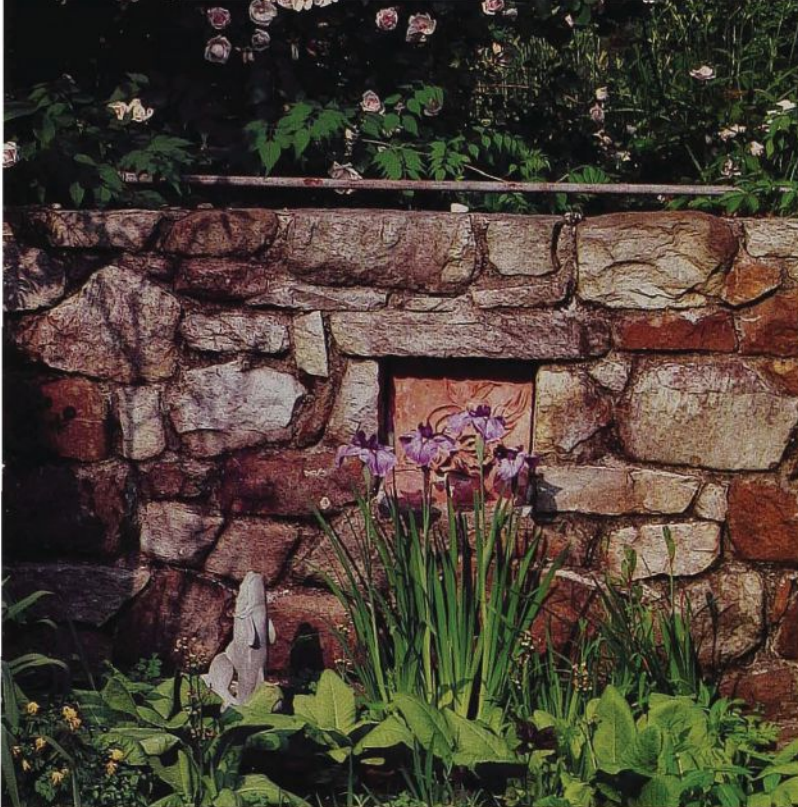


To create a sense of depth in a planting scheme, landscape designer Sally Boasberg suggests treating a fence or wall as one of several layers at different heights. This privacy fence serves as the backdrop for a colorful herbaceous border that includes a pink mallow (*Lavatera* sp.) fronted by—from left to right—rose campion (*Lychnis coronaria*), blue oat grass (*Helictotrichon sempervirens*), beard tongue (*Penstemon* sp.), and hound's-tongue (*Cynoglossum* sp.).

ACHIEVING UNITY

BY REFLECTING the architecture and style of its surroundings, a fence or wall becomes an important prop on your garden stage. A colorful cottage garden delivers a show-stopping performance against an old-fashioned white picket fence; a brick wall offers an elegant backdrop for a formal perennial border; and a stuccoed adobe wall is the perfect foil for the strong lines and dramatic forms of a cactus garden. Although a fence or wall's existence may stem from its function, its aesthetic potential is achieved through the careful selection and placement of plants.

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



"Most stone walls are attractive, so you probably don't want to obscure them," says landscape designer Sally Boasberg. Most plant colors are complemented by stone, although Boasberg feels that silver and gray generally look better against brick. Plants including a tall rose and Japanese iris are used to frame and accent this stone wall, left, without hiding its character.

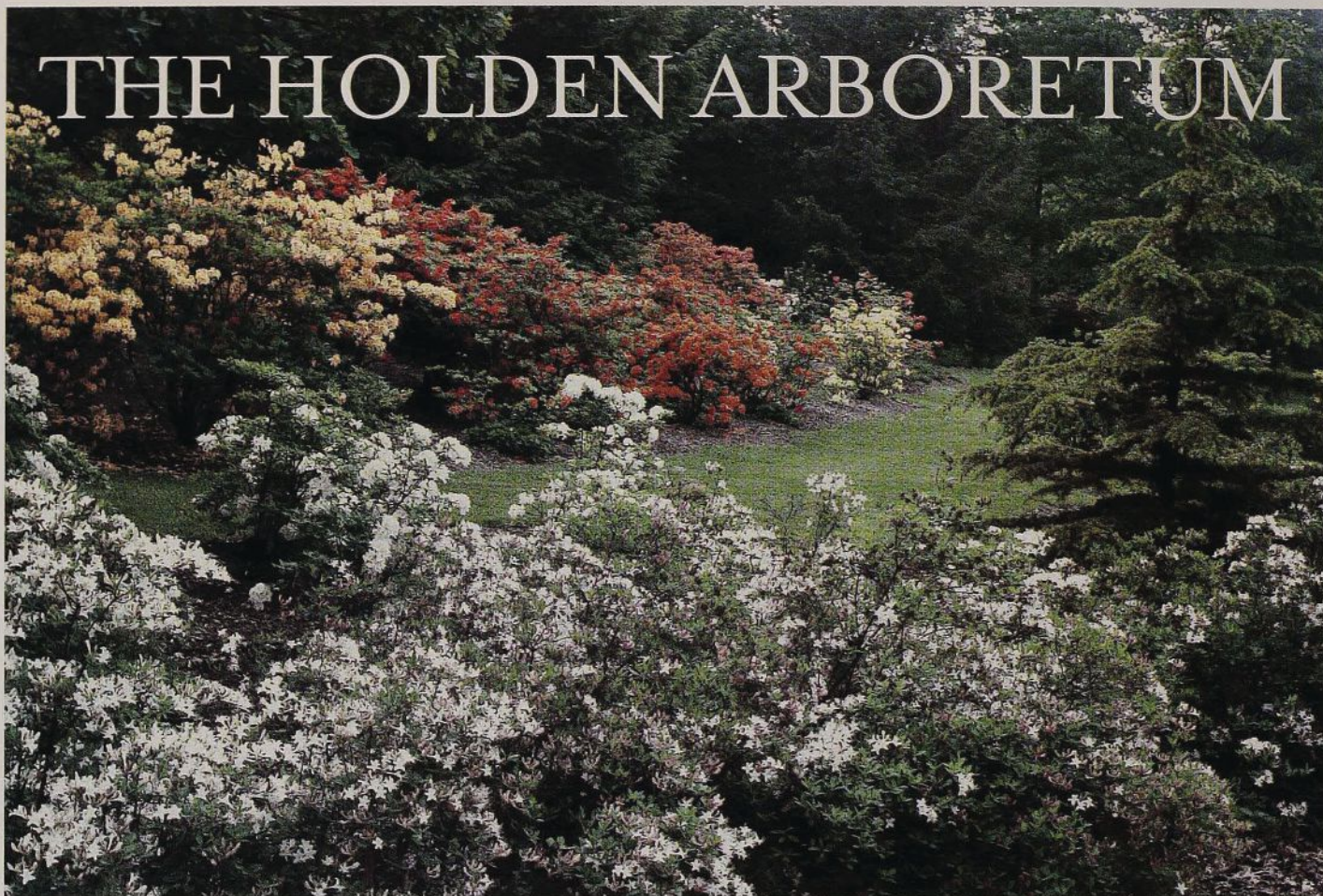


A blank wall invites an espalier—a technique of training a plant to grow flat against the surface of a wall—such as the kiwi (*Actinidia kolomikta* 'Arctic Beauty') shown here. Traditional espaliers were trained in geometric patterns, but today a less formal design is often preferred. The foreground planting includes hostas, lamb's ears (*Stachys byzantina*), and dead nettle (*Lamium* sp.).



Boasberg suggests installing stockade-style fences with their points down and topping them with a decorative board or lattice for a more finished look. Here, the solid board surface provides privacy and a pleasantly simple backdrop for the colorful display of heaths, heathers, and hydrangeas. The corner is accented by a European mountain ash (*Sorbus aucuparia*).

THE HOLDEN ARBORETUM



A majestic natural setting, notable plant collections, and cutting-edge research programs make this Cleveland public garden a required stop for plant enthusiasts.

BY CATHEE THOMAS

CONCEIVED SHORTLY after the turn of the 20th century as a tribute to the memory of a child who died young, the Holden Arboretum has blossomed from that legacy to become the crowning jewel of Greater Cleveland's Emerald Necklace, a string of green spaces encircling the city. Now, at the turn of the 21st century, the arboretum's notable plant collections—along with its participation in cutting-edge programs in education, research, plant exploration, and conservation—have earned it a place among the nation's leading horticultural institutions.

Located 25 miles east of Cleveland in Kirtland, Ohio, the arboretum encompasses more than 3,400 acres in a setting of remarkable natural beauty. From the first wildflowers of spring to the full-blown beauty of the rhododendron garden in June, the explosion of fall colors in the

trees, and spectacular snow-covered vignettes in winter, the arboretum has much to offer visitors year round.

The arboretum, which is celebrating its 70th anniversary this year, is dedicated to collecting, preserving, and displaying woody plants with ornamental and scientific merit for northeastern Ohio. Areas of

particular interest include prairie, wildflower, and butterfly gardens, as well as special collections devoted to lilacs, conifers, crabapples, magnolias, and hedges.

GETTING ORIENTED

FIRST-TIME VISITORS to the arboretum usually begin their tour at the visitor center, where the knowledgeable staff members offer information on what's in bloom, tour availability, maps, and other tips.

For the statistically minded, the arboretum boasts 11,786 accessions—individual plants or groups of plants obtained

Lilacs such as *Syringa* × *hyacinthiflora* 'Buffon', left, and the Helen S. Layer Rhododendron Garden, top, headline the late spring to early summer plant displays at the Holden Arboretum.



In Memory of a Daughter



Albert Fairchild Holden, the founding father of the Holden Arboretum, was born in 1866, the third of nine children born to Liberty and Delia Bulkley Holden. His mother was instrumental in the founding of the Cleveland Museum of Art; his father was involved in the mining business and was one of the founders of Cleveland's major newspaper, *The Plain Dealer*.

After earning a degree in geology from Harvard University, Holden joined his father in Utah as superintendent of the family mines. By 1892 he had set up his own offices in Salt Lake City and expanded the family business to include mines from Alaska to Mexico, amassing a considerable fortune in the process.

Though he had at one time considered bequeathing his estate to Harvard, the untimely death of his 12-year-old daughter, Elizabeth, inspired him to instead endow an arboretum in her memory. A trust agreement in his will designated that funds be set aside for development of an arboretum following a life interest for his two remaining daughters, who were teenagers at the time of his death in 1913.

Rather than wait a lifetime to see the garden come to fruition, Holden's sister and brother-in-law, Roberta and Benjamin P. Bole, donated 100 acres in Kirtland Township to establish the Holden Arboretum in 1931. Both Holden's daughters—by then Mrs. R. Henry Norweb and Mrs. Katharine Holden Thayer—were active and generous supporters of the arboretum throughout their lives, and over time considerable property was added to the Boles' original land bequest. In 1988 the trust passed to the arboretum as its permanent endowment. —C.T.

Holden and AHS Annual Conference

Attendees at this year's AHS Great American Gardeners Annual Conference—to be held in Cleveland June 14 to 16—will have an opportunity to visit the Holden Arboretum during an optional tour. For more information about the conference, turn to page 7 or visit the AHS Web site www.ahs.org.

Paines to Receive AHS Award

C.W. Eliot Paine, director emeritus of the Holden Arboretum, and his wife, Linda, are the recipients of the American Horticultural Society's 2001 Local Horticulture Award. The Paines will accept their award at the Society's Annual Conference.

The Paines have a long association with Holden and the greater Cleveland community. Eliot Paine began his horticultural career at the arboretum in 1964 as assistant horticulturist and—with the exception of a 13-year stint as director of the Garden Center of Greater Cleveland—has served Holden in one capacity or another ever since. He retired in 1995 after 23 years as the arboretum's executive director, but continues to serve Holden as director emeritus and a trustee. On a national level, he is currently chairman of trustees of the Center for Plant Conservation at the Missouri Botanical Garden in St. Louis and was also the recipient of the AHS Professional Award in 1996.

A native of the Cleveland area, Linda Paine is currently serving as a director of the Garden Club of America (GCA). She chaired last year's GCA annual meeting, which was held in Cleveland, and is a past chairman for GCA's Zone X region.



Creeping phlox and cinnamon fern thrive in the Myrtle S. Holden Wildflower Garden.

from known sources. Of these, 9,365 are woody plants and 2,421 are herbaceous. Finding one particular plant might seem like searching for a needle in a haystack, but each collection area of the arboretum has been surveyed and mapped out in 50-

meter grids, and the precise location of each plant is stored in a computerized mapping system.

Armed with a plant location map and basic directions, visitors can easily find any plant they seek. The biggest problem with



Natural and created water gardens abound at Holden, making it a photographer's paradise.

such a task is staying focused on the way to the target plant.

ATTRACTIONS YEAR ROUND

ADJACENT TO THE visitor center is the Arlene and Arthur S. Holden, Jr. Butterfly Garden. The two-and-a-half-acre garden attracts a wide range of pollinators, including butterflies and hummingbirds, and is one of the most popular visitor destinations in summer. Host plants such as birches (*Betula* spp.), willows (*Salix* spp.), and cherries (*Prunus* spp.) provide food for growing larvae, and colorful nectar sources abound. Among these are milkweeds (*Asclepias* spp.), butterfly bush (*Buddleia davidii*), Joe-Pye weed (*Eupatorium purpureum* and *E. album*), pink turtlehead (*Chelone lyonii*), and tickseed (*Coreopsis* spp.).

The main display garden features two major woody plant collections—lilacs (*Syringa* spp.) and viburnums—and the hedge collection, interspersed with some 370 selections of herbaceous perennials. With up to 300 lilacs in bloom at any one time in early May, a morning stroll through this part of the arboretum can be an intoxicating feast for the senses.

Nestled within the display garden, the hedge wheel showcases 27 different hedges ranging from two to eight feet in height. There is a hedge to fill any garden's need, including evergreen and deciduous examples, as well as thorny plants appropriate for barriers. The collection is carefully maintained to demonstrate proper pruning techniques.

The conifer collection, which contains more than 470 specimens of pines, spruces, firs, and other needle-bearing evergreens, offers year-round interest for visitors. In spring, the magnolia collection is a popular destination, as is the crabapple collection.

A short drive from the visitor center are the formal gardens of Lantern Court, which include diverse specialty areas such as a primrose lane, an alpine rock garden, a hosta garden, and aquatic gardens.

NATIVE PLANTS AND ECOSYSTEMS

THE RESURGENCE OF interest in growing plants native to North America is reflected by the enthusiasm visitors show for the Myrtle S. Holden Wildflower Garden.

A patch of native pawpaw trees (*Asimina triloba*) greets visitors entering the north side of the garden. Winding gravel paths lead through a woodland planting with an abundance of spring ephemerals and lush ferns, and then on through a flood plain, fern garden, rockeries, emergent pools, sand barrens, bogs complete with carnivorous plants, a wetland area with a shrub border and fens, and prairies representing dry, moist, and wet species.

The garden contains more than 700 species native to Ohio, grouped in plantings representative of the diverse habitats found at the arboretum. The rockery, for example, features plants capable of thriving in the ecosystem of Little Mountain, a rocky, conifer-covered hill that marks the highest point of the arboretum. Among

these are wildflowers such as red baneberry (*Actaea rubra*), bunchberry (*Cornus canadensis*), oak fern (*Gymnocarpium dryopteris*), goldthread (*Coptis trifolia* subsp. *groenlandica*), and American twinflower (*Linnaea borealis*) nestled in the shade of Canadian hemlocks (*Tsuga canadensis*) and yellow birches (*Betula alleghaniensis*).

Native plants—most propagated from arboretum collections by staff and volunteers—are also among the major attractions at the arboretum's annual spring plant sale.

EARLY SUMMER SHOWS

MAY AND JUNE are the busiest months at the Holden Arboretum, because you will find blooming plants everywhere you look. There are the wildflowers, of course—both in the garden and along all the natural area trails—as well as crabapples, lilacs, and magnolias, but the most breathtaking sight at this time of year is the Helen S. Layer Rhododendron Garden. Here, nearly 2,000 rhododendrons, 1,400 azaleas, and 2,600 companion plants grow on a 20-acre site that incorporates a large pond. The canopy of mixed deciduous trees includes two centuries-old oak trees—one red (*Quercus rubra*) and one white (*Q. alba*).

As the last rhododendron trusses fade in mid-June, more than 100 mountain laurels (*Kalmia* spp.) launch a display of white, pink, and banded flowers. The garden is set in a peaceful mature oak, beech, and maple woods with just the right amount of dappled light dancing across the plants to make flowering prolific.

FOCUS ON CONSERVATION

THE PROTECTION AND display of native plant species are a special interest at Holden, and with such diversity of habitats it is no surprise that the arboretum has been working closely with the Center for Plant Conservation (CPC)—a national organization dedicated to conserving plants native to North America—since 1985 and now serves as the CPC's Midwest/Great Lakes regional garden.

Some 170 species with restricted distri-

bution in Ohio have found a safe haven at the arboretum. Among these is the Lakeside daisy (*Hymenoxys herbacea*), which is threatened by quarrying of its limestone habitat and illegal digging by unscrupulous collectors. The only known wild population of the lakeside daisy in the United States is located in Ohio.

PLANT EXPLORATION PROGRAM

THOUGH THE conservation and display of native plant species is an important aspect of the arboretum's programs, there is equal commitment to finding, evaluating, and displaying non-indigenous ornamental plants acclimated to regional growing conditions. Among the ongoing efforts to enhance the diversity of the arboretum's collections and offer gardeners more ornamental plant choices is a worldwide search for woody plants in climatic zones similar to that of northeastern Ohio; the arbore-



Rare native plants like the lakeside daisy are propagated and displayed at Holden.

tum is in USDA Plant Hardiness Zone 5 and AHS Plant Heat Zone 4.

Peter Bristol, Holden's director of horticulture, and other staff members have made several plant-collecting trips to China, Korea, and Russia—both individually and with groups of professionals from other botanical organizations. The hundreds of species of both plants and seeds collected on these expeditions are shared among the participating gardens and go through rigorous evaluations to de-

termine suitability for ornamental use.

The arboretum has also participated in seed collecting expeditions in nearby states such as Kentucky, Virginia, North Carolina, Tennessee, and Georgia in an effort to expand the diversity of the native plants known to be adapted to northeastern Ohio.

PLANT RESEARCH AND BREEDING

PLANT RESEARCH HAS been an increasingly important element of Holden's programs in the last decade under the guidance of Robert D. Marquard, who became Holden's first director of research in 1993. So far breeding emphasis has focused principally on three genera: buckeyes (*Aesculus* spp.), redbuds (*Cercis* spp.), and witch hazels (*Hamamelis* spp.).

According to Marquard, room for improvement of the common witch hazel (*H. virginiana*) is vast, because there are no named selections in the fall-blooming group, which bears yellow flowers. "We are looking to expand the color range of flowers—oranges and reds would be nice—create more colorful fall foliage, and encourage cleaner leaf drop at the end of the season," he says.

Marquard has very specific goals for his redbud breeding program: He would like to develop northern-hardy redbud cultivars with petite, glossy leaves and larger clusters of bright red or purplish flowers. In pursuit of this goal, Marquard and his staff have made crosses of the native Eastern redbud (*Cercis canadensis*) with *C. racemosa*, a little-known Asian species.

Bottlebrush buckeye (*Aesculus parviflora*), red buckeye (*A. pavia*), and Japanese horse chestnut (*A. turbinata*) are the main focuses of Holden's buckeye breeding. Bottlebrush buckeye has white flowers that bloom reliably in July, but Marquard would like to expand the range of colors; work is being directed towards development of a selection with pinkish flowers. Using the drought-resistant Japanese horse chestnut as a pollen source, Marquard is also trying to breed heat- and drought-tolerant buckeyes.

In addition to its on-site research programs, the arboretum operates the David G. Leach Research Station, a satellite facility located about 25 miles from the arboretum in Madison. The arboretum

Visiting Holden

Holden Arboretum, 9500 Sperry Road, Kirtland, OH 44094-5172. (440) 946-4400.

www.holdenarb.org.

■ Open Tuesday through Sunday 10 a.m. to 5 p.m. Admission: \$4 adults; \$3 seniors (seniors admitted free 1 to 5 p.m. every Tuesday); \$2 children (6 to 15 years).

■ Holden is a participant in the AHS Reciprocal Admission Program. AHS members showing a current membership card receive free admission and a 10 percent discount in the gift shop.

acquired the research station in 1986 through an agreement with David G. Leach, an internationally renowned rhododendron breeder who died in 1998.

The station's current director, Stephen Krebs, is screening the rhododendron population for tolerance to diseases and environmental stresses. The goal is to develop rhododendrons that are both attractive and tough enough to thrive in the heat and stress of the foundation-planting environment in which they are often grown.

LOOKING AHEAD

AS HOLDEN ENTERS its eighth decade of existence, its dedicated staff and directors are anticipating bold changes to both facilities and programs. At the end of last year, a national search was underway to find a new executive director. And a prominent landscape design firm, Andropogon Associates Limited of Philadelphia, Pennsylvania, is developing a new master plan for the arboretum that is scheduled to be completed at the end of this year. "A sound plan is vital as the Holden Arboretum expands its plantings and programs," says C. W. Eliot Paine, the arboretum's director emeritus. "We are looking forward to taking the arboretum into the next exciting phase of its existence."

A resident of Concord, Ohio, Cathee Thomas is a gardener, writer, and artist who teaches classes at the Holden Arboretum.

A New Jersey gardener settling into a second home in the Florida Keys learns valuable lessons about adaptation. **article and photographs by Roger Johnson**



From Temperate to Tropical **THE TRANSPLANTED GARDENER**

ALL GARDENERS are familiar with the trials of adaptation. Every new plant we add to our landscape must adjust to a new environment before it can thrive. This transplanting trauma also applies to gardeners who are uprooted from familiar garden conditions and thrust into a completely foreign environment. The transplanted gardener must learn a new set of plants, climate patterns, soil conditions, pests, diseases. A gardener who moves as I do—between temperate New Jersey and the tropical Florida Keys—has his work cut out for him.

I moved from New Jersey to my seasonal home in Florida six years ago. While I had a lot to learn about living in the tropics, I did know one thing about my new intended garden: It was to be totally aban-

doned for as long as five months each time I traveled North, and no caretaker was to be hired. So what was planted here had to survive salt spray, heat, drought, and competition in my absence. I have learned by trial and failure what succumbs, what survives, and what overwhelms. And in the process, I have adapted to my new garden environment.

A KEY LOCATION

MY GARDEN IS LOCATED on Sugarloaf Key, a small island off the Florida mainland 90 miles from Cuba and a short drive “up the Keys” from Key West, in the only tropical environment found on the continental United States. This land was formed from ancient limy ocean sed-

iments deposited atop an ancient coral reef, which was alive before ocean levels dropped about 100,000 years ago.

When I built my house here six years ago on a scarified lot—cleared to the rock of most vegetation and somewhat filled with canal dredgings—it appeared that little would grow. The exposed surface is continually hardened by beating rain followed by baking sun. A garden pick swung full force only nicks this surface. And indeed, evidence from this and other lots in the neighborhood was that little vegetation, except stunted native button-

The background to these pages is an aerial view of Sugarloaf Key in Florida, where the author, shown in an inset pruning palm trees, gardens for part of the year.



Above: The author designed his garden to be viewed from the second-story balcony of his home, which is elevated on stilts. **Left:** Exotics such as angel's trumpet (*Brugmansia* sp.), top, and bloodflower (*Asclepias currassavica*), bottom, provide splashes of color in the garden.

woods (*Conocarpus erectus*), sea grape (*Coccoloba uvifera*), and the exotic Australian pine or horsetail tree (*Casuarina equisetifolia*) had established themselves on the canal fill that created these lots.

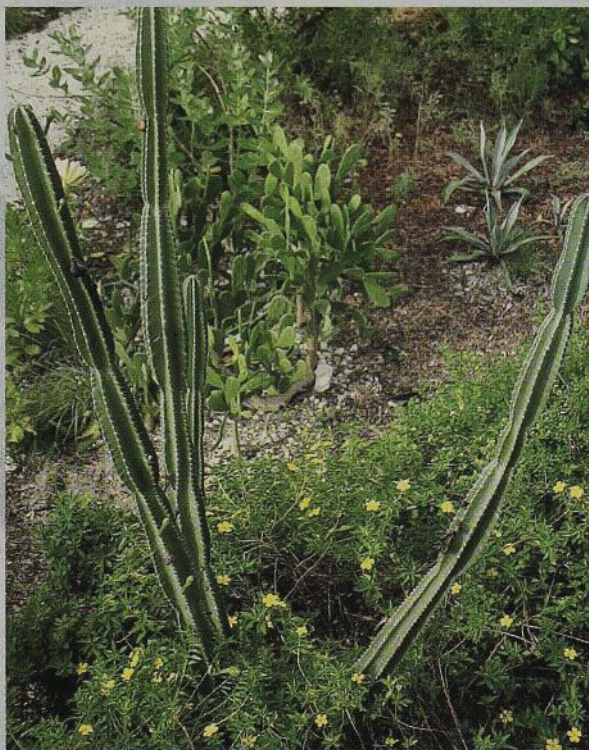
My garden is at the end of a block-long canal that opens to a sound, separated from the Atlantic Ocean by a thin hammock strand. Hammock is a tropical term for broad-leaved, evergreen hardwood trees dominating land that is slightly higher than the mangrove thicket at the lower watery edge. Beyond this the ocean is surprisingly calm, because the fury of breakers is absorbed by the living coral reef three to five miles out. So back at my canal-end dock there is no surf and little tidal play.

I live one story above my garden in a stilt house, 20 feet from the water's edge. Since 1986, Federal law has required the first floor of a home to be eight feet above mean tide level.

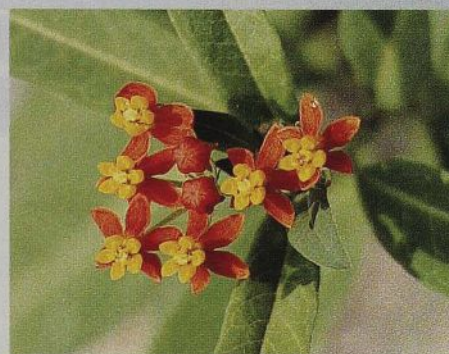
PLANNING MY PRIVATE JUNGLE

BECAUSE THE property abuts the only connecting road of this island as well as the end of a canal, I decided to create a "jungle" setting for privacy. I also wanted an interesting garden view from the second story walk-around—the exterior balcony surrounding the house.

When I bought the property, it had 40 to 50 Australian pines growing on it. Both the builder and county agent—who did the initial and requisite botanical survey to see if endangered species lived here—advised me to remove them. But desiring privacy, and valuing any sign of life in what appeared to be impossible growing conditions, I kept them. In just three years, how-



The Florida Keys is home to many native and adapted succulents, including the apple cactus (*Cereus uruguayanus*).



ever, with the winter sun and water view disappearing, I had all of them removed and the stumps poisoned. These "pines" are actually flowering plants, not conifers. Growing 10 to 20 feet per year, they dominate the skyline in many locations in the Keys. The county in which I reside has officially recognized them as exotic pests, and there is now organized effort to prevent their spread into more natural areas.

The environment here, like much of the Caribbean, is semi-arid (see sidebar, page 48), so for both practicality and personal preference, I elected to develop a xeriphytic landscape plan—planting species that can survive without irrigation.

Today, seven species of cacti grow in my garden, including the native barbed wire cactus (*Acanthocereus tetragonus*, also listed as *Cereus pentagonous*), the naturalized night-blooming cereus (*Hylocereus undatus*), and an exotic tree-sized apple cactus (*C. uruguayanus*, that surprisingly has grown from two to 12 feet in five years. Also present are several prickly pear cacti, including the native *Opuntia stricta*, and *O. cochenillifera*, naturalized from Mexico.

SELECTING PLANTS

I HAD BEEN ADVISED by friends in the Florida Native Plant Society to plant only natives. But I found these less available for purchase in nurseries, and when I did find them, they were generally more expensive. Although many of



Joewood, top, and sea daisy, above, are among the Keys natives in the author's garden.

the indigenous plants are quite handsome, it was difficult for me to resist the exotic tropical palms from Madagascar, the South Pacific, and China for my developing jungle, not to mention the flamboyant angel's trumpet (*Brugmansia* sp.), native to Columbia and Ecuador, with its 10-inch-long, pendulous pink trumpets.

Yet a number of attractive native species are present in my garden and are doing well. Among these is the sea daisy (*Borreria frutescens*), a shrubby perennial with one-inch-heads of yellow petals that flowers continually. Fiddlewood (*Citharexylum fruticosum*) is a tree that grows to 30 feet, with varnished leaves and two-to-four-inch-long racemes of fragrant white flowers. Two small trees or large shrubs that provide dense growth habit and showy flowers are joewood (*Jacquinia keyensis*) which has neat, almost succulent leaves, and Jamaica caper

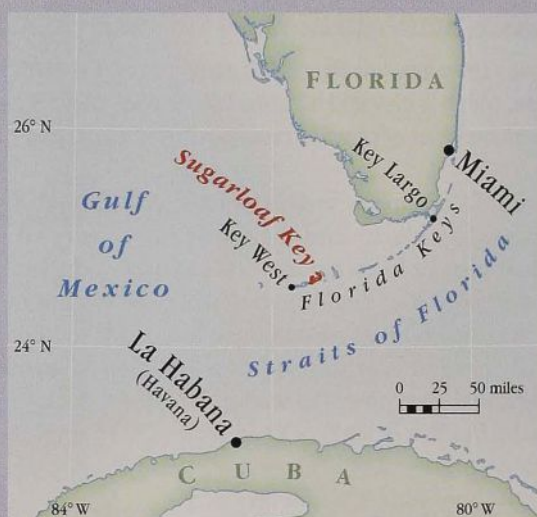
The Florida Keys

The Florida Keys are a chain of islands that constitute the southernmost land-mass of the continental United States. The word "key" comes from the Spanish word *cayo*, meaning a small flat island. Fifteen miles from my garden, Key West is the southernmost city in the United States, and although located approximately 50 miles north of the Tropic of Cancer, it is appropriate to refer to this environment as tropical. The frost-free climate of these islands has an average minimum winter temperature of 68 degrees Fahrenheit, produced by the Gulf Stream, which bathes the Keys in warm water and supports the only living coral reef in North America north of Mexico.

Positioned midway between Miami and Havana, the Keys are drier than either. Miami receives precipitation from the convective heating of the Everglades, and Cuba has sufficient altitude to intercept clouds. The Keys, with a small land-mass, receive three-quarters of the annual rainfall of Miami, or 44 inches. While similar to New Jersey's annual rainfall, two factors produce this semi-arid environment: year round warm temperatures cause greater evaporation and transpiration—direct water loss from plants; and a rocky to sandy soil with very little water storage capacity.

The modern inhabited Keys are linked by U.S. 1, the storied highway running 120 miles south and west from Florida City on the mainland to its end in Key West. The roadway includes 42 bridges; it replaced Flagler's Railroad, which operated from 1912 to 1935, when it was destroyed by a hurricane. The Upper Keys, such as Key Largo, are saturated with restaurants, hotels, houses, and shopping centers; but once off U.S. 1, a short distance to the left or right, you are surrounded by a vast watery view and mangrove wilderness.

—R.J.



(*Capparis cynophallophora*) with one-inch-wide, four-petaled flowers and stamens exerted two to three inches. The great advantage of natives is their ability to survive the occasional extremes of prolonged drought and heat, as well as the salt spray generated by storms.

Additional considerations in choosing plants for any garden landscape are foliage color, texture, and contrast. Most gardens are viewed from ground level, but here more often from a second- or third-story walk-around. For this view I chose plants with neat, radiating symmetry, especially when viewed from above, including several species of *Yucca* and *Agave*, and Mauritius hemp (*Furcraea foetida*).

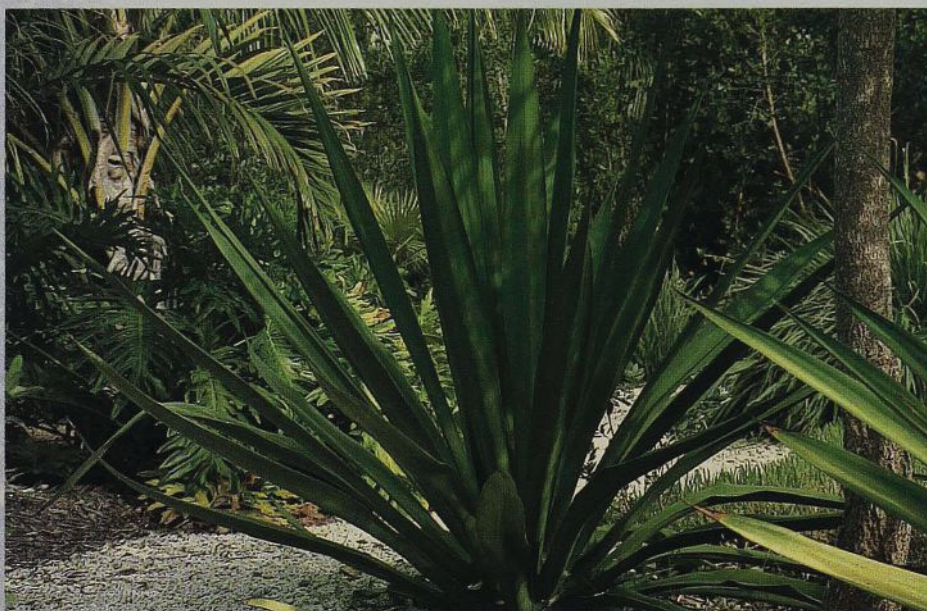
PLANTING AND MANAGING

INITIAL PREPARATION of my scarified lot included breaking up the concrete-like surface—once renting a jackhammer—where a plant was to be inserted and mounding the area with imported "soil." This was usually a sandy, limy marl to which I added organic matter, bought in 40-pound bags at the local hardware store. Then came the planting, mulching, watering, and eventually fertilizing. Because the local soils lack many essential nutrients, including iron, I used a fertilizer containing a balanced blend of micronutrients. The plants—both natives and exotics—flourished under this treat-

Tips for Transplanted Gardeners

Roger Johnson offers the following advice for others who may find themselves gardening in a very different region:

- Buy a good field guide for plants in your new region.
- Visit the nearest botanical garden, taking notes on the plantings and picking up any informational handouts.
- Walk or ride a bicycle around your neighborhood to see what appeals to you in other people's landscapes.
- Tour local nurseries with a notebook to get some plant ideas and become familiar with names.
- Call or visit the local cooperative Extension service to see what information it offers about regional soils, pests, etc.
- Join the local native plant society or a garden club.
- Take time to become comfortable with your new environment before launching into any major landscape projects.



Succulents such as Mauritius hemp (*Furcraea foetida*), above, and other members of the agave family grow well in the hot, dry climate of the Keys.

ment, some growing at phenomenal rates.

As I returned to my garden following three- to five-month absences at various times of the year, it became obvious that here there is no season when growth does *not* proceed, so my principal role as gardener quickly shifted from planter to manager. Early on, a neighbor gave me a tip about propagating gumbo-limbo (*Bursera simaruba*)—native to the Keys and throughout the Caribbean—which was to cut any six-foot section of limb from the tree, stand it upright in the ground, water, and jump back! For some species this is only a slight exaggeration.

Even after several years, I am still sorting out the desirables from undesirables; some plants just grow too prolifically, even when weaned of water and fertilizer. For instance, I planted a 30-foot-long hedge of inkberry (*Scaevola sericea*) along my driveway. This is not the native Northeast holly (*Ilex glabra*) with which I was familiar, but an import from the South Pacific islands, now naturalized in the Keys. Returning to the Keys after a four-month absence, I was not able to drive into the property—inkberry had sprawled to occupy the entire space. Similarly, tropical almond (*Terminalia catappa*), a tree native to India, spread

Resources

Florida Wildflowers in their Natural Communities by Walter Kingsley Taylor. University Press of Florida, Gainesville, Florida, 1998.

Seashore Plants of Southern Florida and the Caribbean by David Nellis. Pineapple Press, Sarasota, Florida, 1994.

Tropical Ornamentals by W. Arthur Whistler. Timber Press, Portland, Oregon, 2000.

The Florida Native Plant Society promotes the preservation, conservation, and restoration of the native plants and native plant communities of Florida. Dues are \$25 per year. P.O. Box 690278, Vero Beach, FL 32969. (561) 562-1598. www.fnps.org.

Sources

Many of the native plant species mentioned in this article are difficult to obtain through mail-order sources. A useful resource for Florida residents is the **Association of Florida Native Nurseries** (AFNN) P.O. Box 434, Melrose FL 32666; (877) 353-2366; www.afnn.org.

AFNN publishes an annual *Native Plant & Service Directory*, which lists wholesale and retail sources for more than 600 native plants. The directory is available for \$5.

vertically and horizontally 10 to 20 feet per year to overwhelm a corner of the property. Ironically, to purchase a small tree cost \$20, but to remove it cost \$200.

Other exotics behave perfectly, however. Both tree of gold (*Tabebuia argentea*) and *Calotropis procera*, a small tree-sized milkweed family member, have handsome silvery gray leaves. The first produces a spring flush of clear yellow trumpet flowers while the latter bears two-inch-wide, purple-and-white bicolored flowers almost continuously.

And not all the natives proved friendly. I planted some railroad vine (*Ipomoea pes-caprae*) as a ground cover for a grouping of palms. Returning a few months later, I found it had run—it is a vining morning glory, which roots at the nodes—to all corners of the property. It took me two days to uproot it and roll it all up for disposal. I calculated that in my absence it grew at least six inches a day.

PLEASANT AND UNPLEASANT SURPRISES

SOME PLANTS ARRIVE serendipitously, transported by birds, raccoons, or other means. Indian mulberry (*Morinda citrifolia*)—which I suspect arrived in a load of the free, recycled county mulch—has become a favorite specimen with corrugated, glossy green citruslike leaves.

Papayas (*Carica papaya*) spring up everywhere. A year ago, a seedling appeared adjacent to the house. Today it reaches over the roof, more than two stories high, and it continues to add new flowers and fruits as I harvest the lowest, mature fruits.

But despite the occasional serendipitous rewards, I have given up on the county mulch, because it contains too many undesirable weed seeds. Now I hire a tree-trimmer with an aerial bucket and chipper each year. This practice provides me with a double benefit: keeping certain plants under control and providing weed-seed free mulch from the trimmings. The trimming is needed anyway to control the exuberant buttonwood and my privacy hedge of *Ficus benjamina*, a favorite for indoor landscaping in the North. In only three years the six-foot trees I planted grew to provide complete second-story level privacy; now they require annual restraint.

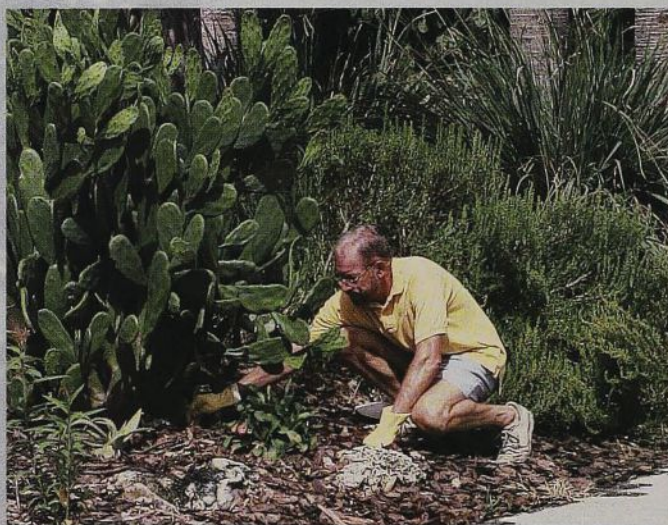
THE PRIVILEGED FEW

AMONG THE DESIRABLE plants in my garden, I designate some as privileged; they may spread and grow where they like. This classification, however, is always subject to review. Among those presently favored and likely to spread around are the yellow- and red-flowered Caribbean milkweed or

bloodflower (*Asclepias curassavica*), oyster plant (*Tradescantia spathacea*), and a seasonal, pink-flowered salt marsh mallow (*Kosteletzkya virginica*). If the continually flowering Caribbean milkweed naturalizes more widely in the Keys—as it has in my yard—it may accommodate local reproduction of the monarch butterfly, which need milkweed in order to breed. Although the monarchs visit us in winter, their reproduction here is uncertain, because there is only one other species of milkweed in the Keys, the native *Asclepias viridis*.

ARMED FOR MAINTENANCE

I HAVE LEARNED that in this new environment, it pays to be prepared when doing garden chores. Entering the garden to weed and prune, I am armed



The author has learned to stay alert when weeding around cacti.

with mosquito repellent, ant insecticide—for the ground nests that one may encounter beneath the mulch—and rubber gloves for the same, as well as for the scorpions lurking beneath a rock. Gloves are also some protection against the sharp edged ancient coral rock, as are well-cushioned shoes.

Weeding a xeriscape of cacti, agaves, and euphorbias, some 10 feet high now, requires controlled movements and additional protective gear—a wide-brimmed hat and eye protection, in case one's head rises forgetfully from beneath one of these. Reaching through a cactus patch or to the base of a spine-tipped agave to grasp and retrieve a weed, re-

quires head back and arm extended, with hand carefully curved to grasp the subject. In such a situation, reacting spontaneously to swat a mosquito or ant can have dire results.

Friends sometimes wonder why I put up with these kinds of plants. But to me, perhaps because I am a native Iowan, they have an exotic presence and demand respect. Much like some of the higher predators in the animal kingdom, they are at once both beautiful and potentially harmful. While weeding these well-armed plants, I sometimes think of myself as equal to a lion tamer or snake handler—the job requires careful vigilance and full attention.

CONNECTIONS

PART OF THE fascination for me in gardening in the Keys is that I have come to appreciate that perhaps no garden can be as cosmopolitan as one in the tropics. On the half acre of my garden, I can grow Alexandra palms (*Archontophoenix alexandrae*) from Australia, Washington palms (*Washingtonia robusta*) from Mexico, and European fan palms (*Chamaerops humilis*) from the Mediterranean.

My garden includes species of the same genus whose native origins could hardly be farther apart. The weeping fig tree from India and Southeast Asia (*Ficus benjamina*) is closely related to the strangler fig (*Ficus aurea*) native to the Caribbean and Florida. And inkberry (*Scaevola frutescens*) is indigenous to the islands of the South Pacific and Indian Ocean, while its cousin *Scaevola plumieri* is native to South Florida and the Caribbean.

My garden in the Florida Keys represents a small but enjoyable sampling of the great global tropical diversity. It also represents one transplanted gardener's introduction and acclimatization to a new and exciting gardening environment. 🌿

A professor of biology at Raritan Valley Community College in Somerville, New Jersey, Roger Johnson lives part-time in the Florida Keys.

Gardening Online

Web Tips from a Savvy Surfer

by Marge Talt

AFTER SPENDING the last six years surfing the Internet, searching for horticultural information of one sort or another, I'm convinced that no matter what you're looking for, the answer exists somewhere in cyberspace. The "somewhere" is the key issue. Finding what you're looking for isn't exactly easy, but the following sites can help point the way.

Starting Point

If you're new to the Internet, where do you go to find what you're looking for?

Many Web sites maintain lists of links to other sites. The American Horticultural Society's Web site (www.ahs.org) has links to many gardening sites, including those listed in this article.

Jim Parra's **The Gardening Launch Pad** (gardeninglaunchpad.com) has been collecting links to gardening Web sites for some four years. His featured sites are reviewed in depth and he's also got interesting articles on assorted gardening subjects.

Though I'm clearly not impartial, I highly recommend the gardening section of **Suite101.com** (suite101.com/topics.cfm/635) as a good place to start getting familiar with the resources on the Net. The site hosts some 60 gardening contributing editors who write about their particular gardening passion; plants, regions, or techniques. New articles are published regularly. There's something for everyone, from novice to specialist, including Kid's Garden, devoted to budding gardeners. Each editor maintains a list of rated links.

A Picture is Worth a Thousand Words

We all want to *see* photographs of plants so we can decide whether or not they appeal to us. Many Web sites have plant photographs, but there's no master index



for photos on the Web—they're all over the map, on all kinds of sites, from personal pages to botanical listings and nurseries. Finding them takes perseverance and luck. Chris Lindsey wants to make it easy for us.

His **hort.net Gallery** (www.hort.net/gallery) now has over 1,000 images, with new, high-quality, images added weekly. You can search by both botanical and common names. Or if you just want to see what's there, you can select "all" for a complete list by botanical name. You can even sign up for an e-mail list that announces new additions.

Finding Nurseries

If you've fallen in lust with a plant that's not available locally, you can probably

order it from one of the thousands of mail-order nurseries—many of which have an online presence. How do you find them? There are lots of lists; the two below are the largest and the oldest—created *by* gardeners, *for* gardeners.

If you're new to mail-order, the **Plants By Mail FAQ** (pbmfaq.dvol.com/list/) is a must-read. Typing in this address will take you to the catalog page, but do click on the link to the FAQ (Frequently Asked Questions). The page contains an alphabetical list of nurseries with addresses and Web links. What's even more useful are the comments, both positive and negative, added to many of the entries by gardeners who have ordered from the nurseries. If you have comments to add, it's easy to do so.

Cyndi Johnson's **Catalog of Catalogs®**, **Version 17** (www.mertus.org/gardening/cat16/frame-cat.html) has grown and been revised over the years. Nurseries are listed alphabetically under categories, with mailing addresses. Where known, from personal or e-mail list member experience, the nurseries are rated for quality, price, service, and variety. If the nursery has a Web site, it's listed.

If the nursery you're interested in isn't listed on one of these Web pages, or it doesn't have a review, subscribe to an e-mail list and ask; someone is bound to know something about it. E-mail lists

THE AMERICAN GARDENER GOES ONLINE! As a new service to American Horticultural Society members, *The American Gardener* will be available online starting in January 2001. Just click on the magazine name on the home page of the AHS Web site (www.ahs.org) and you can view each new magazine in electronic format.

Web Sites for Regional Gardening

We're all most interested in our own back yards—our own specific climate and soils and what will grow best for us. Most of the major American regions are represented on the Web.

University cooperative extension sites offer information tailored to specific states. To find the one in your state, visit **University Cooperative Extension Services** (farmboys.com/resources/ext_serv/ext_serv.htm) on the Farm Boys Marketplace Web site.

Here are some other sites containing regional information. —M.T.

National Gardening (nationalgardening.com/regionalreports/home.tml). This site has the most comprehensive collection of regions—14 in all, with general information about the states, climate, growing, and gardening tips and links.

Two Rainy Side Gardeners (www.rainy-side.com/). Dedicated to the maritime

Northwest; plant profiles, tours of the hosts' gardens, a forum and more.

Mediterranean Climate Gardening (www.support.net/medit-plants/index.html). Mediterranean climate gardening—events, plants, discussions and more.

Terry Yockey's **Northern Gardening** (www.win.bright.net/~tlyockey/). Minnesota & Alaska; articles, photo tours of northern gardens.

A Southern Garden (home.hiwaay.net/~oliver/index.html). An Alabama garden of roses, perennials, shrubs and trees with photos and information, links, etc.

Atlanta Garden Connection (www.atlgarden.com/). Georgia—articles, garden calendar, discussion board, links and more.

Rochester Gardening (www.rochester-gardening.com/index.html). Upstate New York—huge link list, articles, calendar, bulb section and more.

bring the experience of thousands of gardeners to you every day.

Grow It!

Tom Clothier's **Garden Walk and Talk** (www.anet-chi.com/~manytimes/) contains an extraordinary amount of useful information for both beginning and experienced gardeners. He maintains a huge database of germination requirements for annuals, biennials, perennials, trees, and shrubs; he also hosts an excellent series of articles by Amber Hearn on propagation as well as Rick A. Grazzini's "Genetics for Seed Savers," the first description of plant genetics that really explains what goes on in the secret world of plants—and does not put me to sleep. Clothier's own articles, including how to make your own "soil" with shredded Christmas trees, are informative and entertaining. Follow his major heading links, or plug a keyword or two into the search field to find what you're looking for.

Marge Talt is editor of the Gardening in the Shade section of Suite101.com.



2001 American Horticultural Society TRAVEL STUDY PROGRAM

Gardens of the Italian Lakes

June 6–14, 2001



The villas and gardens of the Italian Lakes are the very epitome of grandeur. This special AHS travel/study tour takes you to the the very best private and public gardens on shores of Lake Maggiore and Lake Como in northernmost Italy near the border of Switzerland. Here you will see many gardens of exceptional design and a rich variety of plants, including many alpine plants, which thrive in the climate of this mountainous region.

André Viette, former AHS Board Member and President of André Viette Farm and Nursery in Fishersville, Virginia, is the AHS host for this tour. Viette is a leader in plant development and hybridization, and his ever-popular radio program, *In the Garden with André Viette*, is heard in six states. André and his wife Claire will make this a most memorable travel/study tour.

For complete details about 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.

Book Reviews

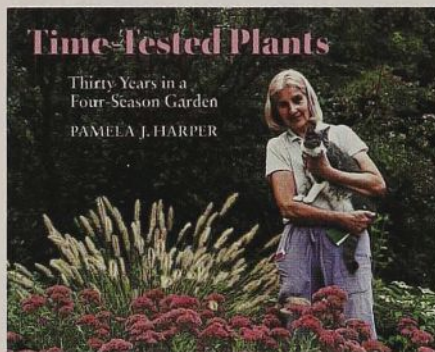
Time-Tested Plants: Thirty Years in a Four-Season Garden.

Pamela J. Harper. Timber Press, Portland, Oregon, 2000. 351 pages. Publisher's price, hardcover: \$39.95.

FEW ARE THE garden books that the reader can open at random and find entries that salute plants like the climbing bleeding heart (*Dicentra scandens*) not only with readable text but with a stunning picture, too. Pamela Harper's *Time-Tested Plants: Thirty Years in a Four-Season Garden* is full of such engaging descriptions and photographs.

In writing about snowdrops (*Galanthus nivalis*) Harper's words of praise are linked to detailed directions for its culture, then

capped with a charming photo of snowdrops blooming through a canopy of cyclamen leaves. And let's not forget her mentions of the hardy begonia, both for the white flowers of *Begonia grandis* 'Alba' and a photo of the backlit leaves of



the pink-flowered variety, where the veining is dark red against a background of flushed light maroon. All of the 250 photographs in the book were taken by Harper and, with the exception of two, all are of her own gardens.

Harper has long had the knack of growing plants in great combinations, whether of flower, texture, or color. After all, she's been gardening, writing about gardens, lecturing about gardens, and taking great photographs for 45 years. She's written several acclaimed gardening books since moving to the United States from England in 1968. One, *Perennials: How to Select, Grow and Enjoy* (1985), has gone through 17 printings; another, *Designing with Perennials* (1990), was selected in 1997 by the American Horticultural Society as one of 75 Great American Gardening Books.

I suspect I'm one of the few gardeners in America who has a signed copy of her first book, *The Story of a Garden*, written back in 1972. It's the tale of a small house on an acre of land, and how she and her husband, Patrick, worked together as plants and ideas multiplied.

Harper now lives on two acres in Seaford, Virginia, where she has spent nearly 30 years developing her gardens—while carefully observing and recording her successes and failures. In this new volume, she offers us the benefit of her experience of watching plants develop from one season to the next over

several years. It's an examination of plants that last, of gardens that mature.

If I had to make a criticism about *Time-Tested Plants: Thirty Years in a Four-Season Garden* it would be of its bulky title. The marketing folks must have decided that 30 years would seem too daunting to the average garden reader in this transient era. I can imagine the Marketer suggesting to the Sales Department, "How about using a main title like *Time-Tested Plants*? That's talking about time in a good way!"

So, in stark contrast to many of today's gardening books, there is no attempt at the old soft sell that pretends gardening is easy or as glamorous as matched cauliflowers on an 18th-century plate. Here are the nuts and bolts—and beauty—of gardening with Pamela Harper.

—Peter Loewer

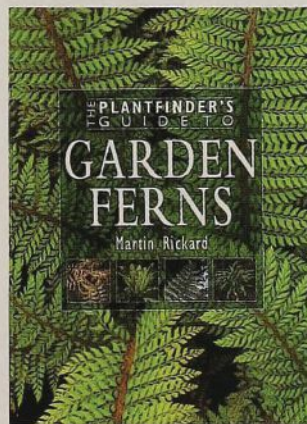
Peter Loewer has authored numerous horticultural books including The Winter Garden, The Wild Garden, and The Evening Garden. He lives in Asheville, North Carolina.

The Plantfinder's Guide to Garden Ferns.

Martin Rickard. Timber Press, 133 S. W. Second Ave. Suite 450, Portland Oregon, 2000. 192 pages. Publisher's price, hardcover \$34.95.

THIS BOOK by Martin Rickard is a beautifully illustrated encyclopedic guide to the cultivation and identification of hardy ferns. Based on observations gleaned from years of research, propagating, and gardening at his hardy fern nursery in Kyre Park in England, Rickard offers readers his first-hand knowledge and keen insights.

Now president of the British Pteridological Society, Rickard was for many years the editor of their horticultural publication, the *Pteridologist*. His practiced attention to detail and editing skills are evidenced in the book's crisp and informative text. In addition there are 20 line drawings and 121 color photographs that both illustrate the text and tantalize the gardener with the possibilities afforded by this distinctive group of plants.



The introductory chapters provide a brief overview of botany and history of ferns and suggestions for their garden uses. Part Two is an A-Z of ferns with descriptions of more than 700 temperate species and cultivars. Martin's entries bring the reader up-to-date on current fern introductions. In Part Three

The Cedar Store

We Carry A Full Line
of Cedar Swings
and Gliders,
Garden Benches,
Tables, Chairs and Accessories.

To Order Visit Our
Online Store

www.cedarstore.com/ag.html

OR Call Toll Free
(888) 293-2339
Free Brochure

WIN
a
Garden Bench



#1010 5' Allegheny
Highback Swing

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



#2212 Fanback Glider Collection

GREAT
GIFTS!

Handmade by Pennsylvania Amish Craftsmen

Rickard offers concise recommendations for propagating ferns and for dealing with pests and diseases.

I was delighted with Martin's caution toward revising botanical names. While botanical accuracy is certainly a worthy goal, all too often a new name is assigned, then later rejected, leading to confusion. Martin is also notably conservative in evaluating cold tolerance—he gardens in a region of Britain with temperatures comparable to USDA Zones 8 and 9. I am delighted to report that a number of his entries are rather harder than noted. Experimentation is recommended.

There are a few areas where the descriptions do not match the material we are familiar with in North America. I have a particular problem with his lumping *Dryopteris championii*, *D. cystolepidota*, *D. fuscipes*, *D. gymnosora*, and *D. purpurella* as possibly under the aegis of *Dryopteris erythrosora*. Here they are quite distinct, but as Martin notes, more research is clearly required.

The fern community went for many years with little useful horticultural literature. This all changed with the welcome publication of Reginald Kaye's *Hardy Ferns* in 1968, David Lloyd Jones' *Encyclopaedia of Ferns* in 1987, and John Mickel's *Ferns for American Gardens* in 1994. Now we have Rickard's *The Plantfinder's Guide to Garden Ferns*, a visual delight and a valuable, up-to-date resource. I wouldn't be without it.

—Sue Olsen

Sue Olsen is the owner of Foliage Gardens, a mail-order fern nursery in Bellevue, Washington, and is the editor of the Hardy Fern Foundation's quarterly newsletter.

Gaining Ground.

Maureen Gilmer. Contemporary Books, Lincolnwood, Illinois, 2000. 200 pages. Publisher's price, hardcover: \$27.95.

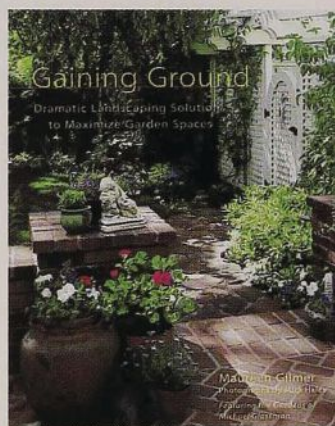
THERE ARE A LOT OF BOOKS on the market that purport to provide solutions to the challenges of tiny garden spaces, but few deliver on their promise as successfully as *Gaining Ground* by Maureen Gilmer.

Gilmer begins each chapter with a thorough discussion of specific problems, and offers practical and creative solutions. For example, she points out that in tiny gardens where there is room for very few plants, the plants should be, "the most beautiful, interesting, and varied subjects you can find." Where homes are very close together, Gilmer suggests using foliage and artifice, rather than high walls, to create separation and privacy.

Chapters cover topics such as making a tract home or condominium garden unique within the constraints of the neighborhood; reclaiming "lost" land such as the narrow strip at the side of your home or even your front garden; and creating a private, secure outdoor retreat where garden space is minimal.

A chapter on integrating water features into a small garden is rich with tips on installing various types, including fountains, and adding accessories such as dramatic lighting.

Landscape design concepts are backed up with case studies of actual garden design projects. Using examples from the work of California landscape designer Michael



Glassman, Gilmer summarizes the challenges presented by the various properties, and then walks the reader through the creative process of solving them. "Before" and "after" photographs enhance the text and dramatically illustrate projects such as the transformation of a dull, barely noticeable tract house entrance into a significant entryway. Gilmer quotes Glassman: "The front walkway should...never [be] in a straight line, or it looks like a gigantic tongue coming out of a front door mouth."

Still, it would have been nice if Gilmer had included the work of other designers, thus adding to the vitality and variety of the book; not all of Glassman's designs are to my taste, although his creativity and cleverness at problem-solving is readily apparent. A final quibble: the book has no index, which is a great frustration for those who want to use it as a handy reference.

But all and all, the book is a pleasure to read. It offers some great ideas for maximizing garden space, the text flows easily, and although the featured projects are all California gardens, the principles illustrated are transferable to anywhere in the country.

—Catriona Tudor Erler

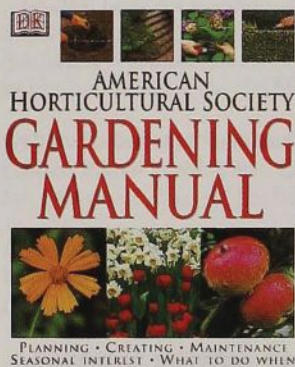
Catriona Tudor Erler's most recent garden books are *Complete Home Landscaping*, *The Frugal Gardener*, and *Garden Rooms: Create and Decorate Outdoor Garden Spaces*. She writes and gardens in Vienna, Virginia.

Gardeners' Books

The books listed here have not been critically evaluated; they have been chosen for description based on unusual subject matter or substantive content. 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.

The American Horticultural Society Gardening Manual.

Gillian Roberts, Editor. Dorling Kindersley Publishing, New York, New York, 2000. 420 pages. Publisher's price, hardcover: \$39.95.



THIS comprehensive gardening guide is divided into four main parts: "Planning Your Garden" invites you to consider what makes a good garden and how you can make the most of your landscape. "Making and Looking After Your Garden" provides instructions for seeding a lawn, installing decking, constructing a water feature, and maintaining hedges. "What Looks Good

When" is a photographic catalog of plants—with a brief description of the cultural requirements for each. Finally, "What to Do When" is a schedule of gardening reminders.

Lots of color photographs help illustrate activities, projects, and materials. An extensive index allows users to quickly find the information they are seeking.

Ball Culture Guide: The Encyclopedia of Seed Germination.

Jim Nau. Ball Publishing, Batavia, Illinois, 1999. 243 pages. Publisher's PRICE, softcover, \$49.95.

Ball Culture Guide

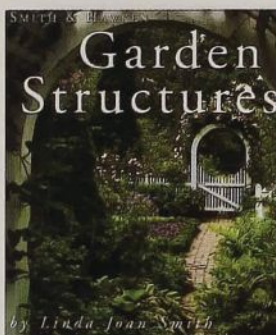


THOUGH written for professional growers, this easy-to-use manual provides important information for anyone who likes to grow herbaceous ornamental plants from seed. Organized according to crop type—bedding plants, potted flowers and

foliage plants, herbs, cut flowers, perennials, and ornamental grasses—plants are listed alphabetically by botanical name. Detailed germination information is provided for each of the more than 300 entries, including expected germination percentage, optimal temperatures for both germination and growing on, days to germination, and more. Tips and cautions are provided throughout to help your germinating efforts be more successful.

Smith and Hawken: Garden Structures.

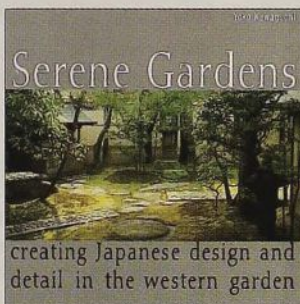
Linda Joan Smith. Workman Publishing, New York, 2000. 246 pages. Publisher's price, hardcover: \$35.



THIS BEAUTIFULLY illustrated book discusses structural elements in the garden and suggests their importance in creating a mood, serving as guideposts, establishing a sense of history, and promoting memories. Part One tackles "The Garden's Boundaries," including gates, doorways, fences, walls, and edgings. Parts Two and Three cover "The Garden Above" and "The Garden Underfoot" respectively. Part Four, "The Living Garden" spans subjects from espalier and pleaching to potting sheds and greenhouses. Sidebars are sprinkled throughout the text, offering specific advice on such topics as what to plant between cracks and how to build a classic potting bench.

Serene Gardens: Creating Japanese Design and Detail in the Western Garden.

Yoko Kawaguchi. Trafalgar Square Publishing, North Pomfret, Vermont, 2000. 144 pages. Publisher's price, hardcover: \$29.95.



AUTHOR Yoko Kawaguchi presents Japanese garden design as a viable option for western landscapes. She discusses traditional Japanese style and components of the Japanese garden, providing practical advice on how plants, paths, fences, rocks, and borrowed vistas can be combined to achieve a pleasing affect. Over

100 color photographs and drawings illustrate concepts and provide inspiration for the reader.

Choosing Small Trees.

Peter McHoy. Laurel Glen Publishing, San Diego, California, 2000. 128 pages. Publisher's price, hardcover: \$19.95.

THIS BOOK IS A GUIDE to selecting, planting, and caring for trees that will reach a maximum height of 30 feet. It profiles over 40 species, includes abundant color photographs, and provides helpful information about using trees as part of your overall landscape design. A short section covers caring for trees grown in containers.

Regional Happenings

NORTHEAST

JAN. 11,12. **Expressing Nature and Culture in the Designed Landscape.** Seminar. Connecticut College Arboretum, New London, Connecticut. (215) 247-5777.

JAN. 18, FEB. 15, MAR. 15. **American Gardening Lecture Series: Adoring the Exotic, Treasuring the Native.** Lectures by selected horticultural experts. New York Botanical Garden, Bronx, New York. (718) 817-8747.

JAN. 25. **Horticultural Lecture #1: Daniel Hinckley—Heronswood in Kingston, WA.** Presented by Wave Hill. Hunter College School of Social Work Auditorium, New York, New York. (718) 549-3200.

JAN. 26 & FEB. 3. **Imaginative Ideas for Residential Landscape Design.** Course sponsored by the Massachusetts Horticultural Society. Elm Bank Reservation, Dover, Massachusetts. (617) 536-9280.

JAN. 26–FEB. 25. **Nature's Pharmacy: Plants That Heal.** Exhibition. New York Botanical Garden, Bronx, New York. (718) 817-8700.

JAN. 30. **Plant-O-Rama.** Trade show and symposium. Brooklyn Botanic Garden, Brooklyn, New York. (718) 623-7220.

FEB. 1. **Ecological Meadow Gardening with Native North American Flowers and Grasses.** Lecture by Neil Diboll. Massachusetts Horticultural Society. Wellesley Community Center, Massachusetts. (617) 536-9280.

FEB. 5. **Feng Shui in the Landscape.** Class. New York Botanical Garden, Bronx, New York. (718) 817-8747.

FEB. 15–18. **Rhode Island Spring Flower and Garden Show.** Rhode Island Convention Center, Providence, Rhode Island. (401) 421-7811.

FEB. 16. **Changing Climates, Changing Landscapes, Changing Attitudes.** Ecological Landscaping Association's winter conference. Boxborough, Massachusetts. (978) 232-9047.

FEB. 22. **Horticultural Lecture #2: Robert Dash—Madoo in Sagaponack, NY.** Presented by Wave Hill. Hunter College School of Social Work Auditorium, New York, New York. (718) 549-3200.

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.

FEB. 22–25. **Connecticut Flower & Garden Show.** Exposition Center, Hartford, Connecticut. (860) 529-2123.

FEB. 23–25. **Gramercy Garden Antiques Show.** Presented by the Horticultural Society of New York. 69th Regiment Armory, New York, New York. (212) 255-0020.

MAR. 1. **Of Time and Place.** Lecture on landscape design by Darrel Morrison. Massachusetts Horticultural Society. Wellesley Community Center, Massachusetts. (617) 536-9280.

MAR. 2–4. **Garden Dreams.** Lectures and workshops. Mohonk Mountain House, New Paltz, New York. (845) 255-1000.

MID-ATLANTIC

JAN. 13–MAR. 11. **Exploring Garden Transformations: 1900–2000.** Exhibit. Longwood Gardens, Kennett Square, Pennsylvania. (610) 388-1000.

JAN. 17 & 18. **Expressing Nature and Culture in the Designed Landscape.** Seminar. Co-sponsored by The Morris Arboretum. Arboretum Villanova, Villanova, Pennsylvania. (215) 247-5777.

JAN. 19–21. **Virginia Flower and Garden Show.** Virginia Beach Pavilion, Virginia Beach, Virginia. (757) 627-2769.

FEB. 22–25. **Maymont Flower & Garden Show.** Richmond Center, Richmond, Virginia. (804) 358-7166.

FEB. 22–25. **New Jersey Flower & Patio Show.** Garden State Exhibit Center, Somerset, New Jersey. (800) 215-1700.

MAR. 2–4. **25th Annual Richmond Home & Garden Show.** Richmond Raceway Complex, Richmond, Virginia. (800) 288-5653.

MAR. 2–4 & 9–11. **Maryland Home & Flower Show.** Maryland State Fairgrounds, Timonium, Maryland. (410) 863-1180.

MAR. 4–11. **Philadelphia Flower Show.** Pennsylvania Convention Center, Philadelphia, Pennsylvania. (215) 988-8899.

SOUTHEAST

JAN. 13 & 14. **24th Annual Redland Natural Arts Festival.** Tropical art, plants, and food. Fruit & Spice Park, Homestead, Florida. (305) 247-5727.

JAN. 27. **19th Camellia Promenade.** Florida Southern College, Lakeland, Florida. (863) 688-0916.

JAN. 31. **Wildflower Symposium.** State Botanical Garden of Georgia, Athens, Georgia. (706) 542-6156.

FEB. 2–4. **Southern Gardening Symposium.** Callaway Gardens, Pine Mountain, Georgia. (800) 225-5292.

FEB. 8–11. **Atlanta Garden & Patio Show.** Cobb Galleria Centre, Atlanta, Georgia. (770) 998-9800.

FEB. 21–25. **Southeastern Flower Show.** Atlanta Exposition Center, Atlanta, Georgia. (404) 888-5638.

FEB. 23–25. **Palm Beach Tropical Flower & Garden Show.** Flagler Drive, West Palm Beach, Florida. (561) 655-5522.

MAR. 1–4. **Nashville Lawn & Garden Show.** Tennessee State Fairgrounds, Nashville, Tennessee. (615) 352-3863.

MAR. 2 & 3. **9th Annual Hellebore Days.** Piccadilly Farm, Watkinsville, Georgia. (706) 769-6516.

MAR. 3. **Grand Opening—American Orchid Society's new international headquarters.** Orchid gardens, greenhouses, library. Delray Beach, Florida. (516) 585-8666.

MAR. 5 & 6. **Artist in the Garden: The Interaction of Nature and Art.** The 11th Annual Davidson Horticultural Symposium. Davidson College, Davidson, North Carolina. (704) 892-6281.

NORTH CENTRAL

JAN. 10-13. **Expanding the No-Till Toolbox.** 9th Annual National No-Tillage Conference. Omni Netherland Plaza Hotel, Cincinnati, Ohio. (262) 782-4480.

JAN. 21. **Celebrating Natural Light in the Landscape.** Lecture by Rick Darke. Chicago Botanic Garden, Glencoe, Illinois. (847) 835-6850.

FEB. 8-11. **Omaha Lawn, Flower & Patio Show.** Omaha Civic Auditorium, Omaha, Nebraska. (800) 475-7469.

FEB. 9-11. **13th Annual Midwest Herb and Garden Show.** Times Square Mall, Mt. Vernon, Illinois. (618) 787-2929.

FEB. 10. **The Landscaping Revolution.** The 21st Annual Natural Landscaping Conference. Presented by the Milwaukee Audubon Society. UW-Milwaukee Union, Milwaukee, Wisconsin. (262) 375-1565.

FEB. 10-18. **National City Cleveland Home & Garden Show.** International Exhibition Center, Cleveland, Ohio. (216) 529-1300.

FEB. 24-MAR. 4. **The Columbus Dispatch Charities Home & Garden Show.** Ohio Expo Center, Columbus, Ohio. (614) 461-5257.

FEB. 28-MAR. 4. **Fort Wayne Home & Garden Show.** Memorial Coliseum, Fort Wayne, Indiana. (812) 546-0933.

MAR. 2-4. **The Garden Market.** Cincinnati Convention Center, Cincinnati, Ohio. (513) 281-0022.

SOUTH CENTRAL

FEB. 1-4. **Oklahoma Garden Festival.** Myriad Convention Center, Oklahoma City, Oklahoma. (405) 528-2996.

FEB. 28-MAR. 4. **Wichita Lawn, Flower & Garden Show.** Century II Expo Hall, Wichita, Kansas. (316) 721-8740.

MAR. 2-4. **Arkansas Flower & Garden Show.** Statehouse Convention Center, Little Rock, Arkansas. (501) 821-4000.

MAR. 3 & 4, 10 & 11. **66th Annual Azalea Trail.** Tour of homes and gardens. Sponsored by River Oaks Garden Club. Houston, Texas. (713) 523-2483.

SOUTHWEST

JAN. 12-14. **Maricopa County Home & Garden Show.** Arizona State Fairgrounds, Phoenix, Arizona. (800) 995-1295.

Garden Series Returns to The Cloister

THE EVER-POPULAR Cloister Garden Series, co-sponsored by AHS, returns to the historic Cloister resort on Sea Island, Georgia, from February 22 to 25. Now in its 12th year, this rite of spring provides attendees with an unsurpassed blend of magnificent grounds, a lovely seaside setting, and insightful, practical sessions from a range of horticultural experts.

Friday's presenters include Christopher DeRosa, landscape designer and owner of the New England Bamboo Company, lecturing on bamboo propagation; award-winning writer and photographer Barbara Perry Lawton, speaking on "The Glorious Mint"; and Susan Orlean, author of *The Orchid Thief*, sharing her research on the fascinating world of orchids. Saturday brings sessions with Jim Wilson, author of *Jim Wilson's Container Gardening*, landscape architect Neil Odenwald on flower gardening, and horticultural consultant Ken Miller discussing natural pest control methods. The series concludes on Sunday with a presentation by writer and illustrator Peter Loewer titled "The New Small Garden," followed by landscape architect Norman Johnson's tips for choosing garden ornaments.

Registration fees are \$375 per person or \$650 for a couple, with both participating. The fee includes membership in AHS; current members will receive a one-year extension of their membership. Cloister rates per night are additional, and include accommodation, three full-course meals each day, and recreation fees. Limited local registration is also available. For more information or to register, call (800) 732-4752 or visit the Cloister Web site at www.seaisland.com.

—Margaret T. Baird, Communications Assistant

FEB. 10. **Romancing the Garden: 50th Anniversary and Valentine's Day Celebration.** Educational and horticultural events. Denver Botanic Gardens, Denver, Colorado. (303) 370-8187.

FEB. 10-18. **Colorado Garden & Home Show.** Colorado Convention Center, Denver, Colorado. (303) 932-8100.

FEB. 24. **World Desert Fair.** Boyce Thompson Arboretum, Superior, Arizona. (520) 689-2811.

NORTHWEST

JAN. 30. **Collecting Plants in Southwest China.** Lecture by Dan Hinckley. Sponsored in part by the Seattle Chinese Garden Society. South Seattle Community College, Seattle, Washington. (206) 764-5308.

JAN. 31-FEB. 4. **GMC Tacoma Home & Garden Show.** Tacoma Dome, Tacoma, Washington. (253) 756-2121.

FEB. 7-11. **Northwest Flower & Garden Show.** Washington State Convention and Trade Center, Seattle, Washington. (800) 229-6311.

FEB. 15. **Earth-Clouds and Dragon Bones: A History of Stone in the Chinese Garden.** Lecture by Jan Kowalczewski Whitner. Sponsored in part by the Seattle Chinese Garden Society. South Seattle Community

College, Seattle, Washington. (206) 764-5308.

FEB. 21-25. **GMC Portland Home & Garden Show.** Portland Expo Center, Portland, Oregon. (503) 246-8291.

WEST

JAN. 13. **Mediterranean Influences on California Gardens.** Lecture by Ken Nacaba. Rancho Los Cerritos, Long Beach, California. (562) 570-1755.

JAN. 24-27. **21st Annual Ecological Farming Conference.** Asilomar Conference Center, Pacific Grove, California. (831) 763-2111.

FEB. 8-11. **Fascination of Orchids.** South Coast Plaza, Costa Mesa, California. (714) 964-3265.

FEB. 10. **English Influences on California Gardens.** Lecture by Christine Rosmini. Rancho Los Cerritos, Long Beach, California. (562) 570-1755.

FEB. 17 & 18. **Camellia Show.** Huntington Botanical Gardens, San Marino, California. (626) 405-2141.

FEB. 24 & 25. **Bonsai-A-Thon.** Demonstrations, tours, plant and merchandise sales. Huntington Botanical Gardens, San Marino, California. (626) 405-2141. 🌱



The Cloister Garden Series

February 22 - 25, 2001

Come glean from the experts in the lush elegance of Sea Island's world-class resort. Nationally recognized garden authorities bring their rich diversity of specialized knowledge to this annual summit of gardening enthusiasts.

The Cloister's carefully nurtured grounds provide a fertile setting for three stimulating days of horticultural presentations including: *Bamboo*, *The Glorious Mint*, *Adventures in the Orchid World*, *Contain Yourself: Everything's Gonna Be All Right*, *The Bountiful Flower Garden—A Return to Basics*, *Bug Wars: Near Perfection without Pesticides*, *The New Small Garden*, and *Garden Jewelry*.

Tours of a private St. Simons Island residence and its beautifully landscaped gardens are among the highlights. Please join us.

The Cloister Garden Series is one of the Great American Lecture Series co-sponsored by the American Horticultural Society.

Call 800-SEA-ISLAND to reserve.

Sea Island
THE CLOISTER®

www.seaisland.com

Seasonal Garden Goods

If you like to grow your own plants from seed, these new or time-tested garden products will help you get a jump on spring.

Seeds Of Italy

Try growing your own fresh Italian ingredients this year with seeds straight from the source. Seeds of Italy is the distributor for Franchi Sementi of Bergamo, founded in 1783 and the second largest seed company in Italy. The company markets an extensive range of Italian vegetable, fruit, herb, and flower varieties. Currently, American customers may order from the Web site only, but the company plans to have seeds available in U.S. outlets this spring. Prices range from about \$1.80 to \$2.50 per packet.

Seeds of Italy, 260 West Hendon Broadway, London NW9 6BE.
0044-0208-930-2516.
www.seedsofitaly.com.



"Gro For It" Propagation Mat

A high-quality, commercial-grade mat that provides even, gentle heat for starting seeds. Place the wire rack over the rubber mat, then set your seed trays on top. The mats come in two sizes; the 90-watt mat measures roughly 22 inches by 15 inches by 24 inches, while the larger, 120-watt mat is 38 inches by 17 inches by 24 inches. The mats are priced at \$54 and \$79.

Charley's Greenhouse Supply, 17979 State Route 536, Mount Vernon, WA 98273. (800) 322-4707.
www.charleysgreenhouse.com.

Luster Leaf Classic Impressions™ Garden Labels

This line features an assortment of attractive, durable metal garden labels in stainless steel, copper, and zinc. Plant names can be marked on the labels with permanent markers or carefully engraved with a sharp tool. Choose between two styles of classic in-ground "T" labels, sold in packets of 10 and retailing for about \$5.50 and \$12.50. Ornamental stakes with detachable hanging plant tags are also available, sold in sets of three for about \$5.50 to \$7.

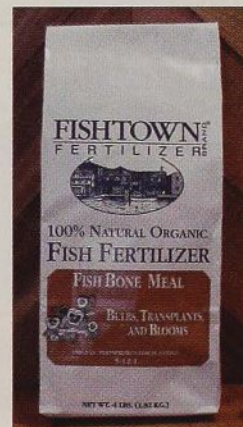


Luster Leaf Products Inc., 2220 Techcourt, Woodstock, IL 60098. (800) 327-4635. www.lusterleaf.com.

Fishtown Fertilizers

Bio-Oregon's line of nutrient-rich organic fertilizers are made from by-products the Northwest's commercial fishing industry that would otherwise be sent to landfills. The fertilizers are deodorized during the manufacturing process, so there's a marine scent, but not a strong fishy odor. Available in one liquid and three dry pellet formulations. Prices range from \$9.50 to \$15.

Bio-Oregon, P.O. Box 429, Warrenton, OR 97146. (800) 962-2001.
www.fishtown.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.

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.

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.carino-nurseries.com.


UNCOMMON AND DISTINCTIVE ORNAMENTAL PLANTS FOR THE DISCRIMINATING GARDENER. Perennials, grasses, shrubs, trees, vines and ferns. Visit our Web site at www.blumoon-nursery.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.

ROSES

HORTICO ROSES. OVER 700 VARIETIES: new show roses and ground covers; English and old garden roses; antique and classic roses by Beales; new Ben Williams roses; hardy Ottawa explorers; Manitoba Parkland varieties; and our fabulous Pavement roses that are disease-free, low-maintenance types suitable for harsh prairie winters. A superb collection. Our fields are known to be virus-free. Orders shipped with our temperature-controlled truck to UPS depots in the USA for local distribution. Catalog \$3. Please submit retail orders by fax at (905) 689-6566, e-mail, or Web site. HORTICO INC., 723 Robson Road, Waterdown, Ontario LOR 2H1. Tel: (905) 689-6984 or (905) 689-3002. E-mail: office@hortico.com; Web site: www.hortico.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

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
Vassalboro, Maine 04989-9713
Ph/Fax: (207) 923-3836

To place your ad here, contact
Mike Armstrong
(703) 518-4700 ext. 19

English Garden Hive
PUT THE BUZZ BACK IN YOUR GARDEN

- Yard art that works for you
- Copper roof
- Simplified system designed for home gardeners



FOR MORE INFORMATION CONTACT
BRUSHY MOUNTAIN BEE FARM, INC.
1-800-233-7929 • www.beeequipment.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

Pronunciations and Planting Zones

Most of the cultivated plants in this issue are listed here with their pronunciations and USDA Plant Hardiness and AHS Plant Heat Zones. If 0 is listed in place of USDA hardiness zones, it means that plant is a true annual—it completes its life cycle and dies in a year or less. To purchase an AHS Plant Heat Zone Map, call (800) 777-7931 ext. 0.

A-C

Acanthocereus tetragonus uh-kan-tho-SEER-ee-us teh-traH-GO-nus (9-11, 12-9)
Actaea rubra ack-TEE-uh ROO-bruh (4-8, 8-1)
Aesculus parviflora ES-kyew-lus par-vih-FLOR-uh (3-7, 8-4)
A. pavia A. PAY-vee-uh (5-9, 9-1)
A. turbinata A. tur-bih-NAY-tuh (6-8, 8-6)
Agave americana uh-GAH-vee uh-mair-ih-KAN-uh (9-11, 12-5)
***Angelonia* 'Angel Mist Purple Stripe'** an-jeh-LO-nee-uh (9-10, 10-9)
***Antirrhinum* 'Montego Orange Bicolor'** an-tihR-RYE-num (7-9, 9-1)
Archontophoenix alexandrae ar-kon-toH-FEE-niks al-ex-SAN-dree (10-11, 12-9)
Arctotis venusta ark-TOH-tiss veh-NEW-stuh (10-10, 10-1)
Asclepias curassavica as-KLEE-pee-us kur-uh-SAV-ih-kuh (9-11, 12-1)
Asimina triloba uh-SIH-mih-nuh try-LO-buh (4-8, 9-5)
Betula alleghaniensis BET-yew-luh al-leh-gay-nee-EN-sis (4-7, 7-1)
Borreria frutescens bo-REE-kee-uh froo-TES-enz (10-11, 11-9)
Brachycome iberidifolia bra-KIH-ko-mee eye-beer-ih-dih-FO-lee-uh (5-8, 9-3)
Buddleia davidii BUD-lee-uh duh-VID-ee-eye (6-9, 9-3)
Bursera simaruba bur-SAIR-ruh sim-uh-REW-buh (9-11, 12-7)
***Buxus sempervirens* 'Graham Blandy'** BUCKS-us sem-pur-VY-renz (6-8, 8-6)
Calotropis procera kal-o-TRO-piss pro-SAIR-uh (10-11, 12-9)
Capparis cynophallophora CAP-uh-riss sin-o-fuh-LOF-ur-uh (10-11, 12-10)
Carica papaya KAH-rih-kuh puh-PIE-yuh (10-11, 10-4)
Cercis canadensis SUR-siss kan-uh-DEN-siss (4-9, 9-2)
C. racemosa C. ras-eh-MO-suh (8-9, 9-8)

Cereus uruguayanus SEER-ee-us yur-uh-gwy-AN-nus (9-11, 12-10)
Chelone lyonii chel-OH-nee lie-O-nee-eye (3-9, 9-3)
Citharexylum fruticosum sith-uh-REH-zuh-lum froo-tih-KO-sum (10-11, 12-9)
Coptis trifolia* subsp. *groenlandica COP-tiss try-FO-lee-uh gren-LAN-dih-kuh (2-7, 7-1)
Cornus canadensis KOR-nus kan-uh-DEN-siss (2-7, 7-1)

D-J

Dimorphotheca pluvialis dye-mor-fo-THEE-kuh plu-vee-AH-liss (9-11, 12-1)
D. sinuata D. sin-yew-AY-tuh (0, 8-1)
Eupatorium album yew-puh-TOR-ee-um AL-bum (4-8, 12-4)
E. purpureum E. per-PER-ee-um (5-11, 9-1)
Ficus benjamina FIE-kus ben-juh-MEE-nuh (10-11, 12-10)
Furcraea foetida fur-KREE-uh FEE-tih-duh (10-11, 12-9)
Gerbera jamesonii jer-BEER-uh (GAIR-bur-uh) jaym-SOWN-ee-eye (8-11, 12-2)
Gymnocarpium dryopteris jim-no-KAR-pee-um dry-OP-ter-iss (4-8, 8-1)
Gypsophila elegans jip-SOF-ih-luh EL-ih-ganz (5-9, 9-1)
Hamamelis virginiana ham-uh-ME-liss vir-jin-ee-AN-uh (3-8, 8-1)

Hylocereus undatus high-lo-SEER-ee-us oon-DAY-tus (59°, 12-10)
***Ilex crenata* 'Sky Pencil'** EYE-leks kreh-NAY-tuh (5-7, 7-3)
I. glabra GLAB-ruh (5-9, 9-3)
I. xmeserveae I. meh-SER-vee-uh (5-9, 9-5)
I. verticillata I. vur-tih-sih-LAY-tuh (4-8, 8-2)
Illicium verum ih-LISS-ee-um VER-um (7-9, 9-7)
Jacquinia keyensis juh-KWIN-ee-uh kay-EN-sis (10-11, 12-10)

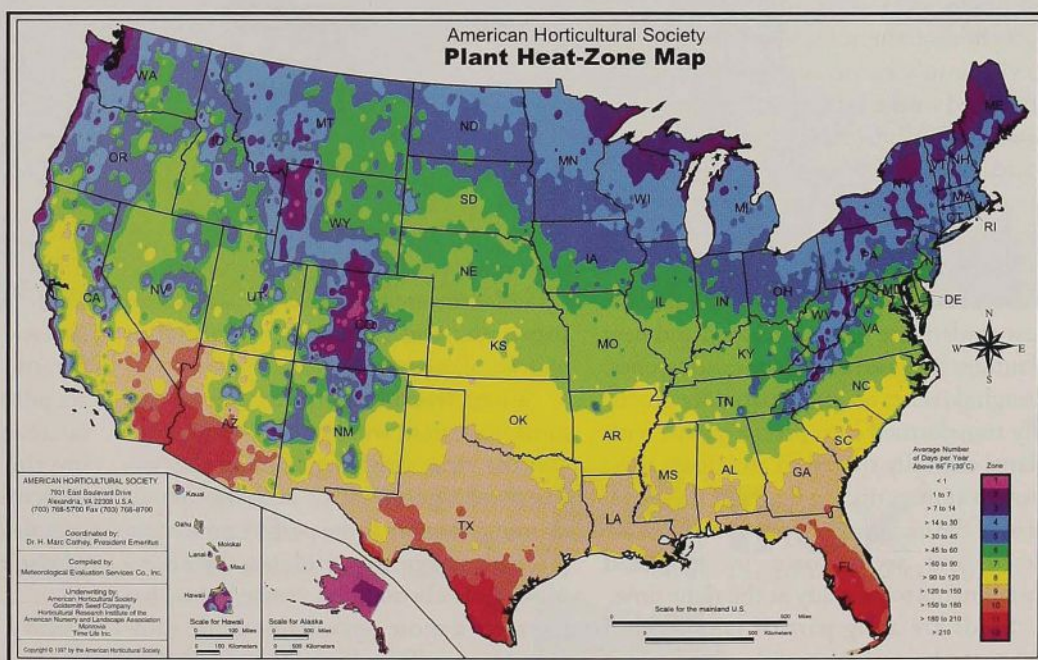
K-R

Kosteletzkya virginica ko-steh-LETZ-kee-uh vir-JIN-ih-kuh (6-11, 12-6)
Leucanthemum xsuperbum loo-CAN-theh-mum soo-PUR-bum (4-7, 7-1)
Linnaea borealis lih-NEE-uh bor-ee-AL-iss (2-6, 6-1)
Linum perenne LIE-num pur-EN-ee (7-9, 8-2)
Lobularia maritima lob-yew-LAIR-ee-uh muh-WRIT-ih-muh (0, 9-1)
Morinda citrifolia mo-RIN-duh sih-trih-FO-lee-uh (6-9, 9-6)
Opuntia cochenillifera o-PUN-shuh ko-ke-ni-LIH-fur-uh (45°, 12-9)
O. stricta O. STRICK-tuh (9-11, 12-1)
***Osteospermum barbariae* var. *compactum* 'Purple Mountain'** os-tee-o-SPUR-mum bar-BAR-ee-ee var. kom-PAK-tum (6-10, 8-1)

O. ecklonis O. ek-LO-nus (10-11, 7-1)
Phacelia campanularia fuh-SEEL-yuh kam-PAN-yew-LAIR-ee-uh (0, 9-1)
Phlox drummondii FLOKS drum-MON-dee-eye (0, 12-1)
Quercus alba KWER-kus AL-buh (5-9, 9-5)
Q. rubra Q. ROO-bruh (4-9, 9-1)
Reseda odorata reh-SEE-duh o-doh-RAY-tuh (9-10, 9-1)

S-Z

***Salvia mexicana* 'Limelight'** SAL-vee-uh mex-ih-KAN-uh (9-11, 12-1)
***S. xsylvestris* 'Mainacht'** S.x sil-VES-triss (5-9, 9-3)
***S. viridis* 'Marble Arch Mix'** S. VEER-ih-diss (10-11, 12-1)
Scaevola plumieri skee-VO-luh ploome-AIR-eye (10-11, 12-1)
Tabebuia argentea tah-be-BYEW-ee-uh ar-JEN-tee-uh (10-11, 12-10)
Tradescantia spathacea trad-es-KAN-tee-uh spath-uh-SEE-uh (9-11, 12-1)
Tsuga canadensis SOO-gah kan-uh-DEN-siss (4-8, 8-1)
***Verbena lilacina* 'De La Mina'** ver-BEE-nuh lie-LASS-ih-nuh (10-11, 12-5)
***Viola xwittrockiana* 'Clear Crystals White'** VY-o-luh wih-traH-kee-AN-nuh (4-8, 9-1)
Washingtonia robusta wash-ing-TOH-nee-uh ro-BUS-tuh (46°, 12-10)





Notes from River Farm

The Busy Days of Winter

by David J. Ellis

A gardener must not feel sorry for himself, even in winter, and no matter how great the cause.

Henry Mitchell, *The Essential Earthman*

JANUARY is a restless month for most gardeners. The winter solstice has come and gone, offering the promise of gradually lengthening days, yet February and March stretch ahead as a seemingly endless chain of bleak, gray days.

Yet there is much to be achieved in January and February that would otherwise go undone in the mad frenzy of spring, when gardening pheromones override planning and forethought with the urgent desire to dig and plant, to play an active role in the awakening of the earth going on all around us.

From my second-floor window here at the American Horticultural Society's River Farm headquarters, I have an opportunity to vicariously participate in the carefully organized winter activities of our horticultural staff. While there is certainly much more to prepare for here on a 25-acre public garden than there is for the average home gardener, the basic list of winter chores is much the same.

Planning is paramount of course, for new gardens are to be developed and new plantings designed to replace existing ones. Rough sketches on graph paper are gradually transformed into precise plans, with plants carefully spaced to anticipate their growth at maturity. To flesh out these gardens of the imagination, plants must be ordered and seeds sown in staggered installments to be ready at the right time.

Seeds are a big part of January and February here at River Farm, for it is at

this time of year that we are also inundated with requests for the seeds offered through our annual free seed exchange. The horticultural staff and interns work feverishly to fill the steady stream of orders pouring in, while at the same time

for the horticultural staff to instruct interns on the finer points of pruning a variety of shrubs and small trees.

And on those days when the outside world is not fit for man or beast, there are always tools to be sharpened or equipment to be serviced. This is the kind of winter chore that is often written about but rarely accomplished by any but the most virtuous gardeners. But it makes for a good New Year's resolution and, if successfully achieved, provides a glow of self-satisfaction when the time comes to put the tools into action.

No matter how long and bleak winter appears from an early January perspective,



River Farm in the snowy embrace of winter—the quiet before the flurry of activity and growth of another spring.

keeping up with the mundane day to day maintenance chores of winter—picking up fallen branches, clearing paths after snowfalls, and scouting for animal or weather damage to plants.

When weather permits, one of the most important winter tasks—and probably the most satisfying from an activity-deprived gardener's standpoint—is pruning. January is the perfect time to rejuvenate overgrown deciduous shrubs, removing deadwood and crossed branches to create a more open habit come summer. Here at River Farm it's an ideal time

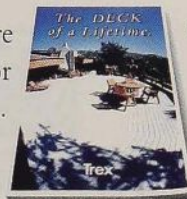
spring always manages to catch us by surprise. One day we're crunching over frozen grass peering anxiously at the ice-covered remnants of the previous season's perennials, the next day daffodil spikes are pushing up everywhere and the yellow tassels of witch hazel flowers are perfuming the air. It's important to make the most of every moment in between, or the urgent demands of spring can be overwhelming.

David J. Ellis is editor of The American Gardener.

IT'S NOT THE View
SO MUCH AS THE Vision.



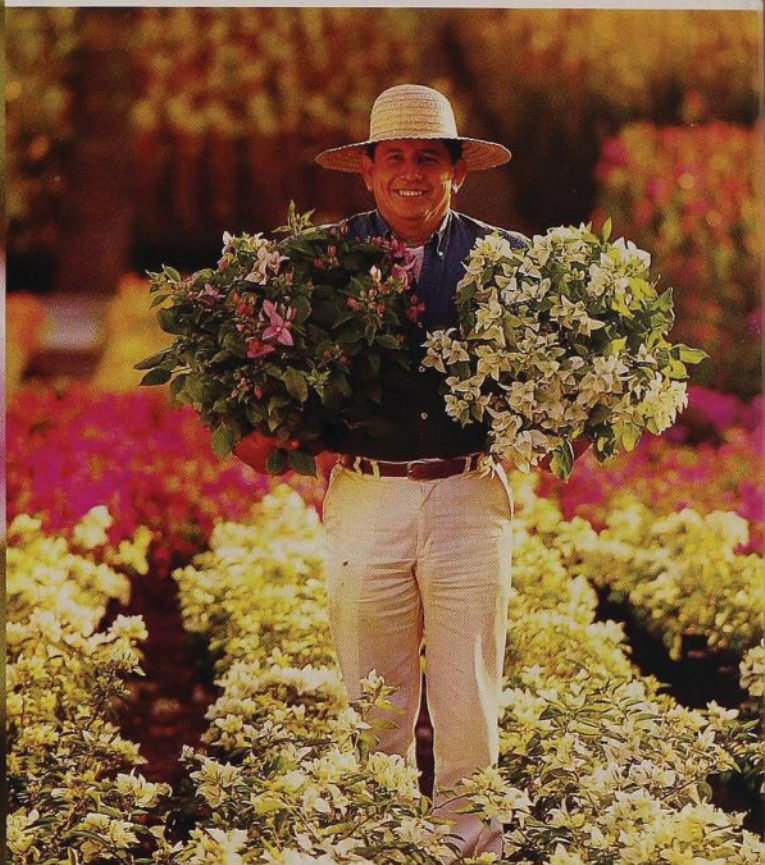
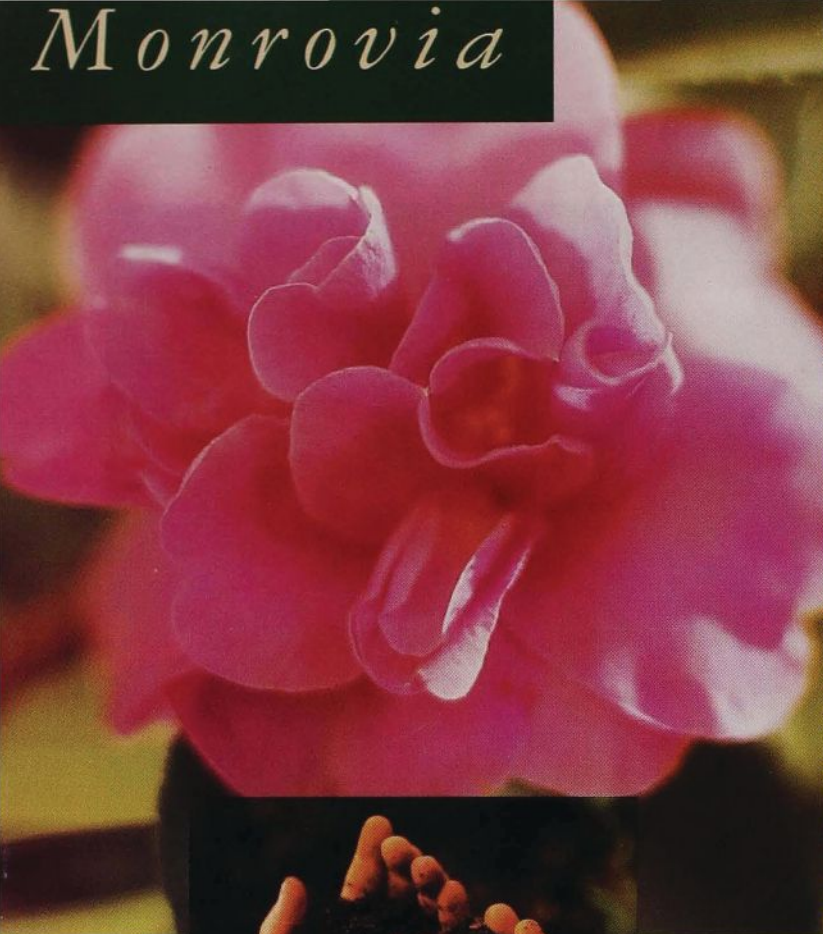
Beyond expected. Where possibilities are wide open. Trex® Easy Care Decking. No sealing. No splinters. No limits. Visit www.trex.com or give us a call at 1-800-BUY-TREX ext.455 for a book full of inspiration.



Trex
The DECK of a Lifetime.

© 1999 Trex Company, Inc. All rights reserved. TREX, the TREX logo, EASY CARE DECKING and THE DECK OF A LIFETIME are either federally registered trademarks, trademarks or trade dress of Trex Company, Inc. Winchester, Virginia.

Monrovia



Since 1926,
growers of *Distinctively Better plants*
that are available at fine garden centers. Each plant is
nurtured and **cared for by hand** and raised in our
exclusively formulated nutrient rich soil
which produces healthier, **hardier** and
more beautiful plants that will **thrive** in your garden.

Monrovia. From our growing fields to your garden...

Distinctively Better plants.



MONROVIA®

HORTICULTURAL CRAFTSMEN SINCE 1926

For the garden center nearest you, call toll free 1-888-Plant It!

