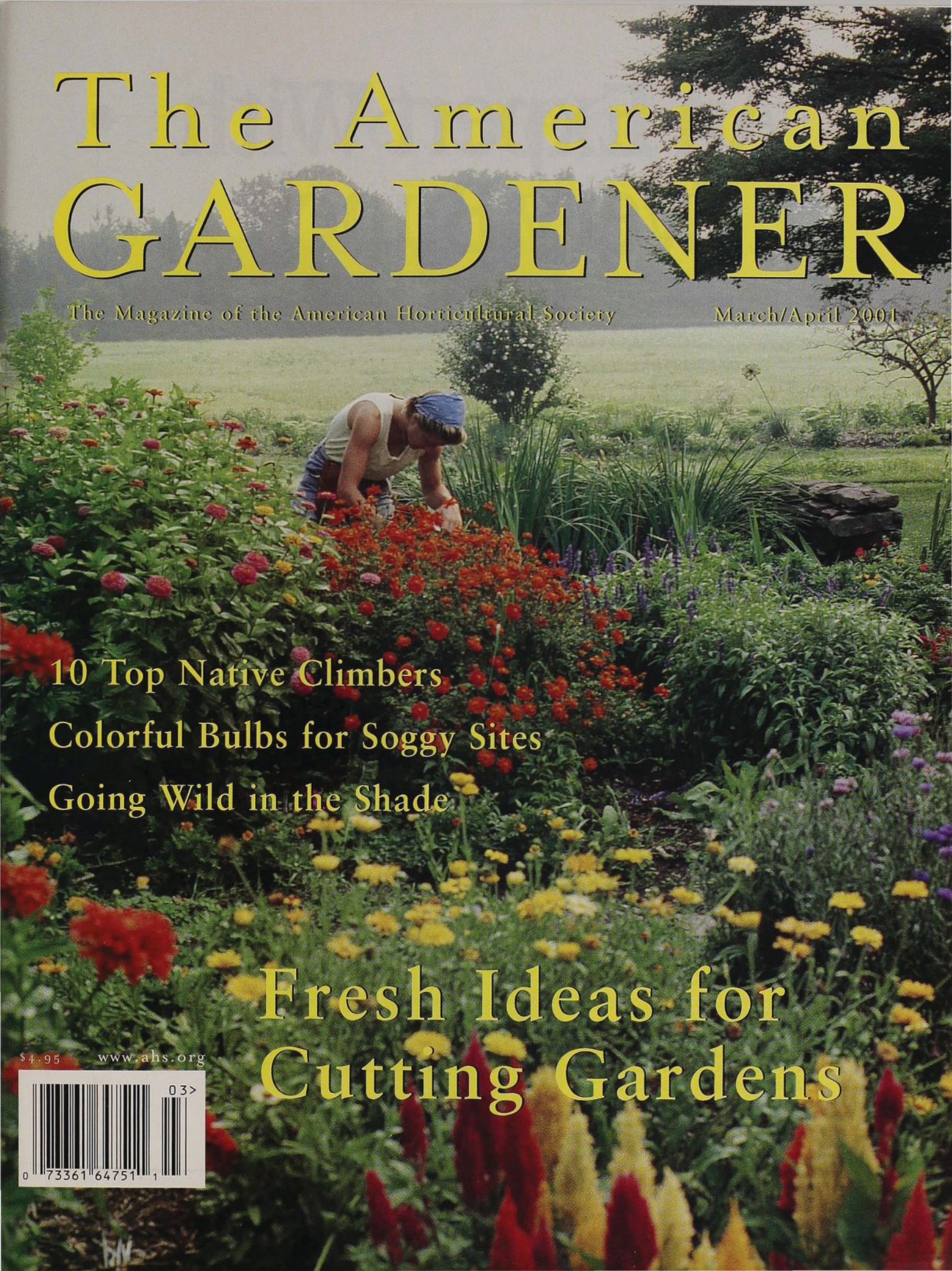
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The Magazine of the American Horticultural Society
March/April 2001
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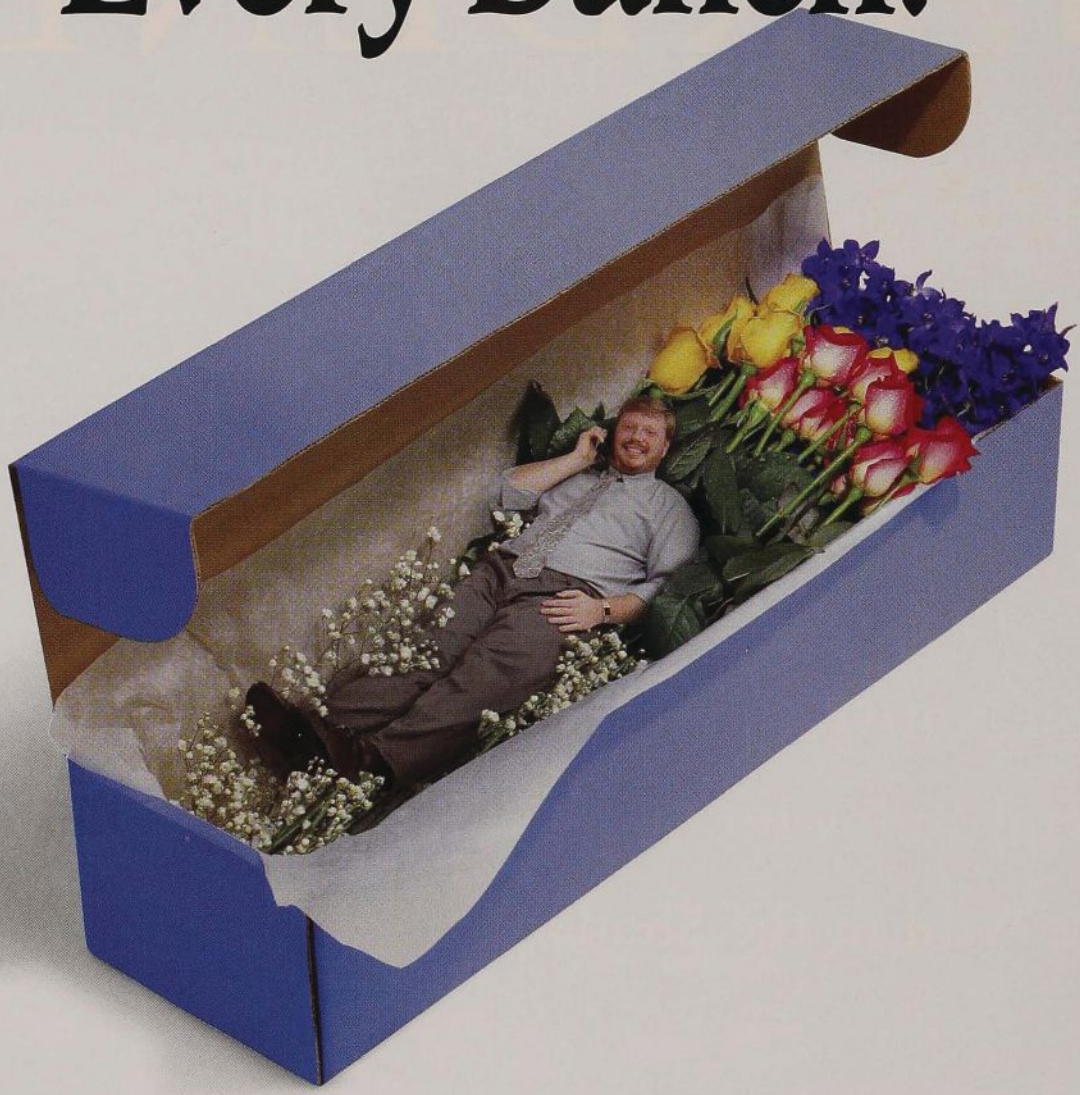

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Contents

Volume 80, Number 2 · March / April 2001

FEATURES

ON THE COVER: Marigolds, zinnias, celosias, and other annuals provide a bountiful harvest for indoor bouquets in this cutting garden in the Pennsylvania countryside.

Photograph by Derek Fell.

DEPARTMENTS

TOP LEFT: JERRY PAVIA. MIDDLE: HUGH AND CAROL NOURSE; BOTTOM: ALAN AND LINDA DETRICK. FAR RIGHT: DAVID CAVAGNARO.

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.

MEMBERSHIP BENEFITS

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

THE AMERICAN GARDENER

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

GREAT AMERICAN GARDENERS ANNUAL CONFERENCE

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

DEVELOPMENT

To make a gift to the American Horticultural Society, or for information about a donation you have already made, call our development department at (800) 777-7931 ext. 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 Haertter Travel Company. For information about upcoming trips, call (800) 777-7931 ext. 121 or view the tour schedule on our Web site.

WEB SITE: *WWW.AHS.ORG*

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

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

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.

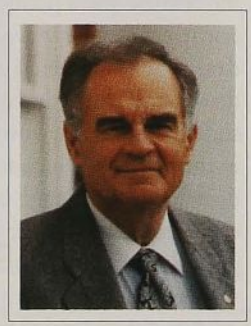
Botanical nomenclature is based on *The American Horticultural Society A–Z Encyclopedia of Garden Plants*, on *A Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland* and on the *Royal Horticultural Society Index of Garden Plants*. Opinions expressed in the articles 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.

An Inside Look

ARRANGING FLOWERS in a glass basket placed in front of a mirror was one of my earliest experiences with plants. The designs became my first training in plant color, form, selection, preparation, and performance.

My monthly copy of *Flower Grower* never seemed to provide all the information that I needed, so I learned mainly by trial and error. But I quickly discovered that certain plants and color combinations provided better displays than others: Snapdragons and chrysanthemums were wonderful, while roses and camellias were difficult to use—they seemed to fall apart.

At 15 I went to work for a local florist, where I was exposed to a new world of experiences: refrigerators, greenhouses, lath houses, and fields of cut flowers. Every imaginable container, wire, and ribbon was available to me. Within a few months I was able to re-create any design I had seen, to introduce new color schemes based on my years of art classes, and to offer a personal commitment to help people experience the pleasure of plants. For me, it was one of the first steps toward a career of being an ambassador for gardening.



So I am especially delighted by this issue's special focus on cutting gardens. Those of you who haven't yet experienced the joy of growing your own cut flowers will find Chela Kleiber's article on creating both traditional and more contemporary cutting gardens particularly useful. And you, our members, describe your favorite cut flowers and offer tips on flower arranging.

Also in this issue, Kathleen Fisher extols the virtues of vines native to North America. If you're neglecting the vertical element of your garden, here's a chance to try something new.

Gardeners who find the third dimension of garden design challenging will also appreciate Rand Lee's intriguing recommendations of statuesque herbs that are bold and beautiful enough for use in the ornamental border.

Soggy areas of the garden are often perceived as "problem" sites, but a solution is sometimes simply a matter of rethinking your plant choices. Bulb experts Brent and Becky Heath offer innovative ideas for brightening damp spots in the garden with an array of bulbous plants that tolerate—or even demand—wet feet.

Moving to a new garden in a different region presents a host of challenges for any gardener. Rekha Morris shares with us her experiences in moving from a sunny urban garden in England to a rural woodland lot in South Carolina. Taking cues from the natural landscape and the native flora around her new home, she established a shade garden filled with colorful wildflowers.

Once you have digested the information in this issue, I encourage you to share the magazine—or give the gift of a membership—to someone you know. The world is filled with budding gardeners of all ages who just need a little nurturing. I like to refer to this process as growing a new gardener.

Ever in green,

H Marc Cathey

—H. Marc Cathey, *AHS President Emeritus*

Members' Forum

MORE ON VERMICULTURE

As a gardener who has kept red worms for several years, I'd like to share an observation with other readers about an important aspect of vermiculture—namely water—that is often bypassed in articles about vermiculture, as it was in the article "Indoor Composting: A Worm's-Eye View" (November/December 2000).

Water composes the majority of tissue in organic materials, including the kitchen refuse usually composted in vermiculture. A simple plastic or wood box with holes in the bottom and a plastic sheet to catch stray compost *will not work.* Some kind of drainage is needed, or the worms will drown and the bedding become a stinking sodden mass. The worm tower mentioned in the article—which is the system I use—does have a drainage basin, although the drain hole can become plugged with small particles of compost, and the basin can slosh over if it becomes too full.

Aspiring vermicomposters should be aware that the drainage is very dark brown and can stain wood, fabric, or other surfaces, so extreme care should be taken when using this liquid to fertilize indoor plants or to create a manure tea.

Also, it is not necessary for the worms to die off before using the finished compost. There is a system—as described for the worm tower—that allows worms to move from one chamber to another as food is depleted in the initial chamber. In a properly managed system, the worms reproduce prolifically, so there is never a need to buy more.

Georgene A. Bramlage
Leverett, Massachusetts

Share Your Secret Gardens

KNOW OF A wonderful public garden in your region that deserves more recognition? In the July/August issue of *The American Gardener,* we will be highlighting the best-kept secret gardens from different regions of North America in a special story. Send us your nominations; we will include your choices in the story.

Be sure to include the name, address, and telephone number of the garden you are recommending and some brief comments about the garden, such as:

- Why is this garden worth visiting? What makes it special?
- Is there a time of year when it is particularly appealing?
- Are there plantings or displays that demonstrate a particular technique or style?
- Is the plant selection unusual?

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

Nominations must be received by April 20.

LEWIS AND CLARK'S FASHIONABLE FRENCH CONNECTION

I was amused to read in "The Plants of Lewis and Clark" (November/December 2000) that Thomas Jefferson had passed on some of the seeds collected on the expedition to "a Madame de Tessé." She was, in fact, *the* Madame de Tessé—Adrienne-Catherine de Noailles, wife of the Comte de Tessé, an aunt of Lafayette, and a notable *philosophe* who included both Benjamin Franklin and Jefferson in her salons during their stays in Paris. Jefferson was a frequent guest at her estate at Chaville near Versailles, where the seeds he gave her most likely found a sympathetic home. Indeed, her friendship with Jefferson, based on shared interests in liberal ideals, philosophical speculation, Roman antiquities, and gardening, would last until her death in 1814. It is to her that Jefferson wrote the oft-quoted letter from Nîmes in 1787, "Here I am, Madame, gazing whole hours at the Maison Carré, like a lover at his mistress..."

May Brawley Hill
New York, New York

GARDENING ON THE INTERNET

EDITOR'S NOTE:
The updated Web link for Cyndi's Catalog of Garden Catalogs, featured in the January/February issue of *The American Gardener,* is *www.gardenlist.com.*

Correction

The listing of a memorial gift in the Society's *Directory of Member Benefits* was reproduced incorrectly. We apologize for the error. The correct listing is as follows:

IN MEMORY OF
Ms. Mary Catherine Blount
Ms. Katy Moss Warner
Mr. Allen A. Burk
Mrs. Margaret Russell
Mrs. Helen V. Shiplet

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.

attend the

SOUTHERN LIVING *gardening school*

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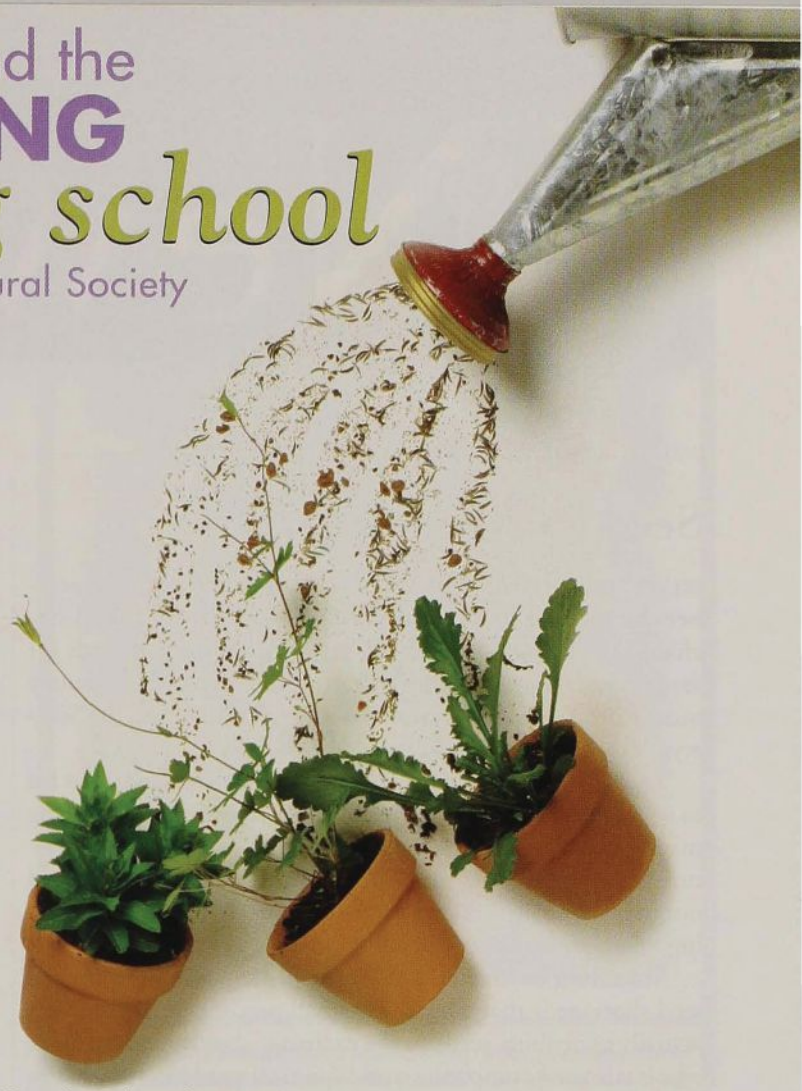

We're taking 30 years of ***gardening advice***, tips and projects on the road for another blooming season. The SOUTHERN LIVING Gardening School is a live energetic show that features the latest fun and ***practical tips*** for the serious and weekend gardener. Learn how to choose the right plants for your yard; select the best ***gardening tools*** and products; and keep your garden in ***bloom*** year-round. Our SOUTHERN LIVING Garden Specialist will help you create the garden of your dreams!

Don't miss the next SOUTHERN LIVING Gardening School.

Southern Living Gardening School co-sponsored by the American Horticultural Society

Date	Location	Ticket Information
March 14	Birmingham Botanical Gardens (Birmingham, AL)	(205) 414-3953
March 15	Riverbanks Zoo & Garden (Columbia, SC)	(803) 779-8717 x1117
March 23	Callaway Gardens (Pine Mountain, GA)	(800) 225-5292
March 24	Brookgreen Gardens (Pawleys Island, SC)	(800) 849-1931 x6001
March 31	Myriad Botanical Gardens (Oklahoma City, OK)	(405) 297-3995
April 5	Daniel Stowe Botanical Garden (Charlotte, NC)	(704) 825-4490
April 19	Norfolk Botanical Garden (Norfolk, VA)	(757) 441-5838
April 19	Marie Selby Botanical Gardens (Sarasota, FL)	(941) 366-5731 x221
April 25	The Dallas Arboretum (Dallas, TX)	(214) 328-4556
April 28	Opryland Hotel (Nashville, TN)	(615) 883-2211
May 5	Biltmore Estate (Asheville, NC)	(888) 844-4696
May 10	Huntsville Botanical Garden (Huntsville, AL)	(256) 830-4447

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For More Information Visit: www.southernliving.com/events/garden or AOL Keyword: Southern Living

AHS News

AHS Programs and Events

Seed Exchange is a Hit

WITH MORE THAN 700 orders for seeds received from members by the end of January, the AHS Annual Free Seed Exchange for 2001 has already outstripped previous records for seed orders. The high-order volume is due in part to an online order form for seeds that was introduced this year on the Society's Web site *(www.ahs.org)*.

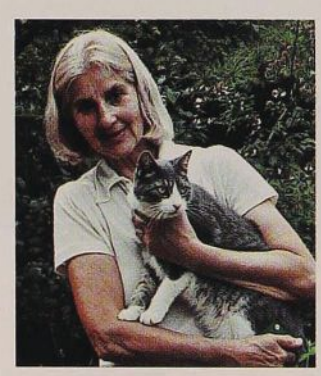
The unprecedented popularity of this year's exchange has led to shortages of certain seeds, however, so substitutions are being made in some cases. Janet Walker, AHS's director of horticulture, says that while a few participants have been disappointed not to get their first choice of seeds, "most people are embracing the opportunity to try something different."

According to Walker, one of the principal reasons for the seed shortage is that a relatively small percentage of members actually contribute seeds to the exchange. Seeds received from wholesale seed companies and botanical gardens are used to supplement the donations of AHS members. To encourage more people to collect and donate seeds, Walker says that next year the exchange will be restructured so that members who donate seeds this fall will have an opportunity to select seeds first, before the program is opened up to the entire membership.

So as you plan your garden this spring, start thinking about what seeds you might be able to offer for next year's exchange.

AHS Co-sponsors 55th Williamsburg Symposium

FOCUSING ITS ATTENTION this year on the art of practical gardening, the 55th Colonial Williamsburg Gardening Symposium, co-sponsored by AHS and the Williamsburg Institute, is scheduled for April 22 to 24 in Williamsburg, Virginia. Among the featured speakers at this year's event are Vermont-based writer and garden designer Gordon Hayward, who will speak on "The Intimate Garden"—his practical design principles for making a garden warm and inviting—and garden photographer and writer Pamela Harper, author of the recently published *Time Tested Plants: 30 Years in a Four Season Garden* (Timber Press, 2000). Harper will share her experiences with plants that have stood the test of time in her Virginia garden.



Symposium speaker Pamela Harper with a feline friend.

Other presenters include Lucinda Mays, addressing "The Very Best Vegetables;" Edward C. Martin on "Practical Garden Design;" Denise Green discussing "Perennial Survivors;" and John Van Etten on "Gardening In Deer Country—A Practical Approach." In addition, James L. Johnson, recipient of the 2000 AHS Frances Jones Poetker Award for floral design will present "Floral Design: Fresh Attitudes, 2001."

Symposium registration is $168, which includes all lectures and a Colonial Williamsburg admission ticket, as well as dessert on Sunday evening, two coffee breaks, and continental breakfast on Tuesday. Registration is by mail or fax; phone registration is not accepted. For additional details, call (800) 603-0948 or e-mail tengle@cwf.org.

Youth Garden Symposium Slated for Great Lakes State

THE MICHIGAN 4-H Children's Garden at Michigan State University in Lansing will be the host facility for the Society's popular Children and Youth Garden Symposium, now in its ninth year. This year's symposium, titled "Gardening Beyond the Boundaries" will be held July 12 to 14. The 4-H Children's Garden is the premier children's garden in the nation, hosting over 200,000 visitors annually. Within the garden are 64 dif-

An ivy-covered topiary bear welcomes visitors at the entrance to the Michigan 4-H Children's Garden in East Lansing.

COURTESY OF PAMELA HARPER; COURTESY OF NORM LOWNDS/MSU

DID YOU KNOW The Society's River Farm headquarters in Alexandria, Virginia, was named one of the top 10 wedding reception sites in the Washington, D.C., area based on a poll of wedding professionals reported in the January 2001 edition of *The Washingtonian* magazine?

For information about holding weddings, meetings, or other events at River Farm, call Events and Facilities Coordinator Stephanie McLellan at (800) 777-7931 ext. 114.

ferent theme areas that encourage children to connect with plants. The garden is also a national leader in using technology to enhance garden-based learning programs. One example of this is the garden's kid-focused Web page, on which the garden's curator, Norm Lownds, has posted numerous interactive activities.

Among the many presenters at the symposium will be Dirck and Molly Brown, the recipients of the Society's 2001 Jane L. Taylor Award for youth garden excellence. The Browns created the Roots and Shoots Intergenerational School Garden, a highly regarded outdoor classroom program they initiated in 1985 at the Elizabeth Gamble Garden in Palo Alto, California. Waddell Elementary School in Lexington, Virginia, adopted the Roots and Shoots program in 1995, and more recently, it has taken root at an elementary school in East Lansing. The Browns will provide an overview of philosophy underlying the Roots and Shoots garden and explain how other schools can develop and sustain similar programs.

A symposium brochure was included with the copies of this magazine mailed to AHS members. Additional information about the symposium and a registration form can also be found on the Society's Web site *(www.ahs.org)*.

Garden Guides Updated

UPDATED AND expanded lists of regional botanical gardens, arboretums, and other public gardens can now be ordered through the Society's Gardeners Information Service (GIS).

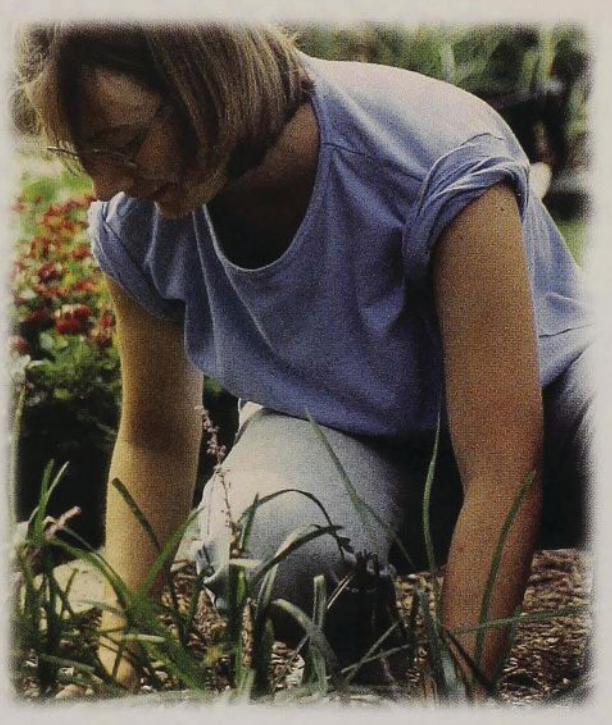
Eight regional bulletins are available: Mid-Atlantic, North Central, Northwest, South Central, Southeast, Southwest/West, and Canada. Gardens are listed alphabetically by state .

The revised bulletins now include additional information such as Web sites and new plant collections. And public gardens in Alaska have been added to the Northwest Region bulletin.

"Anyone who loves gardening and travel will find these bulletins particularly useful," says Marianne Polito, manager of GIS, "and now, with so many garden Web sites, members can even tour distant gardens from home." Gardens that participate in the Society's Reciprocal Admission Program—through which AHS members receive free admission or other benefits—are highlighted within each bulletin.

AHS Members can purchase copies of these and many other GIS bulletins by e-mailing requests to gis@ahs.org or calling (800) 777-7931 ext. 131. Members can also download a select number of other bulletins off the AHS Web site at *www.ahs.org*. Regional bulletins cost from $5 to $9 each, but bulletins for individual states are available for $2.

EDUCATING THE HORTICULTURISTS OF TOMORROW



Whether students attending college or adults changing careers, generations of horticulturists have benefited from American Horticultural Society internships. At George Washington's River Farm (AHS Headquarters), interns gain experience in:

- Integrated Pest Management—by answering questions in our Gardeners Information Service and scouting the grounds
- Education—through leading activities for children in our Living Lab Program and giving tours of our public garden
- Garden Management—by maintaining our plant collections and working on our grounds
- Interpretation—through developing signs and labels to explain our collections to visitors
- Propagation—by germinating seeds for River Farm gardens and plant sales

Interns gain knowledge from other horticultural professionals by visiting public gardens such as Longwood Gardens and the U.S. National Arboretum, and by attending conferences such as the Perennial Plant Conference, the Millersville Native Plant Conference, and AABGA regional meeting.

AHS internships are not supported by member dues—they are supported through the generosity of people who believe horticultural education is paramount.

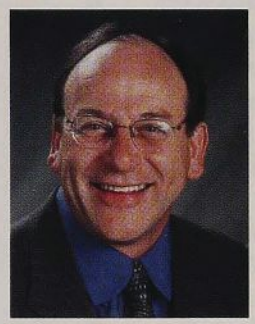
FOR MORE INFORMATION ABOUT THE AHS INTERNSHIP PROGRAM OR HOW YOU CAN BE A SUPPORTER, CONTACT TRISH GIBSON AT tgibson @ ahs.org.

award winner IN FOCUS

Brian Holley Receives 2001 AHS Professional Award

by Margaret T. Baird

THIS YEAR'S RECIPIENT of the Society's prestigious Professional Award is Brian Holley, executive director of the Cleveland Botanical Garden (CBG), who has been spearheading development of the garden's ambitious master plan. In March, the garden broke ground for a $37 million, three-year expansion of its existing facilities.



The crown jewel will be the Eleanor Armstrong Smith Glasshouse, a sparkling, 18,000- square-foot conservatory that will house unique re-creations of Madagascar's spiny desert and Costa Rica's cloud forest ecosystems. These exhibits will include not only plants, but elements of the geology, climate, and animal life specific to those ecosystems as well. "As far as I know, we are the first botanical garden to focus on a specific place in the world and display the plants from there in their full ecological context," says Holley.

Holley came to CBG in 1994 and has worked in botanical garden settings for more than 20 years. During that time he also hosted Canadian television and radio gardening programs and served as gardening editor for the *Hamilton Spectator* newspaper in Ontario, Canada. Holley's own special area of interest is in community-based horticulture, sparked from his involvement in developing programs for disabled visitors at the Royal Botanical Garden in Hamilton, Ontario.

During Holley's tenure, CBG has fostered numerous successful outreach programs in the Cleveland metropolitan area. CBG has actively promoted the installation of gardens in area schools and hosted children's gardening workshops and symposia for teachers. CBG's new endowed chair in horticultural therapy—one of the nation's first—will ensure the continuity of CBG's long history of garden therapy programming. To address the lack of job preparedness for at-risk youth, CBG started the Green Corps, a program in which some 40 teens care for school gardens and sell the resulting fresh produce.

"I believe it's important for any public institution to be always on the lookout for opportunities to make our communities a little better," says Holley. "For a botanical garden, introducing opportunities for people to grow things is invariably a need. We should be trying to provide programs for everyone—those of all ages, abilities, and economic backgrounds."

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

COURTESY OF CLEVELAND BOTANICAL GARDEN

AMERICAN HORTICULTURAL SOCIETY

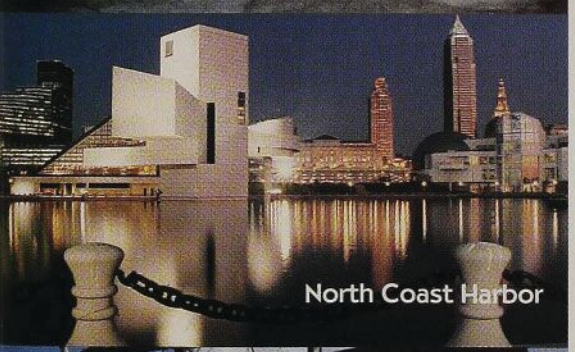
2001 Great American Gardeners Annual Conference

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


North Coast Harbor

Cleveland Zoo

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 spectactular 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!

Information about the speakers and tours scheduled for the conference can be found on the AHS Web site *www.ahs.org*. For a brochure, call (800) 777-7931.

SMARTGARDEN™ — Heat Zones

Consider heat tolerance when selecting plants for your garden

All plants have an optimal temperature range for growth. They also have temperature limits—both high and low—beyond which injury or death is likely to occur. These temperatures vary from one plant to another—some plants have a wide temperature range, others are far more limited—a major reason that locations with widely different climates support such discrete plant species.

In the last issue, we discussed hardiness—a plant's ability to survive winter conditions, including low temperatures. This limitation in a plant's adaptability is addressed by USDA Plant Hardiness Zones. On the opposite end of the thermometer, summer temperatures are equally critical. For this reason the American Horticultural Society (AHS) Heat Zone Map was developed. Although temperature is not the only determinant involved in a plant's ability to survive in summer, it is an important factor that gardeners should consider.

DEVELOPMENT OF THE AHS HEAT-ZONE MAP

In 1997, the American Horticultural Society published the first Heat-Zone Map, under the direction of AHS President Emeritus H. Marc Cathey. The map divides the United States into 12 heat zones according to their average annual number of "heat days." A heat day is defined as a day in which temperatures reach or exceed 86 degrees Fahrenheit (30 degrees Celsius). This is the temperature at which plant proteins begin to break down, resulting in damage or death. AHS Heat Zone 1 averages less than one heat day per year, while Zone 12 averages more than 210 heat days.

What's My Heat Zone?

Members can find out what heat zone they garden in by searching by zip code in the database available on the Society's Web site at *www.ahs.org*. A two-by-three-foot laminated AHS Plant Heat-Zone map can also be ordered for $9.95 from the Web site or by calling (800) 777-7931.

CODING PLANTS

Working with 120 nurseries, universities, and plant growers across the country, Cathey has so far designated codes for 65,000 garden plants. Like hardiness zones, the heat zones are given as a range. The first number indicates the hottest zone in which a plant will survive, the second represents the zone with the minimum amount of summer heat necessary for that plant to complete its annual growth cycle.

For example, the northern bayberry *(Myrica pensylvanica)* has a heat zone range of 7 to 1. Thus AHS Heat Zone 7, with an average of 60 to 90 heat days per year, receives the most heat that shrub will tolerate, while Zone 1, which averages less than one heat day a year, provides sufficient heat for healthy summer growth. Alternatively, the southern bayberry *(Myrica cerifera)* has a heat zone range of 10 to 5. It tolerates far more heat and has a significantly higher minimum heat requirement than its northern relative.

More plants are being coded all the time, and existing codes are being further refined by a national committee. As this information becomes more available and better understood, it is adding a significant tool to our arsenal of plant selection criteria.

A number of nurseries and seed companies are now including heat zone information for plants on their labels or in their catalogs. Each issue of *The American Gardener* lists both the hardiness and heat zones of nearly all the plants mentioned in that issue's articles on the "Pronunciation and Planting Zones" page. Once you know your AHS heat zone (see box), you can determine if a coded plant is likely to survive your summer temperatures.

ANOTHER PIECE OF THE PUZZLE

As with USDA hardiness zones, AHS heat zones are only one part of the plant adaptability picture; several other factors should be considered when selecting plants.

Summer rainfall—and the lack of it—limits the successful cultivation of many plants. The humidity typical of the American Southeast is the death knell of many plants that thrive in drier conditions with similar heat. And some plants are able to thrive in warmer zones as long as nighttime temperatures are cool.

Air movement complicates a plant's tolerance to heat because it can cause plants to lose moisture rapidly, resulting in desiccation. And qualities of soil—its fertility, acidity or alkalinity, and drainage—also influence the summer survival equation. These factors can be artificially mitigated to some degree—windbreaks can be planted, soil fertility and pH can be modified, and plants can be irrigated—but they should also be taken into account when selecting plants.

Knowing your heat zone will help you select plants appropriate to your garden. But because each individual garden has its own set of variables, Cathey suggests that you "take note of what plants thrive in your site and pass your successes on to other gardeners." The more information we gather about plants and their growth requirements, the more likely we are to enjoy garden success.

Rita Pelczar, Associate Editor

Gardener's Notebook

Horticultural News and Research

GRADING GOLDENRODS

THOUGH AMERICAN allergy sufferers long blamed goldenrods *(Solidago* spp.) for their late summer sniffles, it has been convincingly documented that ragweed *(Ambrosia artemisiifolia)* is the principal culprit. But despite their popularity in Europe for their late summer and fall flower display, goldenrods have still been slow to catch on among gardeners in North America.

***Solidago* 'Goldkind' is a compact cultivar.**

JENNY LEE/COURTESY OF CHICAGO BOTANIC GARDEN

A recently published evaluation of the genus by the Chicago Botanic Garden's Plant Evaluation Program may go part of the way toward remedying that situation and will certainly make it easier for gardeners, especially in the Midwest, to select the best goldenrods for their gardens.

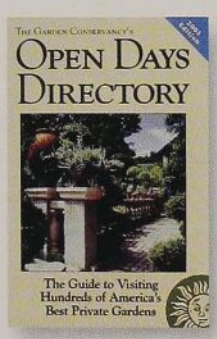
From the 25 species and cultivars that were evaluated in a five-year study at the garden, *S. rugosa* 'Fireworks' emerged with the best overall rating, drawing praise for its arching panicles of golden yellow flowers, dark green foliage, tolerance to fungal diseases that plague some goldenrods, and tight, shrublike habit. Other top performers were compact cultivars—topping out at 24 to 30 inches high—*S. sphacelata* 'Golden Fleece', *S.* 'Baby Sun', and *S.* 'Goldkind' (Golden Baby). Stiff goldenrod *(S. rigida),* a native of eastern and central North America, and *S. flexicaulis* 'Variegata', a shade-loving goldenrod with variegated foliage, also received good reviews in the study.

For more information on the Plant Evaluation Program, or to order a copy of the report on goldenrods (Issue 15) for $3, write to Plant Evaluation Notes, c/o Richard Hawke, Chicago Botanic Garden, 1000 Lake Cook Road, Glencoe, IL 60022. You can also visit CBG's Web site at *www.chicagobotanic.org.*

Here are some sources for these goldenrods: **Forestfarm,** Williams, OR (541) 846-7269. *www.forestfarm.com.* Catalog $5. *(S. rigida).* **Heronswood Nursery,** Kingston, WA (360) 297-4172. *www.heronswood.com.* Catalog $5. *(S. flexicaulis* 'Variegata'). **Niche Gardens,** Chapel Hill, NC (919) 967-0078. *www.nichegardens.com.* Catalog $3. *(S. rugosa* 'Fireworks' and *S. sphacelata* 'Golden Fleece').

VISIT AMERICA'S BEST GARDENS

SUMMER WILL BE here before you know it, so start planning your vacation now with the 2001 edition of The Garden Conservancy's *Open Days Directory.* This annual guide lists hundreds of private gardens throughout the United States that open their gates to visitors on specified days each summer under the auspices of the Garden Conservancy, a non profit organization dedicated to celebrating and preserving America's exceptional private gardens. There is a $5 admission fee per garden.



Garden listings in the directory are arranged by state and each listing includes detailed directions for getting to individual gardens. In addition to the private gardens participating in the Open Days program, nearby public gardens that may be of interest are also listed in the directory. George Washington's River Farm, the headquarters of the American Horticultural Society, is included among these recommended public gardens.

The directory, which costs $15.95 (plus $4.50 shipping and handling), is available by sending a check to the Garden Conservancy at P.O. Box 219, Cold Spring, NY 10516 or by calling (888) 842-2442. You can also order the directory or find out more about the Conservancy by visiting its Web site at *www.GardenConservancy.org.*

DIAZINON PHASE-OUT

FOLLOWING ON THE heels of its recent decision to phase out the organophosphate pesticide chlorpyrifos (September/October 2000 "Gardener's Notebook"), the U.S. Environmental Protection Agency (EPA) announced in December a similar elimination of certain uses of diazinon, one of the most widely used pesticides in homes and gardens. Under the agreement with the EPA, products containing diazinon will gradually be phased out and retail sales will end by 2003.

As with chlorpyrifos, EPA's decision to eliminate diazinon was made under the auspices of the Food Quality Protection Act, which calls for tougher restrictions on pesticides believed to be of greatest risk to children. Diazinon is one of the most commonly found pesticides in air, rain, and drinking water. It is also highly toxic to wildlife—particularly birds.

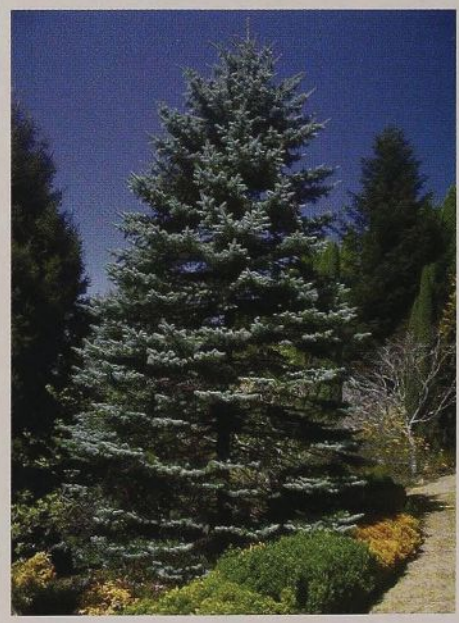
Once diazinon is no longer available, gardeners will need to select alternative pesticides, or shift to holistic techniques such as integrated pest management. "These bans will push the industry to develop new materials," says Michael Weaver, pesticide coordinator and professor of entomology at Virginia Tech in Blacksburg. "There are a lot of reduced-risk pesticides on the horizon, but it generally takes at least 10 years to move materials through the approval process."

Pesticide experts urge people not to throw unused pesticides in the trash or pour them down the drain. "From an environmental standpoint," notes Weaver, "it's far better to safely use them up than to dispose of them improperly."

For more information, visit the EPA Web site at *www.epa.gov/pesticides.*

NOMINATE A NATIONAL TREE

IF YOU'RE a devoted tree hugger like Henry David Thoreau, who wrote that he "frequently tramped eight or 10 miles through deepest snow to keep an appointment with a beech tree," you may be interested in casting your vote for a national tree. The National Arbor Day Foundation (NADF), based in Lincoln, Nebraska, is seeking nominations for a tree that could become our official national symbol. The voting will conclude, not coincidentally, at midnight on April 27, National Arbor Day.



Blue spruce—could it be our national tree?

The foundation has put forward 21 generic "candidates" for the honor—including bald cypress, birch, dogwood, holly, magnolia, palm, pine, redwood, and spruce—but is also accepting write-in votes. You can learn more about the candidates and cast your vote by visiting the foundation's Web site at *www.arborday.org,* or write your selection on an index card and mail it to: National Tree, NADF, Nebraska City, NE 68410.

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Lament for Things Unseen

by Teresa Keene

SOME MORNINGS I awake and think, "I'll bet the daffodil noses are sticking out of the grass in the orchard now!" I scramble out of bed and am about to get dressed before I realize that, even if they are, I have no way of seeing them. That's when I usually crawl back into bed, depressed, and go back to sleep for an hour.

My husband's job and our growing disenchantment with urban life have prompted us to move clear across the state of Washington, from the mild, damp climate of the Puget Sound—where my daffodils revealed their round snouts at the end of January—to the ice-encrusted region of Spokane—where daffodils and their ilk snooze steadily on until March, at least. To make matters worse, I don't even have a burgeoning garden here in Spokane to look forward to when spring finally does arrive. We're renting this first year or so, until we get our bearings. There is no backyard to this charming old brick house where we now live, only a dog run. And the north-facing front of the house is clothed in darkness.

So for another year all I have to look forward to are my many pots and the myriad ways I can fill them—and long for the garden I left behind.

My house for four years on the "west side" of the state (or "wet side," as Spokanites prefer to call it) was a 1942 farmhouse on five acres—a two-story French Country home with a basement that flooded when the water table rose, hardwood floors, a remodeled bathroom with stained glass windows and an antique claw-foot tub, and six-square sash windows throughout.

But it was the garden immediately surrounding the house that was my pride and joy. Although it was not my first garden, it was the first one where I had so much space, and the first time we had the financial means to bring gardening dreams to fruition. I brought the ancient apple orchard on the property back to life, underplanting it with all manner of spring bulbs. I also planted 70 red roses along the rickety old fences. A giant, old, wild rose bush bloomed profusely each June by the large vegetable garden. Fifteen-foot rhododendrons in shades of cyclamen-pink and lavender, which I underplanted with bear grass and English wood hyacinths, bloomed against the dark north side of the house. The blue and pink hyacinths bloomed simultaneously with the rhododendrons.

A gigantic crop of old white peonies would burst out of the spot next to the front gate each spring, right under two large cedar arborvitae that flanked it. A Cecile Brunner rose climbed an arched trellis I had positioned over another gate, sharing it with a purple clematis.

I planted 50 'Beverly Hills' daylilies along the white picket fence beyond our back porch. A 15-by-six-foot perennial bed bordered one side of our driveway, filled with years' worth of finds from neighbors, plant sales, catalogs, and nurseries. The beds flanking the garage door were filled with tall, creamy Oriental lilies, dahlias, ferns, and mint. An ancient rose of unknown ancestry climbed the back porch and filled the air each June with intoxicating perfume. Two privet shrubs, all that remained of a former hedge, grew 20 feet apart and were allowed to expand with abandon for many years. When I inherited them, they were already 15 feet tall. I pruned them into trees and their root-beer-scented blossoms mingled with the scent of the nearby lilacs in the spring. Two ancient camellias, one white, one red, were pruned into round topiaries that reached high into the sky—and looked like tree roses on steroids.

In the northwest corner of the side yard, a big, red-hued hawthorn warned cats away with its long spurs, and an equally big native dogwood sent out masses of its primitive yellow blooms every year. I was especially proud of the dogwood. When we bought the house, the tree was afflicted with anthracnose, which caused it to shed all its leaves at least three times a year, but with careful pruning I managed to keep the disease in check.

I know I'll have my own garden again, soon. Perhaps, as with my last garden, I'll rehabilitate an ancient one. It'll only be another year or so, really.

But this morning I awoke and thought, "The camellias should be opening today!" and nearly fell out of bed in my haste to see them...until I looked around me and remembered that somebody else will be smiling and singing to her children, "Look! They're painting the roses red!"

Teresa Keene is a free-lance writer living in Spokane, Washington.

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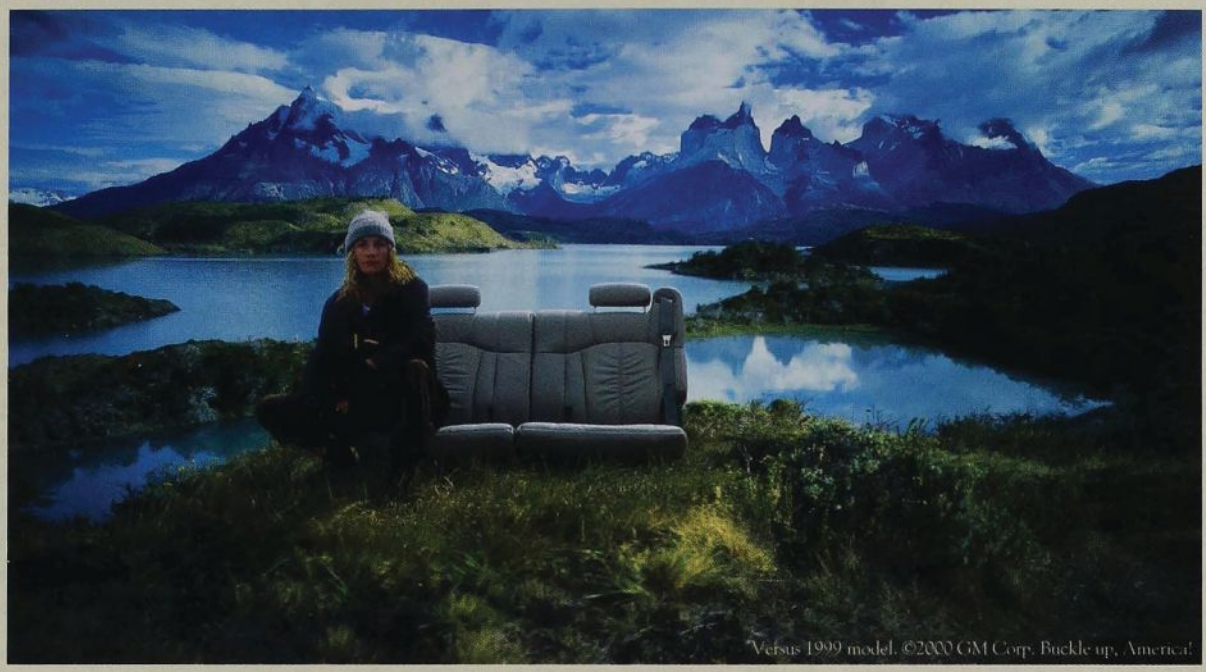

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Natural Connections

Mushrooms in the Lawn: To Mow or Not to Mow?

article and photographs by Rob and Ann Simpson

AT A FAMILY GATHERING, my sister-in-law remarked she had encountered some large, strange mushrooms that were growing in a ring in her yard. Though her husband had cut most of them down, he had left an unmown circle in the middle of their otherwise immaculately manicured lawn, hoping we could shed some light on this mycological puzzle. At about the same time, one of our neighbors told us a similar story of some large fungi she had in her lawn. In the voice of a hunter under the influence of buck fever, she said, "I ran them over with the lawn mower and killed those suckers good." Both occurrences led me to think about the good, the bad, and the ugly of mushrooms in the lawn.

Fairy Rings

The mushrooms in my sister-in-law's yard had been growing in a large circle. Being the non-naturalist, somewhat superstitious type, she might have believed some of the folklore surrounding these fungi. The mushroom "fairy rings" seem to pop up mysteriously over night. Where the mushroom caps actually erupt from the ground, there is often a barren area with little grass flanked on either side by a zone of luxuriant grass growth.

In the absence of scientific thought, many imaginative explanations have arisen about the origins of such phenomenon. In *The Mushroom Handbook* (1967), Louis Krieger recounts a series of pre-scientific explanations. Fairies, he wrote, were implicated as the main cause for such mushroom rings. As they danced on misty moonlit nights, they wore the grass down where they whirled around in circles. Gnomes and hobgoblins were supposed to bury their treasures inside these fanciful rings.

Early scientific ruminations were not much better at solving the puzzle. Some early theorists thought that the rings were caused by a lightning bolt strike in the open, while others surmised that a whirlwind had passed. Other scientists suspected fairy rings sprang up where a haystack had stood or where subterranean animals were active.

Focusing on Fungi

Finally, fungi were pegged as the cause of such rings. Many fungi reproduce by spores. When a spore germinates, it sends out rootlike structures called mycelia. Saprophytic fungi—those that feed on dead or decaying organic material—may grow outward at a uniform rate if there is an even distribution of nutrients available. The radial pattern of the fairy ring is constant as long as the growing fungus does not hit something or run out of food. The fruiting bodies—mushroom bodies, or carpophores—occur at the edge of the ring. Just outside the ring, the liberation of nitrogenous material from the decaying organic matter may form a band of exceptionally luxuriant grass growth. Where the fruiting bodies actually erupt there may be the barren zone that earlier implicated dancing fairies.

The poisonous green gill parasol in this Ontario yard creates a dramatic ephemeral "lawn ornament."

Beware the Green Gill Parasol (And Others)

The green gill parasol *(Chlorophyllum molybdites)* is a frequent lawn mushroom whose fairy rings demand attention. This is a poisonous species that usually causes extreme gastrointestinal upset. Although rarely fatal, people suffer so much they think they are dying. Two of my students had impatient visitors from New York City who would not wait for the proper identification. Disregarding my students' cautious admonitions, the visitors ate the fungus. In addition to a costly trip to the hospital, they spent the next 12 hours violently ill and the rest of their vacation recovering.

This species and other common lawn mushrooms like the smooth parasol *(Lepiota naucina)* and the meadow mushroom *(Agaricus campestris)* are saprophytic fungi. If there are trees in your lawn, the destroying angel *(Amanita virosa)* might pop up. This mushroom is a mycorrhizal fungus—it has a symbiotic relationship with roots—and usually needs at least one tree in the

yard for it to be present. I have seen both the delicious edible *Agaricus* and its deadly look-alike *Amanita,* growing side by side in a lawn. If you are inclined to eat wild mushrooms, remember the old adage: There are old mushroom hunters and there are bold mushroom hunters, but there are no old, bold mushroom hunters!

Inky caps growing in a colony at the base of a tree stump.

Inky Caps

Many people have encountered mushrooms that turn into an inky mush. Because of their auto-disintegration, inky caps like the shaggy mane *(Coprinus comatus)* are some of the easiest mushrooms to identify. Some other inky caps like Tippler's bane *(Coprinus atramentarius)* and mica cap *(Coprinus micaceus)* are a sure sign that there is a buried tree stump or wood. These saprophytes act as decomposers, breaking down the hard-to-digest cellulose of the wood.

When they become a black slimy mush, people might want to mow over them as our neighbor did. But did she really *kill* them? She ran over the fruits, but the great majority of the fungus lives on underground, and provided there are sufficient nutrients, they will survive to fruit again. By whacking these mushrooms with the lawn mower, our neighbor is actually helping the spores proliferate.

Lawn Mushroom Aesthetics

From an aesthetic point of view, mushrooms can be very pleasing. Their colors are often vivid, and their forms are highly varied. Just think how many times you have seen mushrooms used as an art form on clothing, post cards, sun catchers, and teapots. Why not incorporate them as a visual element of our lawns? A fairy ring can be viewed as an ephemeral lawn feature. Mushrooms can give different textures to the lawn, and the stately appearance of some of the spectacular large species like the green gill parasol certainly attracts attention. When the various species start to senesce, then bring out the weed whacker. But until then, I recommend you look at fungi in a different light. Where appropriate, think of mushrooms as an appealing and integral part of your lawn—a living, changing lawn ornament.

Rob and Ann Simpson of Stephens City, Virginia, teach biology and photography courses at Lord Fairfax College, where Rob is program head of Natural Resources. They are currently working on a book about the spring wildflowers of the southern Appalachians.

Gardeners Information Service

GRAPE BLACK ROT

Every year I have beautiful green grapes on my vines, but before they ripen they turn black. What can I do about it?

—S.P., ARLINGTON, VIRGINIA

It sounds like you have the vintner's ancient scourge, grape black rot. It usually starts with small spots on the foliage that enlarge and are surrounded by a darker brown border. Spots also appear on the fruit, but, as you noticed, not until they are about half grown. They enlarge quickly, rotting the entire grape in a few days. The diseased fruits turn black, shrivel, and dry up; they look very much like raisins and are known as mummies.

Grape black rot is caused by a fungus, *Guignardia bidwellii,* and is a serious problem for grape growers, since all cultivars are susceptible. Wayne Wilcox, a specialist in grape diseases at Cornell University in Ithaca, New York, explains that sanitation is of utmost importance for control. The fungus produces two types of spores: The overwintering spores survive on mummies and these are airborne, thus any infected fruit left on the ground or on the canes becomes the primary source of infection. Later, the disease is further spread through waterborne spores that develop on infected fruit. Remove all mummies from the vines and from the ground beneath. Mulching to cover any remaining overwintering spores creates a physical barrier that will help reduce infection.

Wilcox suggests that fungicides may be necessary to control the fungus, and timing is critical for their application: The first should be applied right at the start of bloom, followed by one or two more applications at two week intervals. Mancozeb and Captan are two commonly used fungicides for black rot.

If the disease has been left untreated for several years, Wilcox warns that the fungus may also be overwintering in cane lesions. Infected canes should be removed if possible, but if not, a delayed dormant spray of liquid lime sulfur—applied at the first sign of bud break—will help. "It is sort of a trade-off," says Wilcox. "It burns the heck out of everything," both the emerging buds and the fungus. But, it may be a necessary procedure if the canes are severely infected.

SHORT-LIVED CARDINAL FLOWER

I can't grow cardinal flowers *(Lobelia cardinalis)* in my garden for more than a year before they die. Is there a secret to growing them?

—C.C., VIA E-MAIL

Cardinal flowers are native to wetlands of the eastern United States and thus thrive in locations such as a wet meadow or alongside a garden pond or stream. They can be grown in more traditional borders as long as you incorporate plenty of organic matter to help retain moisture. It may be a good idea to try and site them so they receive some afternoon shade, otherwise be prepared to water regularly; the more sun cardinal flowers get, the more water they need. No matter where you plant them, take particular care to keep the soil moist until plants are established.

If your site is appropriately moist, the other possible explanation for your difficulty involves mulching. According to the Virginia Native Plant Society's (VNPS) fact sheet on the species, "Cardinal flower's evergreen basal leaves need exposure to the sun for continued photosynthesis through winter." VNPS advises carefully tucking mulch *underneath* the leaves to protect the plants' shallow roots, but warns, "the plant may die if the basal rosettes are covered with leaves or mulch." Some growers avoid mulching cardinal flowers altogether.

Even when grown under the best of circumstances, cardinal flowers are short-lived perennials, but when they are well sited, they usually self sow readily.

DIVIDING HOSTAS

My hostas are getting too large for the area where they are located. When is the best time to divide them?

—M. P., DENVILLE, NEW JERSEY

According to the American Hosta Society, hostas can be divided nearly any time, but to minimize stress, early spring is best. Plants should be dug as soon as the eyes—emerging buds—appear, and before appreciable growth takes place. Divisions should be made using a sharp knife; to prevent the spread of infection, the knife should be dipped into a solution of one part bleach to 10 parts water between each cut. Plant the divisions in organic rich, moist but free-draining garden soil and water regularly until they are established.

MYSTERY SUNFLOWER

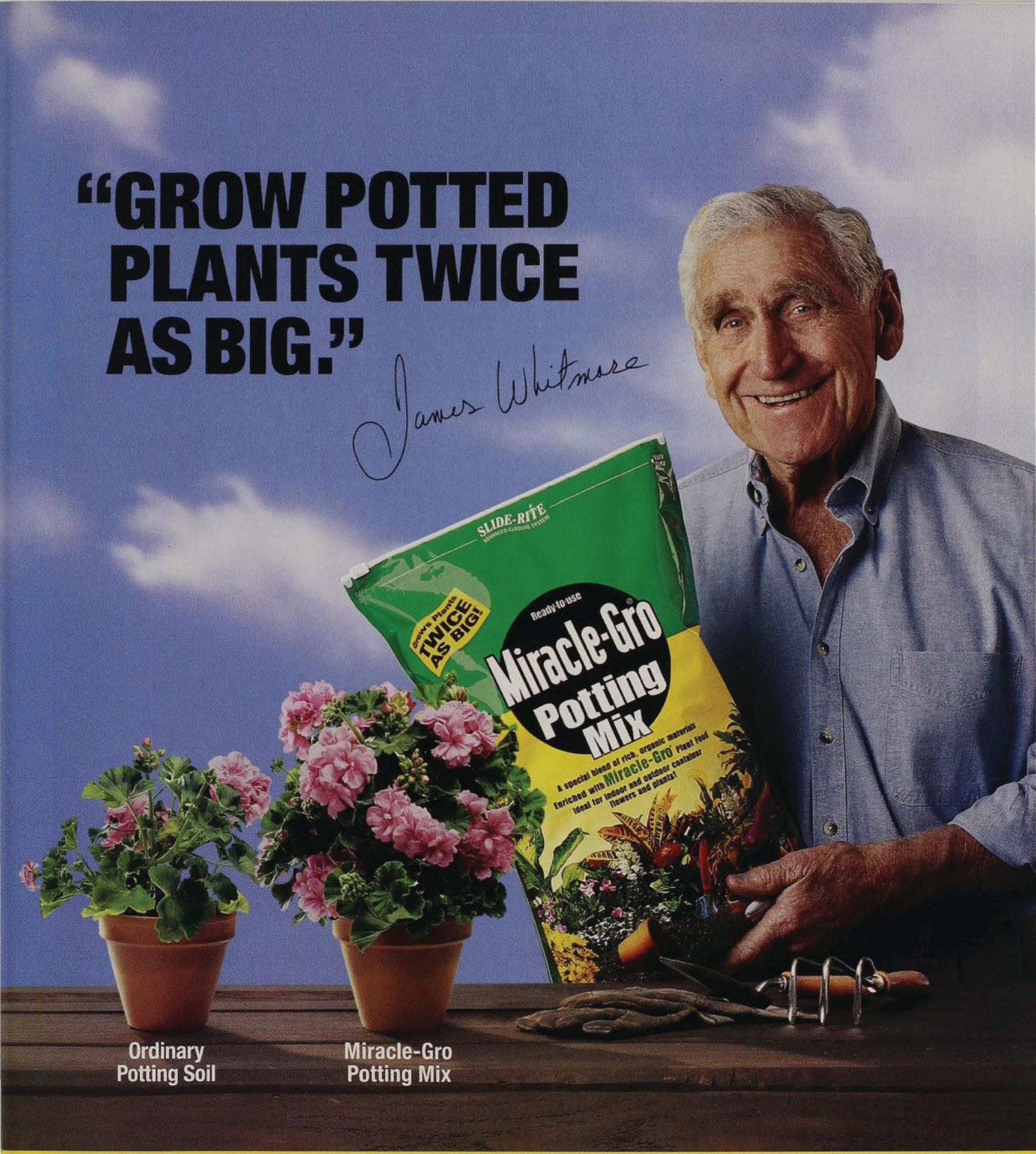
Last fall I saw a black sunflower at a farmer's market in Missoula, Montana. It was about four inches in diameter and about as black as flowers get. I've been trying to identify the variety and find a source. Can you help?

—L.G., VIA E-MAIL

We've never heard of a black sunflower, but Johnny's Selected Seeds of Albion, Maine (207) 437-4301, does offer the hybrid 'Moulin Rouge', which it claims is the "darkest of sunflowers." Harris Seeds of Rochester, New York (800) 514-4441 also carries that variety. Its deep burgundy ray petals surround an ebony center. The pollenless, three-to four-inch flowers are borne on well-branched plants that reach six feet tall. 'Moulin Rouge' is recommended both for cut flowers and as an accent planting. Perhaps it is your mystery cultivar.

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.



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Cutting Gardens: A Fresh Look

BY CHELA R. KLEIBER

IT'S A QUANDARY: To cut or not to cut. A huge bouquet of those cactus-flowered dahlias growing in the front garden would be the perfect touch for your coffee table; on the other hand, they do fill out the bed so perfectly. Must you sacrifice garden glory for indoor ambiance? Perhaps the answer is to design a cutting garden.

Many large estates have extensive cutting gardens—usually set apart from display areas—for supplying the makings for fresh and dried floral arrangements. Cut flowers have also become popular crops for roadside and farmer's market sales as many small farmers have discovered that cut flowers are often a more lucrative venture than vegetables. But most of us have neither the space nor the time for such an indulgence—right? Well, not necessarily. Cutting gardens don't have to be huge, and they don't even have to be separate. The tradition of cutting gardens—growing flowers to harvest for indoor pleasure—continues, though often in a somewhat modified form, in many of today's home landscapes.

Traditional Cutting Gardens

The traditional cutting garden is segregated from the rest of the garden. In his 1921 classic *The Complete Garden,* Albert D. Taylor explained, "The best success in garden development is obtained when a clear-cut line is drawn between the so-called cut flower garden and the flower garden as a piece of landscape design. There is nothing more discouraging to the expert designer than to see masses of flowers at the height of their bloom, and at a time when they should be their most effective in the garden design, deliberately cut for table use."

There are at least two compelling reasons to segregate a cutting garden. As Taylor says, an essential feature of a carefully crafted display garden is that flowers be present and looking their best for their various big moments on the garden stage, not off gallivanting on a dinner table. Cut flower grower Bill Preston of Bowie, Maryland, confides that many of his regular customers buy his flowers to avoid removing the same kinds of blooms from their own gardens (see "The Flower Guy," page 26).

The second reason to segregate gardens according to their purpose is a matter of design. The traditional cutting garden is planned with an eye for practicality—ease of planting, maintaining, and harvesting—rather than considering the combinations of color, height, texture, and form that are so critical to successful ornamental garden design. But while the blend of these elements in a cutting garden may be undesirable from a design standpoint, bouquets themselves are a great, risk-free way to experiment with color and texture combinations that may even inspire design changes in the display garden.

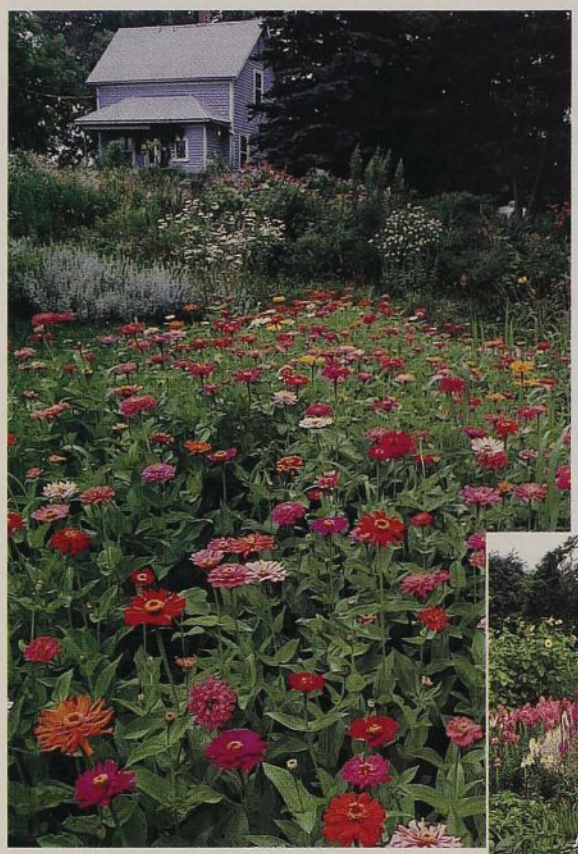
In a traditional cutting garden, flowers are usually planted in rows, like corn. In fact, a cutting garden has much in common with a vegetable garden: The rows afford easy maintenance and maximum harvest, and if one type of flower—such as a spring bulb—is exhausted during the season, another type may be planted later, just as vegetable crops are planted in succession for different seasons.

But straight rows of crops rarely fit into the context of landscaped gardens, where plants are generally grouped in clusters, and

DAVID CAVAGNARO

the garden outline is often curved to fit the contours of the surrounding landscape. If straight lines are part of a designed border, the garden is most likely very formal, radiating from the house or lining a walk, a context in which wide rows of cutting flowers would look painfully out of place.

A traditional cutting garden really doesn't take a lot of space if you are growing the flowers for personal use. Lynn Byczynski, author of *The Flower Farmer: An Organic Grower's Guide to Raising and Selling Cut Flowers,* suggests that a five-by-12-foot bed of annuals is sufficient to provide all the fresh flowers you could want all summer long.



Clever Compromises

But what can you do if you want flowers for cutting but don't have the time or space to devote to a separate garden? The key, as in so many of the better things in life, is brilliant inspiration followed by clever planning, plus a bit of compromise. Perhaps you can have a separate cutting garden, but rather than planting all one kind of flower, arrange groupings of plants with similar growth requirements. And pay careful attention to the color and texture combinations within the planting. Granted, maintenance will not be quite as easy, and you will probably find yourself more limited in your selections than if you were growing your flowers as row crops, but the result will be far more harmonious.

Another approach is to design a special garden of flowers that have a long blooming season and are particularly good for cutting—a mass planting of one type of flower, or a dynamic mix—and place them so that there is a pleasing transition between this bed and adjacent areas. My favorite opera composer, Richard Wagner, insisted that, "the art of composition is the art of transition." By using subtle elements such as color or textural repetition, your cutting bed can appear to be a logical extension of nearby plantings and structures. A wide swath of multi-branched sunflowers or a mixed planting of tall zinnias and marigolds planted against the backyard fence provides abundant flowers for cutting as well as a long-lasting and casual garden display.

The similarity between vegetable and cut flower gardens suggests yet another approach—include several rows of cutting flowers between your rows of beans and tomatoes. Make multiple plantings to ensure a continuous supply of blooms; as one planting slows down, replace it with another. Keep the space between your rows of flowers wide enough to allow for easy access for harvesting, and mulch to help retain soil moisture and inhibit weed growth.

Cutting Garden Favorites

Just about any flower may be cut, but some have such a limited vase life that it hardly seems worth the effort. Other flowers seem to have been born—well, bred—to be cut. Lists of cutting flowers abound in gardening books, and you will undoubtedly compose your own list of favorites as you experiment (see "Selected Varieties of Flowers for Vases," page 25).

Three basic qualities make a flower good for cutting: a reasonable vase life; long, strong stems; and exquisite beauty. One of my favorite flowers for fresh arrangements is Japanese iris, which has all three.

Many annuals make great cut flowers because they bloom for a long season, offer a wide range of colors and forms, and the more you cut, the more they bloom. Cutting annuals has the same effect as deadheading: It prevents the development of seeds. This stimulates the plant to generate more flowers in its ongoing effort to reproduce.

Some of the best cut flowers are spring-blooming bulbs, and a substantial planting of them can significantly extend your cut flower season. Cutting these flowers will not stimulate more blooms, at least in an immediate sense, but preventing seed production by cutting the flowers will help channel more energy toward the bulb, which may result in more flowers the following year. Be sure to plant enough bulbs so that you can cut them

Opposite: Beds of cutting flowers, such as marigolds and zinnias, can be integrated into a vegetable garden. This page, above left: An informal bed of zinnias produces an abundance of blooms for indoor and outdoor color. Above right: This more formal cutting garden includes varieties of lilies, corn cockle (*Agrostemma* spp.), and snapdragons.

DAVID CAVAGNARO; JERRY PAVIA

Members' Cut Flower Tips

A few months back we asked you, our members, to share your cut flower expertise. We wanted to know your favorite selections for cut flowers and fillers; your tips on growing and arranging them; and whether you grow your cutting flowers in a separate bed, or integrate them into your display gardens. We received fascinating replies from all over the country.

Favorite Fresh Flowers and Fillers for Cutting

According to our survey, all types of plants—annuals, bulbs, herbaceous perennials, grasses, and shrubs—are finding their way into our readers' vases. Roses, dahlias, lilies, and daisies of all kinds were the most frequently mentioned cut flower favorites. Hydrangeas, purple moor grass *(Molinia* spp.), and lavender are valued for both fresh and dried arrangements. Other top choices include zinnias, purple globe amaranth, which "really adds a punch of color," says M.E. Butler of Wilburton, Oklahoma; garden phlox, peonies, and daffodils—specifically 'Manly' and 'Winston Churchill'.

According to Catherine Bly Cox of Burkittsville, Maryland, "Pelargoniums are rarely used as cut flowers, but they last well in the vase and combine well with other flowers." Peruvian lilies *(Alstroemeria* spp.) produce long-lasting blooms. "I cut buds, which opened after being cut, as well as flowers, and found they lasted three weeks in a vase," notes Joan Lindquist of Sayville, New York.

H. Marc Cathey, president emeritus of the American Horticultural Society and our resident cut flower expert, remarks that snapdragons, commonly grown as annuals, are in fact, perennial to Zone 7. "Every child loves the form, and every adult loves the fragrance," says Cathey, who adds that the 'Rocket' and 'Butterfly' series make outstanding cut flowers all summer long.

In addition to frequently mentioned fillers such as grasses and baby's breath, our members flesh out their fresh arrangements with a number of herbs—rosemary, mints, lemon grass—which also contribute fragrance to the display.

Alexandra Cook of Washington, D.C., recommends the annual snow on the mountain *(Euphorbia marginata)* as a filler for late season bouquets. It grows easily from seed, tolerates heat and drought, and, according to Cook, "although its coloring is a simple green-and-white, it seems to sparkle."

Other suggested fillers were cast-iron plant *(Aspidistra* spp.), winter currant *(Ribes sanguineum),* and Solomon's seal *(Polygonatum* spp.) "I cannot overstate the virtues of Solomon's seal as a green addition to arrangements," says Catherine Bly Cox. "It remains available for cutting from spring into fall, and it lasts for a long, long time in the vase."

Season-Extending Choices

Many of our surveyed readers enjoy drying flowers for long-lasting arrangements. Favored plants for dried arrangements were several ornamental grasses, including wild oats *(Chasmanthium latifolium),* hair grass *(Deschampsia* spp.), and eulalia grass *(Miscanthus sinensis).* To add color, our readers suggest the air-dried blooms of nigella, straw flowers, roses, cockscomb, and oregano—specifically *Origanum libanoticum* and *O. laevigatum* 'Hopely's Purple'. Also useful are stems of heathers and the shiny seedheads of blackberry lily *(Belamcanda chinensis).*

Integrating Flowers

Most of our members prefer integrating their cutting flowers into their display gardens. Catherine Bly Cox can't do without roses for cutting and has devised a plan to avoid one of the pitfalls of rose cultivation—the unsightly appearance that results from insect and disease infestation. "I don't much like hybrid teas in the border," she says, "because of the havoc that Japanese beetles wreak, and I don't like to spray them." So Cox grows her roses as a "crop" alongside her vegetables, where she can harvest at will in spring and fall "without worrying too much about how beetles and black spot make them look during the hot months."

Cut Flower Tips

We received several handy tips for using cut flowers. For Ella May T. Wulff of Philomath, Oregon, "the basis for any arrangement is adequate greenery." So she usually arranges her green foliage first, then adds the flowers.

"No holds barred," is the approach taken by Tom Capranica of Hereford, Arizona, for his floral arrangements, "Mix and match whatever you can!" To extend vase life, he suggests trimming foliage so that none is submerged, and adding a drop of liquid bleach each time you change the water.

"To arrange flowers and greens so that they stand nicely in the vase," says Joan Lindquist, "I make a grid of horticultural tape [florist's tape] on the top of the vase. This prevents them from leaning the 'wrong way.'" She achieves a graceful effect by incorporating the airy flowers of molinia or the arching leaves of miscanthus into many of her arrangements.

Joan B. Nickol of Cedar Rapids, Iowa, has an approach to fresh cut flower arrangements that seems to cover all the bases. "No sparse bouquets," she urges. "Either one bloom with a little filler or a hearty bunch of flowers stuffed in a vase. The first is elegant—the second lavish."

To those who responded to our survey, thank you. By sharing our experiences, we all learn something new!

Rita Pelczar, Associate Editor

SELECTED VARIETIES OF FLOWERS FOR VASES

Although most flowers that are grown for cutting perform admirably in a display bed, not all varieties of bedding plants are suitable for cutting. Many bedding plants have been bred for compact habits and short stems; others do not last long once they are cut. For the long stems and extended vase life preferred in cut flowers, care must be taken in selecting appropriate varieties. The following list is a sampling of recommended selections for cut flowers. There are many more, of course, but these should help you get started.

ANNUALS
(including tender perennials often grown as annuals)

Ageratum houstonianum 'Blue Horizon' (0, 9-1)
Antirrhinum majus 'Rocket Series' (7-9, 9-1)
Celosia argentea 'Chief Hybrids' (0, 9-2)
Consolida ajacis 'Blue Cloud', 'Snow Cloud', 'Giant Imperial Series' (0, 9-1)
Cosmos bipinnatus 'Sensation Series', 'Versailles Series' (0, 12-1)
Euphorbia marginata (0, 12-1)
Eustoma grandiflorum 'Echo Series', 'Mariachi Series' (8-11, 12-1)
Gomphrena globosa 'Bicolor Rose', 'Strawberry Fields' (0, 9-2)
Helianthus annuus 'Superior Gold', 'Velvet Queen' (0, 11-3)
Limonium sinuatum 'Excellent Hybrids' (8-9, 9-1)
Salvia farinacea 'Blue Bedder' (8-11, 12-8)
Salvia leucantha (9-11, 12-4)
Tagetes 'Gold Coin' (0, 12-1)
Zinnia elegans 'Benary Giants Hybrids', 'Blue Point', 'Oklahoma Hybrids' (0, 12-1)

HERBACEOUS PERENNIALS

Achillea 'Moonshine', 'Coronation Gold' (4-9, 9-2)
Agastache 'Tutti-Frutti' (6-10, 10-3)
Aster ericoides 'Blue Star', 'White Heather' (3-9, 9-1)
Aster ×frikartii 'Wonder of Staffa' (5-8, 8-5)
Astilbe chinensis var. *taquetii* 'Superba' (3-8, 8-2)
Campanula persicifolia 'Grandiflora Alba' (3-8, 8-1)
Delphinium 'Standup', 'Connecticut Yankee Series' (3-8, 6-1)
Digitalis 'Foxy' (5-9, 10-1)
Echinacea purpurea 'Bravado' (3-9, 12-1)
Echinops ritro 'Taplow Blue' (3-9, 12-1)
Euphorbia griffithii 'Fireglow' (4-9, 9-1)
Gypsophila paniculata 'Perfecta' (3-9, 9-3)
Ipomopsis rubra 'Scarlet Surprise' (6–9, 9-3)
Liatris scariosa 'Alba', 'September Glory' (5-9, 9-1)
L. spicata 'Floristan White', 'Kobold' (3-9, 9-1)
Salvia 'Indigo Spires' (7-11, 12-1)
Veronica spicata 'Blue Charm', 'Sightseeing Blue' (4-8, 8-1)

BULBOUS PLANTS

Allium aflatunense 'Purple Sensation' (4-8, 9-5)
A. cristophii (3-9, 9-5)
Crocosmia 'Golden Fleece', 'Lucifer', 'Jackanapes' (6-9, 9-2)
Dahlia 'Cheerio', 'Chilson's Pride', 'Cricket', 'Purple Gem' 'Shadow Cat' (9-11, 9-3)
Gladiolus 'Parade', 'Peace', 'Sunsport', 'Wayside's Arranger's Blend' (8-10, 9-3)
Hyacinthoides hispanica 'Blue Queen' (4-9, 9-1)
Leucojum aestivum 'Gravetye Giant' (4-9, 9-1)
Lilium 'Casa Blanca' 'Enchantment', 'Laura', 'Star Gazer' (3-9, 8-4)
Narcissus 'Cheerfulness', 'Dutch Master', 'Geranium'. 'Ice Follies', 'Mount Hood', 'Salome' (3-8, 9-2)
Nerine bowdenii (8–10, 10-5)
Polianthes tuberosa 'The Pearl' (7-10, 12-7)
Tulipa 'Angelique' 'Apeldoorn', 'Golden Apeldoorn', 'Rosy Wings' 'Sorbet' (3-8, 8-1)
Zantedeschia aethiopica (8-10, 10-4)

without losing too much of the garden display, and as the flowers fade, plant annuals alongside the bulbs to hide the foliage as it dies back and to supply your vases for summer.

Many herbaceous perennials also make terrific cut flowers and, though they usually have a shorter season of bloom than most annuals, many offer other charms. Consider the look of perennials for the periods when they will not be in bloom—their foliage can add texture and color to a planting or an arrangement. The great thing about peonies—besides their flowers—is that they look good all summer, and the foliage is great for cutting. Other perennials that boast both delightful flowers and useful foliage include yarrows *(Achillea* spp.), astilbes, hostas, lavenders, and Russian sage *(Perovskia atriplicifolia).*

PETER A. HOGG/MONROVIA

Though rarely considered for flower arranging, coleus leaves can add intriguing color and texture to indoor bouquets.

Foliage is essential for use as a filler in most bouquets. Finding foliage for cutting usually requires little effort beyond strolling around the yard with your snips, and it can more easily be harvested from various parts of the landscape without causing a void.

While green leaves are the rule, you can add pizzazz to arrangements with colorful exceptions such as the silvery white of western mugwort *(Artemisia*

AHS MEMBER IN FOCUS: The Flower Guy

When he retired in 1982, Bill Preston had the opportunity to pursue a favorite pastime, gardening. But after two years of growing far more vegetables than he and his wife, Corinne, could eat, can, or give away, Corinne suggested he try growing flowers. That was the beginning of a new career for Preston, a longtime AHS member who now sells his fresh-cut bounty at two local farmers' markets in Maryland from April through November.

Preston says the first vegetable market he approached didn't really want a flower guy. But pretty soon people were coming to the market specifically to buy flowers, "then they would pick up their vegetables too," he chuckles.

Until last year, he grew his crops on two parcels of land totaling just over an acre near his home in Bowie, Maryland. This year he will add another field to bring his total production area to two acres.

Preston has developed a faithful following of customers. The best way to keep them coming back, he discovered, is to offer a constantly changing selection. "You've got to have something interesting each week, something that maybe you haven't had before," he says. Which is why he grows about 150 different crops, from spring's daffodils and columbines to the aconitums and chrysanthemums of late summer and autumn.

Maryland flower grower and AHS member Bill Preston amid cosmos, left. Above, part of his field with a row of sunflowers.

Among the more unusual crops Preston grows for cutting are toad lilies *(Tricyrtis hirta),* spuria and English irises, and several species of *Silene,* which some people know as catchfly. His crops include spring bulbs, herbaceous perennials, and lots of annuals. Many areas of his fields are double cropped—he overplants early bloomers like English iris with summer-blooming annuals such as sunflowers. His detailed cropping schedule ensures maximum production from his land and a constant but always changing supply for his markets.

Dahlias are one of his favorite crops. "I've been hooked on dahlias since I was a kid," he admits. When I visited his fields last fall, he had between 75 and 80 dahlia varieties in bloom, each of which he knew by name, planting date, market demand, and vase life. But per square foot, one of the most profitable crops he grows is lisianthus *(Eustoma grandiflorum).* His customers begin asking for them in April, even though they are not available until July.

For gardeners interested in growing their own flowers for cutting, Preston suggests easy annuals such as the long-stemmed 'Gold Coin' marigold, and 'Oklahoma' or 'Benary Giant' zinnias. "And glads are always easy to grow, but they require support," he adds. Staking is required with many cut flowers. Preston warns, "You can't grow a bedding plant and expect cut flowers."

Preston usually hires a couple of teenagers two or three hours a day over the summer to help in his fields. He obviously enjoys sharing his knowledge and experience with them, and he involves them in all aspects of production. Preston himself works nine to 10 hour days in summer, taking a long break in the heat of the afternoon.

And what are the rewards of such long hours? Beyond the financial incentive, it is quite clearly a labor of love. "The whole business of selling cut flowers," Preston explains, "is the good feeling that comes with the exchange between people." Sometimes his customers return just to tell him how much his flowers were enjoyed. Preston delights in these reports. "You know that you are doing something for people, and I like that part."

Rita Pelczar, Associate Editor

ludoviciana), the red-purple of beefsteak plant *(Perilla frutescens* 'Atropurpurea'), and the variegated patterns of coleus *(Solenostemon scutellariodes)* and caladiums. Textures also vary from airy and ferny to stiff and swordlike, with everything in between. And herbs with fragrant foliage such as anise-hyssop *(Agastache* spp.) and basil *(Ocimum basilicum)* provide yet another dimension that should be considered.

Many of the woody plants already growing in your garden can also add to your cache of cut flower sources. Like spring-flowering bulbs, branches of early blooming shrubs and trees such as forsythia and flowering cherries are often among the first flowers available for cutting. Furthermore, woody plants such as winterberry *(Ilex verticillata)* and beautyberry *(Callicarpa* spp.) supply lovely fruiting stems for fall arrangements.

The Solution

Indoor arrangements are an effective way to provide a gentle transition from the garden to the house. Bringing a part of your garden indoors encourages you to see the plants you grow in a different light; combinations of flowers and foliage that may not—because of disparities in their height or differing cultural requirements—grow well together in the garden, sometimes mingle harmoniously in a vase.

RITA PELCZAR

Resources

Cutting Gardens by Anne Moyer Halpin, Betty Barr Mackey, and Derek Fell (photographer). Simon and Shuster, New York, New York, 1993.

The Flower Farmer: An Organic Grower's Guide to Raising and Selling Cut Flowers by Lynn Byczynski. Chelsea Green Publishing, White River Junction, Vermont, 1997.

Specialty Cut Flowers: The Production of Annuals, Perennials, Bulbs, and Woody Plants for Fresh and Dried Cut Flowers by Allan M. Armitage, Varsity Press, Portland, Oregon, 1993.

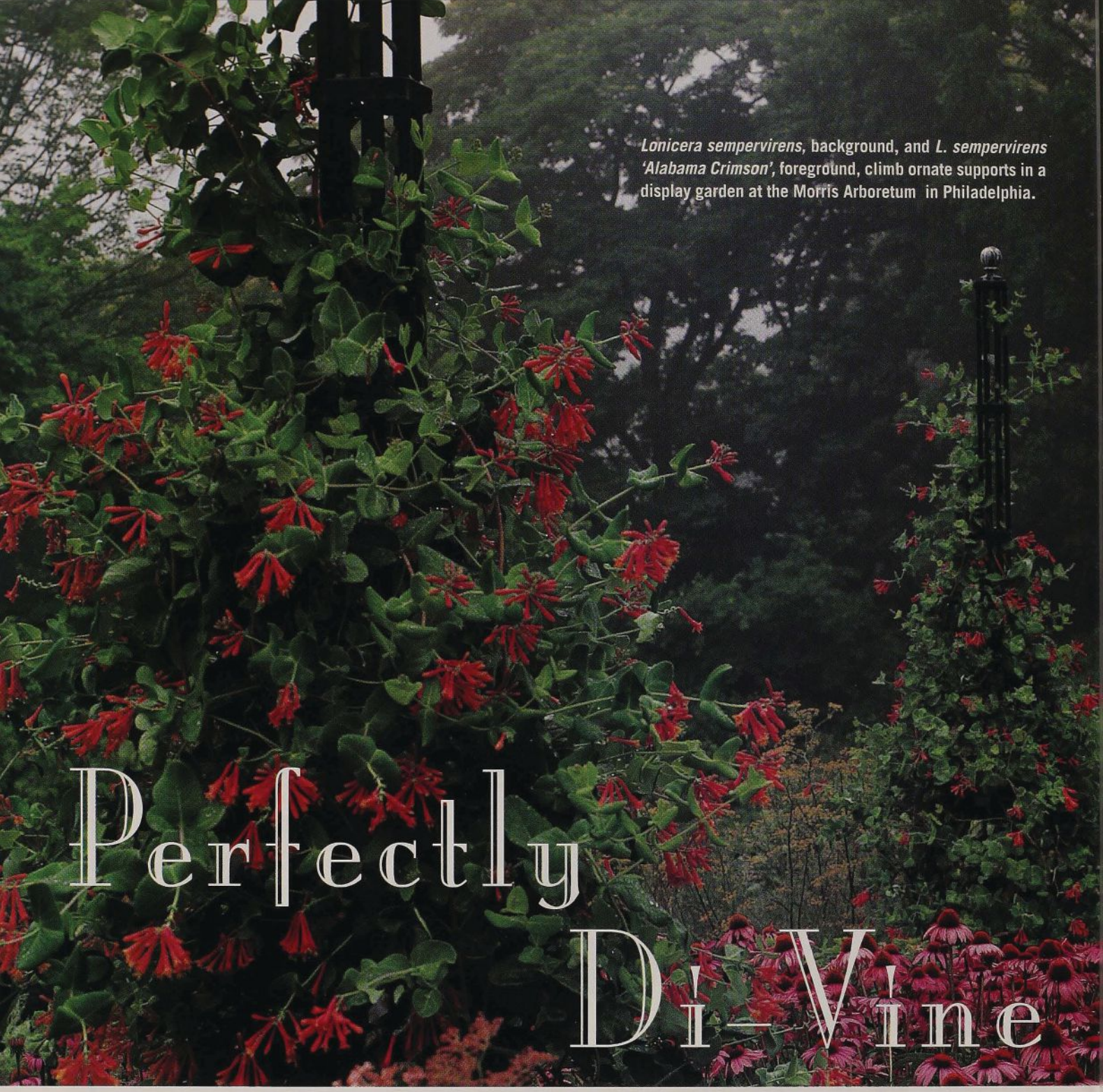
Taylor's Weekend Gardening Guides: The Cutting Garden by Rob Proctor. Houghton Mifflin Company, Boston, Massachusetts, 2000.

DAVID CAVAGNARO

Two young friends gather flowers for an indoor bouquet. Creating a cut flower garden is a good way to introduce children to the beauty and joy of plants.

Whether your cutting garden is the traditional type, set apart for that exclusive use, or a more aesthetic planting integrated into your display gardens—you can ensure abundant blooms all season long.

A resident of Philadelphia, Chela R. Kleiber is program manager at the Pennsylvania Horticultural Society and coauthor of Burpee Complete Gardener.



Lonicera sempervirens, background, and *L. sempervirens 'Alabama Crimson'*, foreground, climb ornate supports in a display garden at the Morris Arboretum in Philadelphia.

ROB CARDILLO

Perfectly Di-Vine

These native climbers will add style and stature to any garden.

BY KATHLEEN FISHER

SOME OF US are brilliant at laying out all-season color and rich texture at ground level, but once we raise our eyes to the vertical plane, it's a different story. If this is your plight, you'll find that your garden lacks a sense of place, like a living room with no paintings or photographs on the walls. Worse than that—no walls at all!

Certainly, garden rooms can be created with trees and shrubs, but their growth is usually slow and their potential limited on small lots because they grow out as well as up. Yet vines are about the last thing gardeners think about, both because they usually require support and because some have received a bad reputation for getting out of control. The support needn't be expensive, however, and the latter problem can be resolved by avoiding bad eggs such as Japanese honeysuckle and Asian wisterias or by judicious site selection.

If you are thinking about adding a vine to your garden, consider taking the patriot-

ic route with native vines. It's true that some of them also itch to have a merry romp all over your garden, but you can take measures to make them heel, and, if they do escape, they won't cause environmental havoc. With the notable exception of native wisterias, which were thoroughly covered in the May/June 2000 issue of *The American Gardener,* here are some of my favorites.

CORAL HONEYSUCKLE *(Lonicera sempervirens,* USDA Zones 4–9, AHS Zones 9–3).

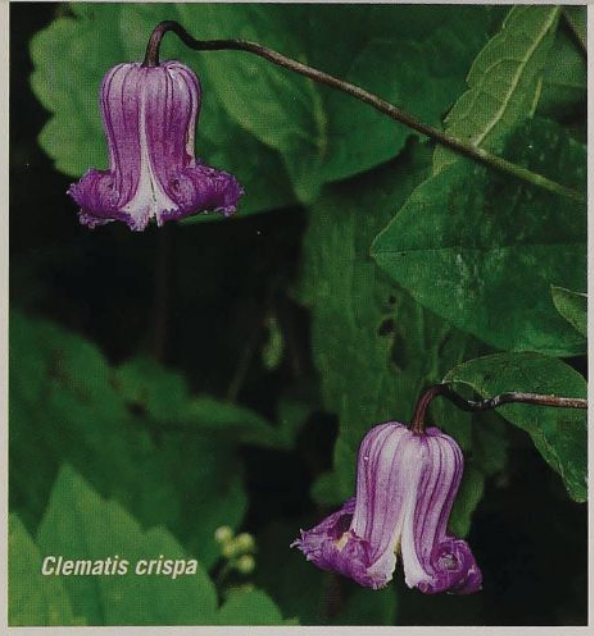
If I had to choose a favorite native vine (and the jury's still out, since I haven't come close to growing all of them), it would have to be this glowing hummingbird magnet. Long before my hummingbird feeder in the city draws a single bird, I hear the tiny engine thrum of a hummer that's been drawn to my country getaway by this well-behaved native of the eastern United States. You'll have to come to grips with its lack of fragrance—the siren song of non-native honeysuckles—but you'll be rewarded by season-long crimson flowers and then glowing translucent red berries. In spring, new leaves emerge with a reddish tinge; north of USDA Zone 8, most of them will drop in fall.

There are quite a few cultivars of this twiner, including some with yellow flowers. 'John Clayton' is a popular selection where I live, maybe just because it's the name of our local chapter of the Virginia Native Plant Society! Another sought-after cultivar is 'Manifich', which is light orange with a clear yellow center.

Coral honeysuckle thrives in slightly acid to neutral soil and blooms best in sun, although it performs with aplomb in shade. It grows 10 to 20 feet in height but should rarely need pruning, and, in fact, will produce a welcoming tangle for birds' nests if left alone. If you do feel a need to take a nip or tuck, do so lightly during the season, since a wholesale whacking back in late winter will wipe out the next season's blooms. Though aphids are said to be a problem with coral honeysuckle, I've never experienced them in the same way I have on the Asian hybrids.

LEATHER FLOWER *(Clematis crispa,* Zones 6–9, 9–6).

Granted, it's hard to resist those dinner-plate-sized hybrid clematises. But after one of them broke my heart by developing wilt, I've decided to rebound by exploring some native versions of this climber. They're said to be tougher than the mixed breeds, with a subtle appeal that grows on you rather than sweeping you off your feet on first glance.


Clematis crispa

Clematis crispa is a fragrant southeastern native that most experts say doesn't need the alkaline soil preferred by most other clematises. Its down-turned flowers have sepals that appear to have been trimmed with pinking shears, while its color is a blushing blue or pinky lavender that pales toward the center. Their numbers are sparse, but they can return reliably from late spring into early fall. Common names include blue jasmine, curly clematis, and marsh clematis, since it grows in marshy woods and even swamps throughout most of the eastern United States south of New England. *Clematis crispa* is possibly the most fine-textured of several native clematises that are broadly called "leather flowers" because of their thickened petal-like sepals.

TRUMPET VINE *(Campsis radicans,* Zones 4–9, 10–5).

What gardener hoping to attract hummingbirds would be without this eastern native? Its orange-red trumpet-shaped flowers draw them even more predictably than the coral honeysuckle. You can also find yellow forms ('Flava') and some selections that are more fire-engine red. In fall it forms brown seedpods that clatter in the wind, setting up the perfect atmosphere for ghost stories around a campfire.

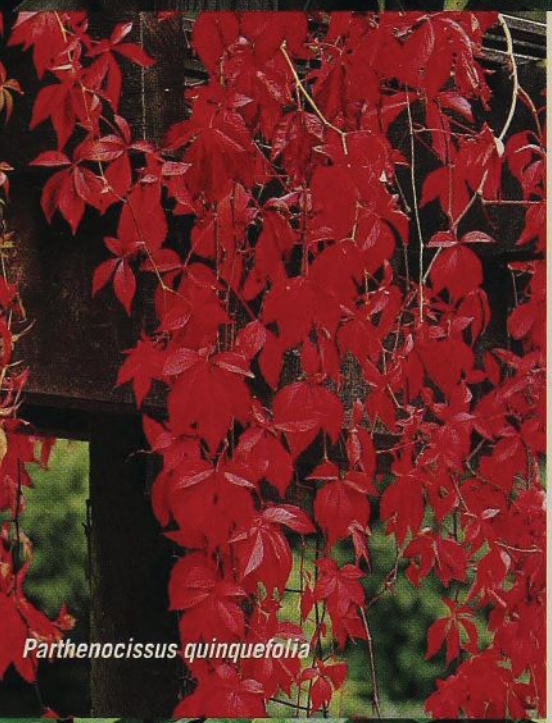
Each of those pods is crammed with winged seeds, and the plants also spread by runners. Thus even native plant afficionados worry about controlling this vine, which both twines and puts out aerial rootlets. It can grow to 40 feet, developing a woody trunk as stout as a forearm. It doesn't merely tolerate salt and sand, but, in my experience, seems to prefer those conditions in our bayside weekend garden to the rich clay found inland.

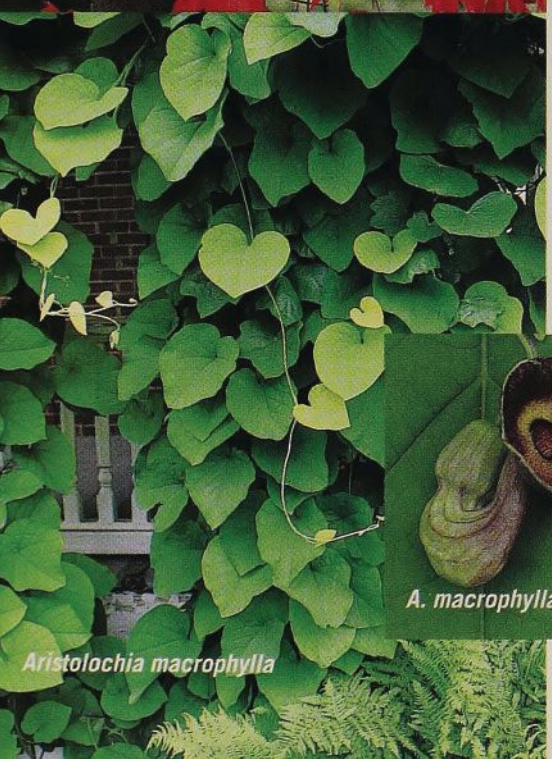
One of the best uses I've seen of trumpet vine was to cover a support pole for a deck. The deck controlled the height of the vine and kept it easy to reach for pruning

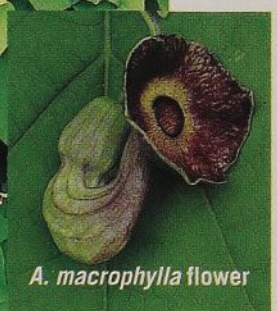

Campsis radicans

JOSEPH G. STRAUCH JR.; ANITA SABARESE


Gelsemium sempervirens


Parthenocissus quinquefolia


Aristolochia macrophylla


A. macrophylla flower

off sideshoots, while hummingbird visitors could be admired from the double glass doors of a basement walk-out under the deck. Give it a similarly limiting situation where you can bully it back to a few shoots and remove those bone-rattlin' pods.

CAROLINA JESSAMINE *(Gelsemium sempervirens,* Zones 7–9, 10–4)

I sometimes wonder if I'm *really* growing Carolina jessamine. It matches the photographs I've seen, but not the descriptions. For starters, most writers say it blooms for only a brief time in early spring. Granted, the first year I thought it was a bust. It even needed coaxing to twine up the trellis. Early the next summer it put forth a few paltry flowers, but by the next spring (we're talking crocus time) it was laden with pale yellow trumpets. Now it seems to bloom (albeit not heavily) for months. Second, most books rave about its fragrance, while my discerning nose can't detect a whiff.

Despite this variability in form, rewards are pretty much guaranteed. The handsome evergreen foliage is similar to that of the dreaded Japanese honeysuckle. Even in the few months the flowers aren't winking their yellow eyes at us, the foliage provides camouflage between house and compost bins. More southerly gardeners do report problems with invasiveness, and here in Zone 7 it's certainly vigorous, flinging itself onto a rooftop adjacent to its trellis and flapping around numerous side shoots. Still, these are nothing a quick haircut can't cure.

It will tolerate almost any situation—sun or shade (it grows into trees in the wild), heavy or sandy soil, acid or a bit alkaline. The double-flowered form, 'Pride of Augusta', is reputed to be less invasive in the South.

VIRGINIA CREEPER *(Parthenocissus quinquefolia,* Zones 4–9, 9–5)

Some people supposedly confuse this plant with poison ivy. Those of us highly susceptible to the scourge of the latter have no such problems. Both emerge with similar-looking reddish leaves, but Virginia creeper confirms its identity with five toothed lobes as opposed to poison ivy's three.

Virginia creeper, as its name indicates, is also happy when horizontal and is sometimes recommended as a woodland ground cover. As a vine, landscape architects of no less stature than Fletcher Steele have used it in their compositions, and plant explorer David Fairchild, who brought us so many species from Asia, was also partial to its charms. The most notable among these is its flamboyant and long-lasting red fall color. Much more subtle are the blue berries that help sustain birds through winter.

This vine clings with tendrils that branch and form adhesive "feet," enabling it to cling to any surface. But they also leave unsightly footprints on some surfaces when pulled away, so think twice before directing the vine up a white wall.

DUTCHMAN'S PIPE *(Aristolochia macrophylla,* Zones 5–8, 8–4)

If you need a vigorous grower to shade your sweltering deck or screen your view of the neighbors' rusting pickup, check out this twining southeastern native, a relative of the hardy gingers *(Asarum* spp.). A twining perennial that can grow more than 30 feet tall, it has glossy dark green leaves six to 10 inches across. They overlap, so come summer, you'll have to go looking for the one-inch flowers shaped like an ornate, curved-stem pipe. The U-shaped tube of the pipe is greenish yellow but the open end is mottled purple brown. The slightly carrionlike aroma of these flowers attracts flies, which tumble into the "pipe" and pollinate it.

Clearly, you can't support this vine on a wimpy trellis or fence, and against the side of a house or shed it can trap moisture and hasten deterioration of paint or

THIS PAGE TOP: JERRY PAVIA; MIDDLE: MARK TURNER; BOTTOM: DAVID CAVAGNARO (2). OPPOSITE TOP: ALAN AND LINDA DETRICK; BOTTOM: ROB AND ANN SIMPSON

SUPPORTING YOUR VINE HABIT

Coral honeysuckle on a sturdy support

Knowing what mechanism vines use to climb is important in choosing where to grow them and what kind of support is necessary. Most vines fall into two categories: twiners, which wrap themselves around supports; and "stickers," which attach themselves by aerial rootlets or adhesive pads. Morning glories *(Ipomoea* spp.) are twiners and English ivy *(Hedera helix)* is an example of a vine that climbs using aerial roots. Twiners need the support of a trellis or another plant to climb, while stickers can climb up walls or tree trunks without assistance.

Supports for most vines can be easy and inexpensive, as long as you're willing to control their height and spread with frequent pruning.

You won't be able to control the weight of trumpet vines and others that develop muscular woody stems, however, so give them stout support from Day 1.

As a rule, vines that twine will need to be trained as you get them started, but then they can grow up an open structure like wire mesh or a widely spaced wooden trellis. Vines that climb by aerial rootlets prefer a more solid wall, but they can leave their little root prints on siding and even damage wood if they're pulled off. They can also rip large chunks of bark off trees when you try to remove them.

Tendrils can work their way under clapboards but shouldn't do any harm. However, evergreens that produce masses of foliage can trap moisture and contribute to rot of wood shingles or clapboard. A wonderful device for vines is a hinged trellis that will swing out from the wall for painting or other damage control. Unfortunately—and obviously—this only works for annuals, or for perennials that you can prune down enough to swing away from the structure.

Many gardeners fret that vines will damage brick walls, but there's evidence they may even benefit some masonry. On brick, they can pit masonry, possibly causing it to crack in freezing weather, but this process takes decades to occur. On stone walls, there are often so few mortar joints that there is nothing for them to harm. It's been theorized that the vegetative growth and decay may actually raise the pH of masonry walls, counterbalancing damage from acid rain.

For freestanding trellises, I've gone the cheap route over the years, buying a ready-made trellis and nailing it up to landscape timbers set on end in a pit of concrete. This will last a long time for lighter-weight vines, like most clematis, and even for the heavier ones if you're a committed trimmer. Yet I strongly advise: STRENGTH. Instead of using 4-by-4s, consider 6-by-6s. The U.S. National Arboretum in Washington, D.C., uses thick uprights and wire cables for its climbing roses, and in my own garden I recently erected a similar system for some of our most vigorous vines. —K.F.

even wood. Give it a nice stout pillar where it can climb and cover a pergola. If it gets out of control, just cut it back—in which case you'll encourage side branching. Dutchman's pipe generally prefers some shade and isn't fussy about soil. It also shrugs off pollution and pests. The West Coast has its own native, *A. californica* (Zones 8–11, 7–3). Although the flowers are also small, they're more showy because they bloom before the leaves unfurl.

MAYPOP *(Passiflora incarnata,* Zones 6–10, 12–1). This is another vine that needs patrolling, big time. Some say its common name comes from the way its ripe fruit will pop when squeezed, but those of us who've grown it are pretty sure the name relates to its propensity to pop up yards away from where we've planted it. Though May is the month when it often makes its annual reappearance, it can be as late as June in northern regions.

The flowers of maypop are just about the most amazing creations available to temperate gardeners. (Yes, there are some 500 *Passiflora* species native to subtropical or tropical climes, but even a couple rated hardy into Zone 6 rarely survive in Zone 7.) The maypop's design is laden with metaphors for the crucifixion of Christ, hence the botanical name and common name for the genus, passionflower. It reminds me alternately of an old-time carnival ride and a multi-armed deity in a ballerina skirt.

All the reference books assume you are growing it for fruit and urge planting more than one vine. But while the lemon-size greenish yellow fruits can impart a tart taste to tea, they're fairly negligible compared to

Sources

Collector's Nursery, Battle Ground, WA. (360) 574-3832.
www.collectorsnursery.com. Catalog $2.
Aristolochia californica.

Fairweather Gardens, Greenwich, NJ. (856) 451-6261.
www.fairweathergardens.com. Catalog $4.
Aster carolinianus; Celastrus scandens; Cissus incisa; Decumaria barbara 'Chattooga'; *Matelea carolinensis; Lonicera sempervirens* 'John Clayton' and 'Manifich'.

Forestfarm, Williams, OR. (541) 846-7269.
www.forestfarm.com. Catalog $4. Free if ordered online.
Apios americana; Clematis ligusticifolia; Cocculus carolinianus; Gelsemium sempervirens 'Pride of Augusta'; *Lonicera interrupta; L. sempervirens* 'Cedar Lane'; *Parthenocissus inserta.*

Plants of the Southwest, Santa Fe, NM. (800) 788-7333.
www.plantsofthesouthwest.com. Catalog $3.50.
Asarina wizlizenii; Clematis pseudoalpina

Prairie Moon Nursery, Winona, MN. (507) 452-1362.
www.prairiemoonnursery.com. Catalog free.
Dioscorea villosa; Echinocystis lobata.

We-Du Nurseries, Marion, NC. (828) 738-8300.
www.we-du.com. Catalog $2.
Aristolochia macrophylla; Bignonia capreolata; Campsis radicans; Clematis crispa; Decumaria barbara; Gelsemium sempervirens; Lonicera sempervirens; Parthenocissus quinquefolia; Passiflora incarnata.

Woodlanders, Inc., Aiken, SC. (803) 648-7522.
www.woodlanders.net. Catalog $2.
Aristolochia macrophylla; Bignonia capreolata; Decumaria barbara; Gelsemium sempervirens; Gelsemium rankinii; Lonicera sempervirens 'John Clayton'; *Passiflora incarnata.*

Resources

Manual of Woody Landscape Plants by Michael A. Dirr. Stipes Publishing, Champaign, Illinois, 1998.

Flowering Vines: Beautiful Climbers, edited by Karan Davis Cutler. Part of the 21st-Century Gardening Series from Brooklyn Botanic Garden, New York, 1999.

the flowers. Plant one in a chimney flue sunk into the ground to control its runners. It will bloom best in full sun in neutral soil. The tropical-looking three-lobed leaves can form a dense tangle, and while it supposedly maxes out at six feet tall, by the end of the season it invariably has burrowed between the roof and seven-foot wall of our garage. Don't hesitate to prune it back severely, since it will only flower more.

Where I live, a related native, *P. lutea* (Zones 5–10, 12–1), also pops up everywhere. The greenish to off-white blooms are about the size of a quarter and the black fruits look like undersized blueberries. But the flowers have the same wondrous whirlgig form as their larger cousin, and it can be effectively used as summer decoration if allowed to clamber through spring-flowering shrubs.

CROSS VINE *(Bignonia capreolata,* Zones 6–9, 9–5). This lesser-known cousin of the trumpet vine has similarly shaped mid-spring flowers, not quite as long but lots of them. Reddish-purplish-brown outside and yellow inside, the flowers waft a fragrance that University of Georgia horticulturist Mike Dirr describes as "mocha." Getting its name from a shape that forms in its woody stems, it us-


Bignonia capreolata

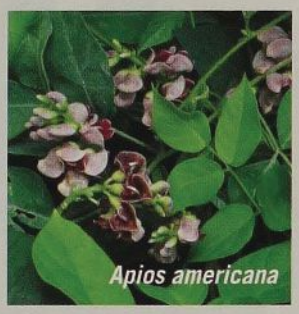

Asarina antirrhinifolia

HUGH AND CAROL NOURSE, JESSIE M. HARRIS

Regional Native Vines

Try some of these little-known North American climbers with some ornamental appeal, grouped roughly by the principal region to which they are native. For additional information on their qualities and growing habits, consult regional wildflower guides or request information from the nurseries that carry them.

EAST/SOUTHEAST


Apios americana

Apios americana (Indian potato) USDA Zone 3–9, AHS Zone 9–1
Aster carolinianus (climbing aster) Zones 8–10, 10–1
Celastrus scandens (American bittersweet) Zones 3–9, 10–1
Cocculus carolinianus (Carolina moonseed) Zones 7–9, 9–6
Gelsemium rankinii (swamp jessamine) Zones 7–9, 9–4
Matelea carolinensis (climbing milkweed) Zones 6–9, 9–6

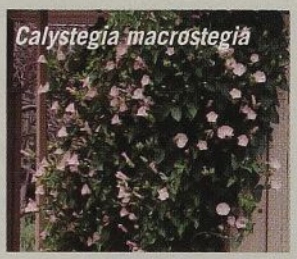
MIDWEST

Cissus incisa (grape ivy) Zones 6–9, 9–6
Echinocystis lobata (wild cucumber) Zones 8–10, 10–8

SOUTHWEST/ROCKY MOUNTAINS

Asarina wizlizenii (netcup vine) Zones 8–10, 10–8
Clematis pseudoalpina (Rocky Mountain clematis) Zones 6–8, 8–6
Parthenocissus inserta (western Virginia creeper) Zones 3–8, 8–3

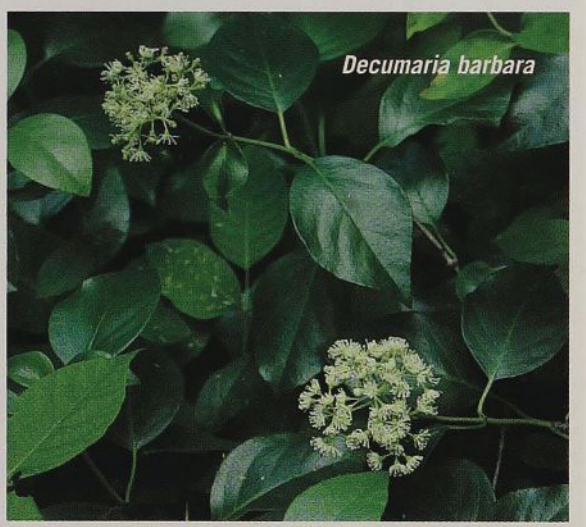
WEST


Calystegia macrostegia

Aristolochia californica (California Dutchman's pipe) Zones 8–11, 7–3
Calystegia macrostegia 'Anacapa Pink' (California morning glory) Zones 8–9, 10–1
Clematis ligusticifolia (western virgin's bower) Zones 6–8, 8–6
Lonicera interrupta (chaparral honeysuckle) Zones 6–8, 8–3

es its tendrils to climb rapidly, sometimes to 30 feet or more. Like trumpet vine, it develops seed capsules containing winged seeds. The lance-shaped evergreen to semi-evergreen leaves are paired and develop a reddish purple cast in winter.

Native to the southeast up to southern Illinois, this vine is one tough cookie, enduring shade—although it will flower less and the foliage will be more sparse—flooding, heat, salt, and wind. But that doesn't mean you need to torture it. Give it your usual gourmet garden soil—moisture retentive and well drained—and you'll be met with gratitude. And although it survives Zone 6, it doesn't like long stretches of bitter cold. Many gardeners in borderline growing areas keep it in a container that they overwinter in a freeze-free area.


Decumaria barbara

VIOLET TWINING SNAPDRAGON

(Asarina antirrhinifolia, syn. *Maurandella antirrhinifolia,* Zones 9–10, 12–1). Native to warm areas of the southwest from Texas to California and south into Mexico, this twining climber can be grown elsewhere as an annual. It reaches three to six feet tall, maintaining a relatively delicate habit compared to some of the previously mentioned dynamos. Its wiry stems support shallowly lobed leaves, and, from mid-summer through fall, violet or purple flowers with white or yellow throats. These bear a resemblance to snapdragons, but they're a bit larger and more open. Given a simple support for climbing, this vine provides height to a container planting of mixed annuals. Or allow it a chance to twine up the railings of a porch—it's best viewed at close range. It thrives in full sun and moist, well-drained soil, but may require some protection from drying winds.

WOOD VAMP

(Decumaria barbara, Zones 6–9, 9–6). This native is also called climbing hydrangea, and as a result is often confused with Asian vines such as *Hydrangea anomala* subsp. *petiolaris* and *Schizophragma hydrangeoides* that have the same common name. Its flowers are less showy than those species, but they're still appealing in an understated way. Fragrant, they appear in two- to three-inch flat clusters in late spring. The foliage is probably the big drawing card—leathery, shiny, and dark green in summer and yellow before shedding in fall. A cultivar, 'Chattooga', is said to have larger, longer-lasting leaves.

Clinging with aerial roots, wood vamp can grow more than 30 feet tall once it becomes established. It's quite happy in filtered shade and most at home scrambling up a pine or hardwood in a naturalized area. Give it organic, acid soil that retains moisture well, since it won't thrive when subjected to drought. Otherwise, wood vamp is a rewarding vine that you won't have to coddle or worry about keeping under control.

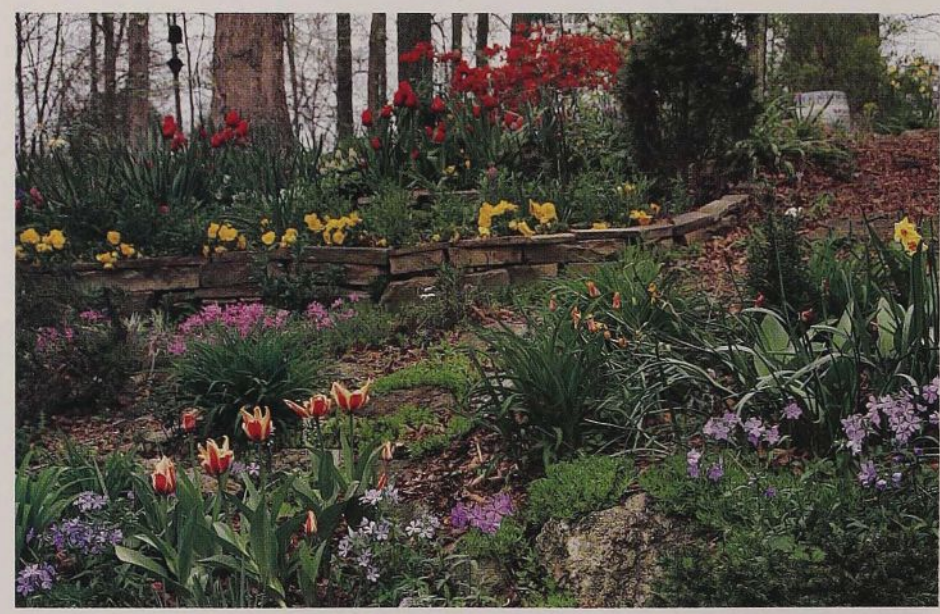
A resident of Alexandria and Reedville, Virginia, Kathleen Fisher is senior editor of Old-House Journal *in Washington, D.C. Her most recent book is* Taylor's Guide to Shrubs, *published in January by Houghton Mifflin.*

GOING WILD IN THE SHADE

Lessons from nature inspired this gardener's design of a tranquil woodland garden in the Piedmont region of South Carolina.

BY REKHA MORRIS

PHOTOGRAPHS BY HUGH AND CAROL NOURSE



AFTER SOME three years tending a small sunny city garden in England, the move to a wooded lot in the Piedmont region of South Carolina 10 years ago was a startling transition. One day I was in the midst of colorful, sun-loving perennials, and the next morning I woke up to a monochromatic green world alive with the sound of birds. It was a dramatic change, but one that I have embraced wholeheartedly.

At first I was content to walk in the woods and share in our cats' enthusiasm for our new surroundings. But this did not last very long. Along with the books, furniture, and household objects that had been shipped from England came two small, prefabricated ponds that had been in my garden there. I had shipped them as a reminder of the garden I was leaving behind, and to forge a link with the garden I was yet to fashion. Their arrival rekindled the old urge to wrest a little order from the tangled thickets of greenery, to dig, plant, and nurture—in short, to create another garden.

TAKING CUES FROM NATURE

THAT WINTER when the woods were bare and the tangle of wild muscadine, dogwood seedlings, and Virginia creeper no longer impeded my movements, I often followed the cats on their rambles. I soon realized that I was walking down narrow meandering paths they had created as they had moved about the woods during the summer and fall. Although these were mere ribbons in the landscape, there was a natural flow to them as they wound around trees and thickets. This initial relaxed pattern of paths became the basis of my efforts to segment the woods into sections, irregular in definition but limited enough in size for me to visualize as unified spaces that I could begin to clear and plant.

The author, far left, used stones left over from construction of her home to make terraces, above, that she has planted with spring bulbs. *Chrysogonum virginianum*, top left, and, *Phlox divaricata*, top right, are among the native species that also flourish in the woodland garden.

Our new house is set near the front of a three-quarter-acre wooded hillside lot that is roughly rectangular in shape. My garden in England, enclosed by old walls on two sides, and by the house and a wooden fence on the other two, was in every sense a garden room. But I immediately knew that in this new garden the trees, shrubs, and wildflowers would define the space rather than walls, fences, or hardscapes. I wanted to be able to watch and listen to the wildlife and to be conscious of every facet of the changing seasons. In my previous garden, I had indulged my passion for plants from far-flung areas of the world. Here, I sensed that the woods would not be indifferent to my intrusions, and I was prepared to allow the specifics of this place and its flora to direct my choices.

As my husband, Michael, began clearing the vines and tree seedlings that clogged the woodland floor, I began using logs and fieldstones to demarcate three major paths and the four irregular segments they created. In one section, builders had pushed up the rocks and stones cleared for the house; with a little adjustment of these rocks to create informal terraces, I gained a natural rockery in the high shade of trees but with some late afternoon sun. The next section is in heavier shade, but the two segments farthest from the house have greater exposure to the sun because some trees had been cleared for a power line. Over time, I discovered that because of differences in grade and exposure to light, each of the four sections possesses a distinct microclimate.

The design of my garden evolved intuitively from what I observed in the natural landscape around me, but much of my knowledge of plants came from consulting references to the native flora of the Piedmont region (see "Resources," page 37).

Rohan, one of the author's cats, rests amid a riot of blue phlox, white and red garden azaleas, and the native yellow-flowered Florida azalea *(Rhododendron austrinum).*

A TAPESTRY OF SHRUBS

IN MAKING a new entrance driveway, Michael and I had to remove dozens of azaleas. We replanted these in a loose configuration in dappled shade along the peripheral areas in the rear of the lot to camouflage a large composting area and a neighbor's metal fencing. Later, we interplanted these azaleas with a variety of eastern native shrubs, including sweetspire *(Itea virginica),* summersweet *(Clethra alnifolia),* chokeberry *(Aronia melanocarpa),* fothergilla *(Fothergilla major),* witch hazel *(Hamamelis virginiana),* Florida anise *(Illicium floridanum),* and flame azaleas *(Rhododendron calendulaceum).* This tapestry of shrubs defines the edges of our property while at the same time provides shelter and food for the woodland creatures that dwell on the hillside.

After the great burst of spring flowers from azaleas and hundreds of daffodils, these shrubs carry the bloom season through the summer and provide nectar for bees and butterflies. Their colorful fall foliage and berries then decorate the garden into the quiescent days of winter.

WOODLAND WILDFLOWERS

DURING MY INITIAL explorations that first winter, most of the woodland wild-

flowers were dormant. But as I moved and relocated rocks, three plants caught my attention because they retained their distinctive foliage in the winter months: little brown jug *(Asarum arifolium),* pipsissewa *(Chimaphila maculata),* and crane-fly orchid *(Tipularia discolor).*

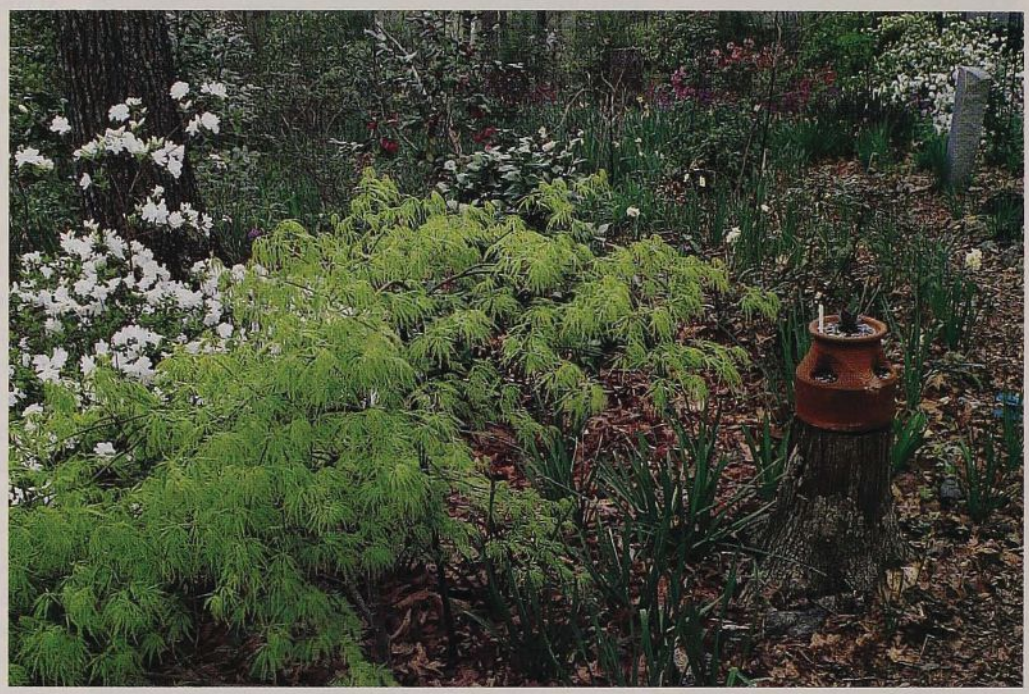
Little brown jug is the most striking herbaceous perennial in the winter landscape because its large arrow-shaped leaves are variably marked in shades of dark green with bronze and pewter. Pipsissewa grows only six to eight inches high and has small ovate leaves with prominent silvery veining; in the spring, white, pendant flowers rise above the foliage, two or three to a stem. Crane-fly orchid has strongly veined, large ovate leaves that are purple on the undersides and occasionally also on top. These begin as basal rosettes around October and form noticeable clumps in winter before dying back. In early summer, 10- to 12-inch-high stems bearing tiny brown-and-white flowers emerge from the bare ground.

The second spring revealed many more wildflowers, including Jack-in-the-pulpits *(Arisaema triphyllum),* Solomon's-seals *(Polygonatum biflorum),* foamflowers *(Tiarella cordifolia),* small bellworts *(Uvularia sessilifolia),* mayapples *(Podophyllum peltatum),* trilliums *(Trillium catesbaei),* and bloodroots *(Sanguinaria canadensis).* Gradually I began to group individual species around natural rock outcroppings or clusters of rocks that had been carefully placed to create sheltered habitats.

These woodland volunteers were an incentive to seek out more wildflowers native to the Piedmont. In addition to purchasing plants through reputable mail-order nurseries and accepting donations from friends, I was able to stock my garden with natives rescued with permission from nearby land slated for development.

An old logging road that ran through a projected housing development became a source of many natives. Seeds of many woodland wildflowers had washed down and taken root in this stretch of clearing. Michael and I rescued bloodroots, mayapples, foamflowers, countless rue anemones *(Thalictrum thalictroides,* also known as *Anemonella thalictroides), Trillium catesbaei,* and a dozen yellow-flowered violets *(Viola tripartita),* which are listed as an endangered species in this region.

A long, roughly oval segment of our woods seemed an ideal location for these rescued plants. I had already defined the spine of this area with star magnolia *(Magnolia stellata),* mountain laurels *(Kalmia latifolia),* and eastern native deciduous azaleas. Large, flat field stones collected from other parts of the property were laid to form several undulating paths; these stepping stones allow me to plant, weed, and water without compacting the soil around delicate roots.



NATURAL INSPIRATION

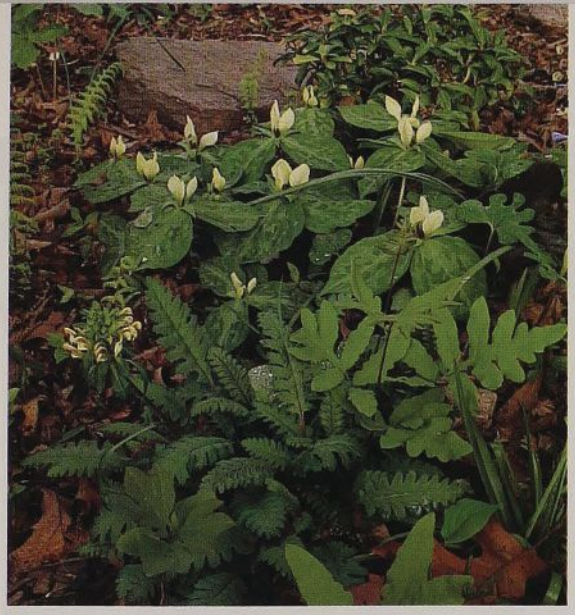
WHILE RESCUING these plants, I had noticed that a loose line of mayapples streamed downwards from a large colony at the crest of the hill. Standing below them, I could look up into the single white flowers held below the foliage. I decided to emulate the pattern of this fortuitous self-sowing and planted the rescued mayapples along a path that winds upwards.

I scattered *Trillium catesbaei*—with flowers in various shades from pale coral flushed white to deepest pink—up and down this area wherever I found space to plant them between rocks and roots. Clumps of *Viola tripartita* were clustered around a large oak at the edge of the path, where their bright yellow blooms can be easily viewed during the early days of spring. All the rescued bloodroots had grown along the open edges of the logging road, so I planted them on a hillside where they receive late afternoon sun.

A year later, we joined other members of the South Carolina Native Plant Society to rescue plants from a large wooded property slated for clear-cutting. This site was rich in wildflowers such as *Hepatica americana,* foamflowers, and louseworts *(Pedicularis canadensis).* There were also trilliums *(Trillium catesbaei),* pink lady's-slipper orchids *(Cypripedium acaule),* Jack-in-the-pulpits, black cohoshes *(Cimicifuga racemosa),* blue cohoshes *(Caulophyllum thalictroides),* and wild gingers *(Asarum heterophyllum).*

Dozens of clumps of the wild gingers—with their shiny, rich green, cordate foliage highlighted with prominent silver

Above: A Japanese maple flanks one of the paths winding through the author's garden. Among the native plants the author rescued and transplanted to her garden is rue anemone, opposite bottom, growing among primroses, and *Pedicularis canadensis,* opposite top, with its almost fernlike clumps of foliage; behind it grows *Trillium discolor,* another native.



Another essential element in creating our wild garden was trying to duplicate the layered quality of our eastern woodlands, where tall red oaks *(Quercus rubra)* and tulip trees *(Liriodendron tulipifera)* are the dominant features. On our property, numerous dogwoods, a few sassafrasses *(Sassafras albidum)*, and a large thicket of hearts-a-bursting *(Euonymous americanus)* formed a second canopy. Over time, I have added various shade-tolerant deciduous and evergreen understory trees, shrubs, and vines to provide informal structure to the garden and prevent it from looking utterly stark in winter.

The natural checks and balances assured by such a diversity of plants helps reduce the ravages of diseases and pests. And I encourage natural predators to thrive by avoiding the use of toxic pesticides. This leaves me with only two major problems to resolve: taking care of the masses of leaves that descend each fall and preventing the woods from becoming too dry in the summer.

Each autumn the large leaves of red oaks and tulip poplars form a thick, choking layer that mats down during our winter rains and can smother delicate woodland flowers. To prevent this, we shred the leaves, allowing the resulting fine debris to drift at will across the woodland floor. In February, when the shredded leaves have begun to decompose, we spread a thin layer of compost over all the planted areas to encourage microbial activity and to serve as mulch. Over time, this has made the existing soil more fertile and water retentive.

Ensuring that the plants do not suffer from lack of adequate moisture during the hot and dry summers has been trickier. We have set up a complex system of some 35 sprinklers ranging in height from 18 inches to four feet; three or four of these are turned on at a time until the entire woodland is watered.

Despite this supplemental watering, the soil tends to be on the dry side. During the hottest and driest period last summer, I discovered that running only the tallest sprinklers not only reduced our overall use of water but also provided enough atmospheric moisture to prevent leaves from drying out. While I would not recommend this technique to every gardener, it has proven effective in our climate, where hot, dry afternoon air seems to be most harmful to plants.

The two ponds imported as a reminder of our previous garden are now set one above the other to form a waterfall on the hillside behind our house. While they were once home to a couple of goldfish and a newt, in my woodland garden they attract frogs, box turtles, garter and black snakes, opossums, and a variety of birds. Long after the flowers have faded each spring, these welcome visitors fill the garden with Shakespeare's "sounds and sweet airs."

markings—now carpet large areas of our woodland garden. I also edged several of my paths with foamflowers, which generally spread by stoloniferous roots and quickly form little colonies. Their palmate leaves, often highlighted with dark maroon-brown centers, are topped by billowy masses of small white or creamy white flowers in April and May.

TENDING THE WILD GARDEN

KEEPING THESE rescued plants alive that first summer demanded constant watering, and encouraging them to thrive and naturalize is an ongoing process. Although I had attempted to place the plants in habitats closely approximating those where I had found them growing, some have required replanting. Wild gardening is a process involving experimentation, change, and constant vigilance. The informality of my woodland garden is conducive to plants being moved and situated according to their specific needs rather than by the dictates of a rigid plan.

Resources

South Carolina Native Plant Society, c/o Tom Goforth, 376 Carrick Creek Road, Pickens, SC 29671. E-mail: tgoforth@innova.net.

Field Guide to the Piedmont by Michael A. Godfrey. The University of North Carolina Press, Chapel Hill, 1997.

Manual of the Vascular Flora of the Carolinas by A.E. Radford, H.E. Ahles, and C.R. Bell. University of North Carolina Press, Chapel Hill, 1964.

Rekha Morris is an art historian, gardener, and writer. She and her husband, Michael, live in Pendleton, South Carolina.

HIGH-RISE HERBS

Stalwart herbs add texture and substance to the ornamental border.

BY RAND B. LEE

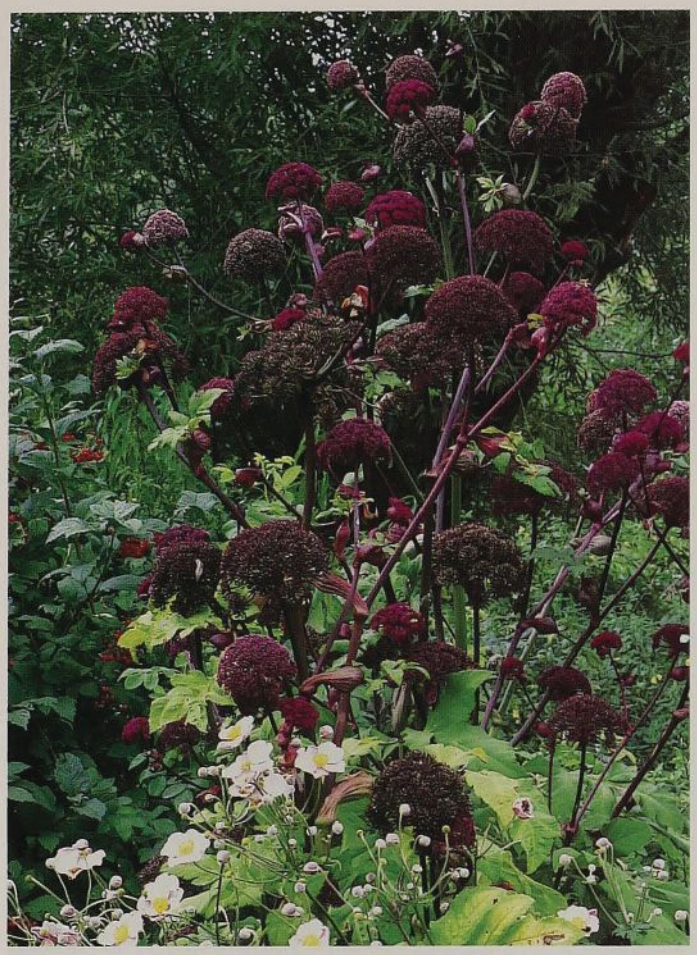
Angelica makes an imposing statement against the backdrop of an old barn.

DAVID CAVAGNARO

PEOPLE TEND to think of culinary and medicinal herbs as compact little plants that should be confined to an herb or vegetable garden. But there are a number of statuesque herbs that lend admirable substance, texture, and interest to ornamental borders. Tall herbs draw the eye upward—for gardeners are always stooping—and act as backdrops to concentrate the visitor's attention on a specific frame of the garden picture. Tall herbs can also become supports for less sturdy plants, which can be trained up and through them to charming effect. And most herbs offer food and cover for birds, butterflies, bees, wasps, and other pollinators, all of which bring their own particular charm and utility to the garden.

Most of the herbs covered in this article are quite civilized members of the plant kingdom, but, given ideal conditions, a few can become somewhat thuggish—they start out looking cute, only to turn humongous in a year or two or self sow with abandon—so you'll want to site them with a view to their mature size. The majority will thrive in a moist or regularly irrigated site that receives some afternoon shade in summer, especially in warmer regions of North America.

A good place to start the search for statuesque herbs is the carrot or parsley family (Apiaceae, formerly known as Umbelliferae). These plants are characterized by pithy—often hollow—stems, compound leaves that sheath the stems, and rounded



The bold burgundy flowerheads of Korean angelica are a pleasing counterpoint to the delicate pink flowers of *Anemone tomentosa*.

DAVID CAVAGNARO

or flat inflorescences made up of numerous small flowers borne on individual stalks—botanists term such flower heads "umbellate," and members of this family are often referred to as umbellifers.

ANGELICAS

AMONG UMBELLIFERS, you can't beat the angelicas for architectural interest. True culinary herbs, the angelicas were formerly much used in teas and in baking; their resin-scented seeds, leaves, and roots can quicken the dull palate and chase the winter sludge from the soul. Biennials to short-lived perennials, they produce broad, cut-leaf rosettes the first year, then swell to two to four feet across the second year, when stout, hollow, sparsely leafed, almost bamboolike stems arise and develop multiple branches. Ball-shaped flower heads form at the ends of the upper stems that are as lovely in bud as broccoli. In the garden, a more glorious specimen or back-border plant could not be imagined.

Angelica archangelica, a native of damp European meadows and riverbanks, is so-named because, according to legend, the Archangel Michael revealed to a medieval monk that angelica was a cure-all for the Black Death. It was not, unfortunately, for plague sufferers, but it certainly looks as though it *could* have been. Hardy in USDA Zones 4 to 9 and heat tolerant in AHS Zones 9 to 1, it can grow up to eight feet tall, bearing white to cream-colored umbels in mid-spring. Like all angelicas, it is supposed to be strictly monocarpic—dying after flowering—but plants sometimes return a third year regardless.

A riveting North American angelica is American masterwort *(A. atropurpurea),* native to the central United States and hardy to Zone 4. A well-grown plant can get six to 12 feet tall and six feet across; its red stems, wine-and-green juvenile foliage, mid-green, burgundy-veined mature foliage, and huge balls of white spring flowers make it the most impressive of the angelicas.

Newer to American gardens is the four- to six-foot-tall Korean angelica *(A. gigas),* introduced from Asia by plant hunter Barry Yinger. It also has a distinct purple cast to its flower stems, but its bright, rounded, burgundy-colored flower heads open in August, much later than other angelicas.

Astilbes make good companions for angelicas. Try the one-and-a-half to two-foot-tall late-July to August bloomer *Astilbe* 'Bronce Elegans' ('Bronze Elegans'), with its deep rosy pink plumes and glossy, bronze-green foliage; or *A.* 'Fanal', which has dark reddish green foliage and blooms deep garnet red at the same height as 'Bronce Elegans' but a month to a month and a half earlier.

Or partner angelicas with dusty meadow rue *(Thalictrum flavum* subsp. *glaucum).* This beautiful perennial has the typical blue-green columbinelike foliage of its genus, but in this subspecies, the mid- to late summer blossoms are the color of rich cream. The plants, which are native to Europe and North Africa, can grow five feet tall. Related is the Japanese lavender mist meadow rue *(T. rochebrunianum),* the blossoms of which are lilac-colored, with prominent yellow stamens. All are adapted to the same rich, moist soil and part shade that suit the angelicas.

All angelicas can be started from seed, but for best results the seeds should be sown immediately after harvest in the fall. For seeds that have been dry stored for any length of time, moist cold conditioning as described below is crucial, and germination can take up to six months, so be patient.

Like most umbellifers, angelicas can be tricky to transplant once their taproots have formed, so either sow seeds in fall where you want them to grow or, to moist cold condition them, place them in slightly moistened peat in a sealable plastic bag and store them at about 40 degrees Fahrenheit for at least six weeks. Check the bag at intervals and pot up any seeds that have started to germinate. Sow the remaining seeds in individual biodegradable containers in early winter and plant the containers directly in the ground in early spring once the seedlings have developed their first true leaves. Site them where they will receive part or dappled shade—they require

> Tall herbs draw the eye upward—for gardeners are always stooping—and act as backdrops to concentrate the visitor's attention on a specific frame of the garden picture.

Sources

Gardens North, North Gower, ON, Canada. (613) 489-0065. *www.gardensnorth.com.* Catalog $4, U.S. and Canada. *Angelica atropurpurea; A. gigas; Anthriscus sylvestris* 'Ravenswing'; *Myrrhis odorata; Valeriana officinalis.*

Goodwin Creek Gardens, Williams, OR. (800) 846-7359. *www.goodwincreekgardens.com.* Catalog $2. *Angelica archangelica; Lavandula ×allardii; Rosmarinus officinalis* 'Tuscan Blue'; *Smyrnium olusatrum.*

Horus Botanicals Ethnobotanical Seeds, HCR Route 82, Box 29, Salem, AR 72576. Catalog $3. *Cleome gynandra* (syn. *Gynandropsis gynandra).*

Richters, Goodwood, ON,Canada. (905) 640-6677. *www.richters.com.* Catalog free. *Anethum graveolens; Angelica archangelica; Cymbopogon citratus; Myrrhis odorata; Levisticum officinale; Ocimum gratissimum; Parthenium integrifolium; Porophyllum ruderale; Valeriana officinalis.*

Sunnyboy Gardens, Earlysville, VA. (888) 431-0006. *www.sunnyboygardens.com.* Catalog $3. *Angelica archangelica; Angelica gigas; Foeniculum vulgare* 'Rubrum'; *Levisticum officinale; Myrrhis odorata.*

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Growing Herbs and Vegetables: From Seed to Harvest by Terry and Mark Silber. Alfred A. Knopf, New York, New York, 1999.

Herbs in Bloom: A Guide to Growing Herbs as Ornamental Plants by Jo Ann Gardner. Timber Press, Portland, Oregon, 1998.

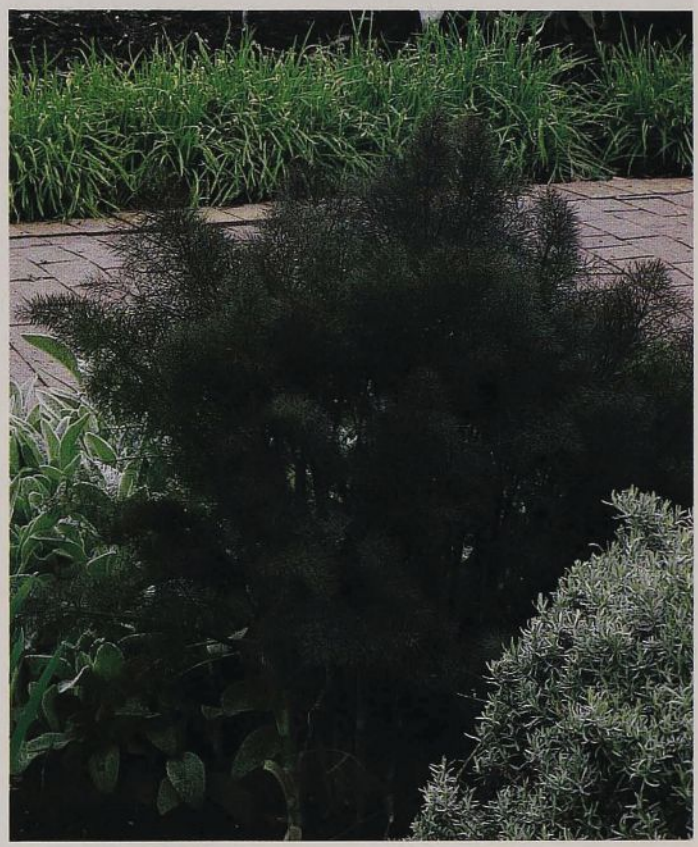
Landscaping Herbs by Barbara L. Collins and Floyd A. Giles. Stipes Publishing, Champaign, Illinois, 1998.

full shade in hot climates—in deep, rich, well-drained soil that stays evenly moist during the growing season. After the plants have finished flowering, seeds will develop. Collect them after they ripen and turn brown in fall and sow immediately as described above.

FENNEL

ONE UMBELLIFER I rather wish I *didn't* love so much is the salad, baking, and pickling herb sweet fennel *(Foeniculum vulgare),* particularly bronze-colored or purplish selections such as 'Purpurascens', 'Rubrum', or 'Smokey', hardy in USDA Hardiness Zones 5 to 9, AHS Heat Zones 12 to 1. I got my first fennel plant in a two-and-a-half-inch pot from a Santa Fe nursery, choosing the most deeply bronze-leaved seedling I could find. The first year it made a modest puff of feathery purple; the next year, the puff was adorned with a few small plates of bronze-yellow flowers that turned into wheels of licorice-flavored, gray seeds by summer's end. The second year, the plant was at most three feet tall. This past year it was eight feet tall, a glory of purple and old gold, often chomped on by big, fat, bright green caterpillars with black stripes—larvae of the swallowtail butterfly, which commonly feed on members of the carrot family. They never do very much damage, anyway, so I leave them to turn into butterflies.

And what a sight the fennel is en masse: a wall of purple smoke that forms a dramatic dark curtain in back of such bright



Softly textured and silvery-leaved lavender and lamb's-ears set off the airy purple foliage of *Foeniculum* 'Smokey'.

DAVID CAVAGNARO

raspberry-red and sulfur-colored flowers as the painted daisies *(Pyrethrum roseum),* the old rose 'Jacques Cartier', crocosmias 'Lucifer' and 'Solfata', and the purple-leaved, four-foot-tall, scarlet-blossomed, old semidouble dahlia 'Bishop of Llandaff'. White plants look lovely against bronze fennel, too—particularly the two- to three-foot-tall silver-leaved *Artemisia ludoviciana* 'Silver King', the mildew-resistant *Phlox paniculata* 'David', the tall white annual *Cosmos bipinnatus* 'Purity', and—for an angelic treat—the three-foot-tall, double-flowered, perennial white baby's breath *Gypsophila paniculata* 'Bristol Fairy'.

If you prefer green fennel to bronze, the giant anise fennel (another selection of *F. vulgare)* is worth a try. But this particular fen-

nel is said to grow 12 feet tall at maturity, so be sure to plant it where its stature can be enjoyed.

Be forewarned that fennel is an utterly incorrigible self-sower and is considered invasive in the wild in states as far flung as Virginia and California. Much of my spring is spent scurrying about my garden pulling up seedlings, for if you don't get them young, their taproots will burrow to China and you will never get them out. Those same taproots, of course, make fennel wonderfully tolerant of heat and drought.

As you would expect, fennel seeds germinate easily, but because of their taproots, they are best sown outdoors in spring where they are to grow. If you start the seeds indoors, sow them in biodegradable pots and transplant them outdoors right after your region's typical last frost date. Bronze fennel is somewhat variable from seed, so discard the greener seedlings in favor of the darker. Fennel grows best in full sun and rich, well-drained soil but will tolerate poor or moist soil.

LESSER-KNOWN UMBELLIFERS

ANOTHER GREAT UMBELLIFER, little grown in North America, is sweet cicely *(Myrrhis odorata).* Medieval herbalist John Gerard wrote of its "divers great and fair spread wing leaves...of sweet pleasant and spice-hot taste," and recommended its leaves in fresh salads, where "it addeth a marvellous good rellish to all the rest." The leaves really do taste sweet, and the sweet, spicy roots were also eaten boiled or fresh with oil and vinegar, or candied and used as dessert garnishes. Even the seeds are edible.

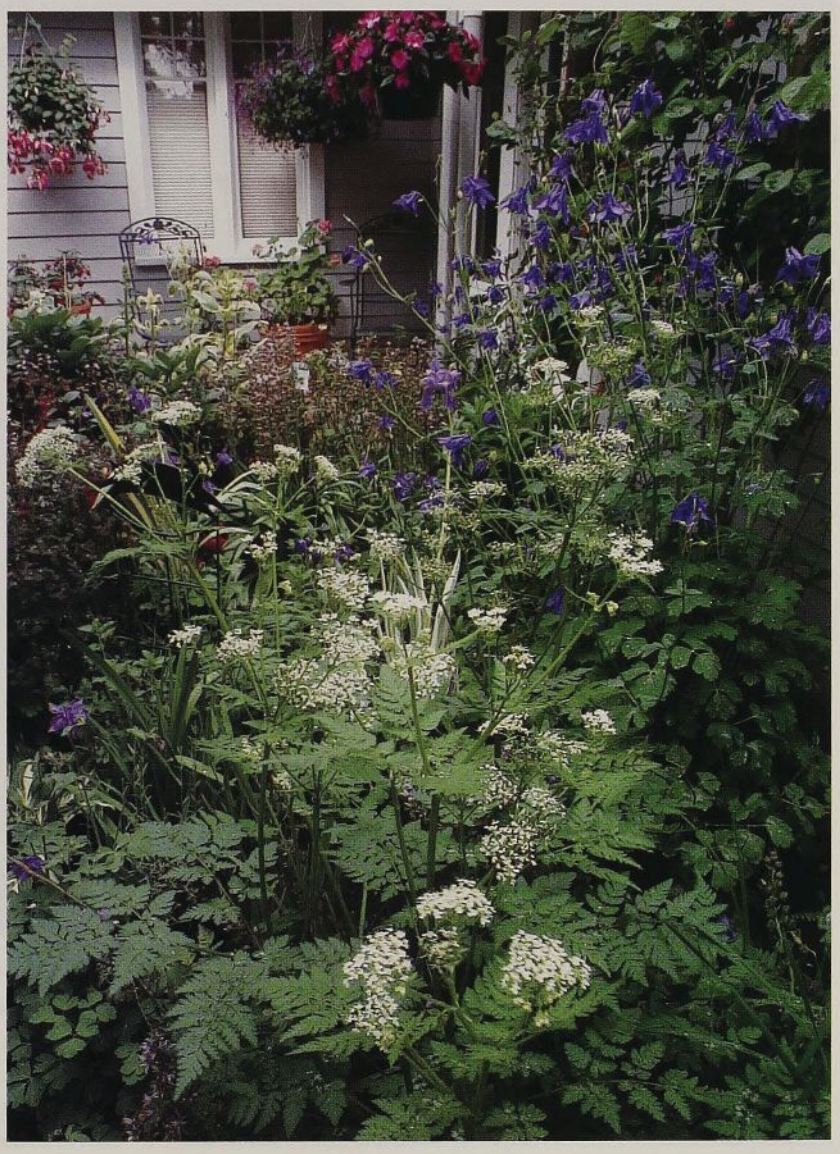
Hardy from Zones 4 to 8 and heat tolerant in Zones 8–1, it is indeed a lovely plant, with leaves as finely cut or finer than that of the maidenhair fern and delicate umbels of star-shaped flowers that bloom in early summer. It is beautiful interplanted with bulbs such as the June-blooming blue-flowered onion *(Allium caeruleum).* It will grow best where it receives part or dappled shade and, with regular watering, can reach five feet tall, with an equal spread. Sweet cicely self sows readily, and seeds can be sown outdoors in fall or cold conditioned and sown indoors in late winter.

Though saddled with odd common names, another umbellifer to consider is cow parsley or keck *(Anthriscus sylvestris).* There is nothing bovine about keck; the "cow" in "cow parsley"—like the "dog" in "dog rose"—is a folk prefix differentiating a wilding from its more cultivated garden relatives. Cow parsley is a biennial or short-lived perennial sporting very finely divided, airy-looking leaves, each composed of three multi-segmented feathers. The umbels are smallish, bearing six to 12 circlets each of tiny white blossoms in early summer.

Cow parsley can grow five or six feet tall on rich, well-drained, irrigated soil. The plain green species is very lovely, but it cannot hold a candle to the cultivar 'Ravenswing', which precisely mimics the deep brown-purple of bronze fennel. 'Ravenswing' looks fabulous in the garden backed by the red-leaved, scarlet-flowered form of the castor bean *(Ricinus communis* 'Carmencita') and interplanted with the tall snapdragon cultivars such as 'Rocket Red' and 'Rocket Bronze' in a small sea of white and blue biennal or short-lived perennial forget-me-nots *(Myosotis sylvatica).*

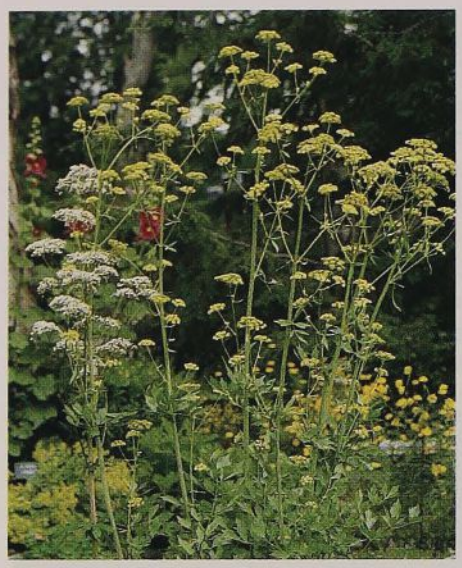
Though its water requirements are beyond my dry mountain budget, an excellent plant for a moist perennial border is lovage *(Levisticum officinale),* an Eastern Mediterranean umbellifer hardy to Zone 5. Its hollow, ribbed stalks and its green toothed and notched leaves bear more than a passing resemblance to those of the cultivated celery plant, as do its greenish yellow flower umbels, which arise in late summer. Furthermore, it is very strongly scented of celery in all its parts. Lovage differs from celery, however, in its size: An established plant can reach four to six feet tall and three feet in diameter at flowering time.

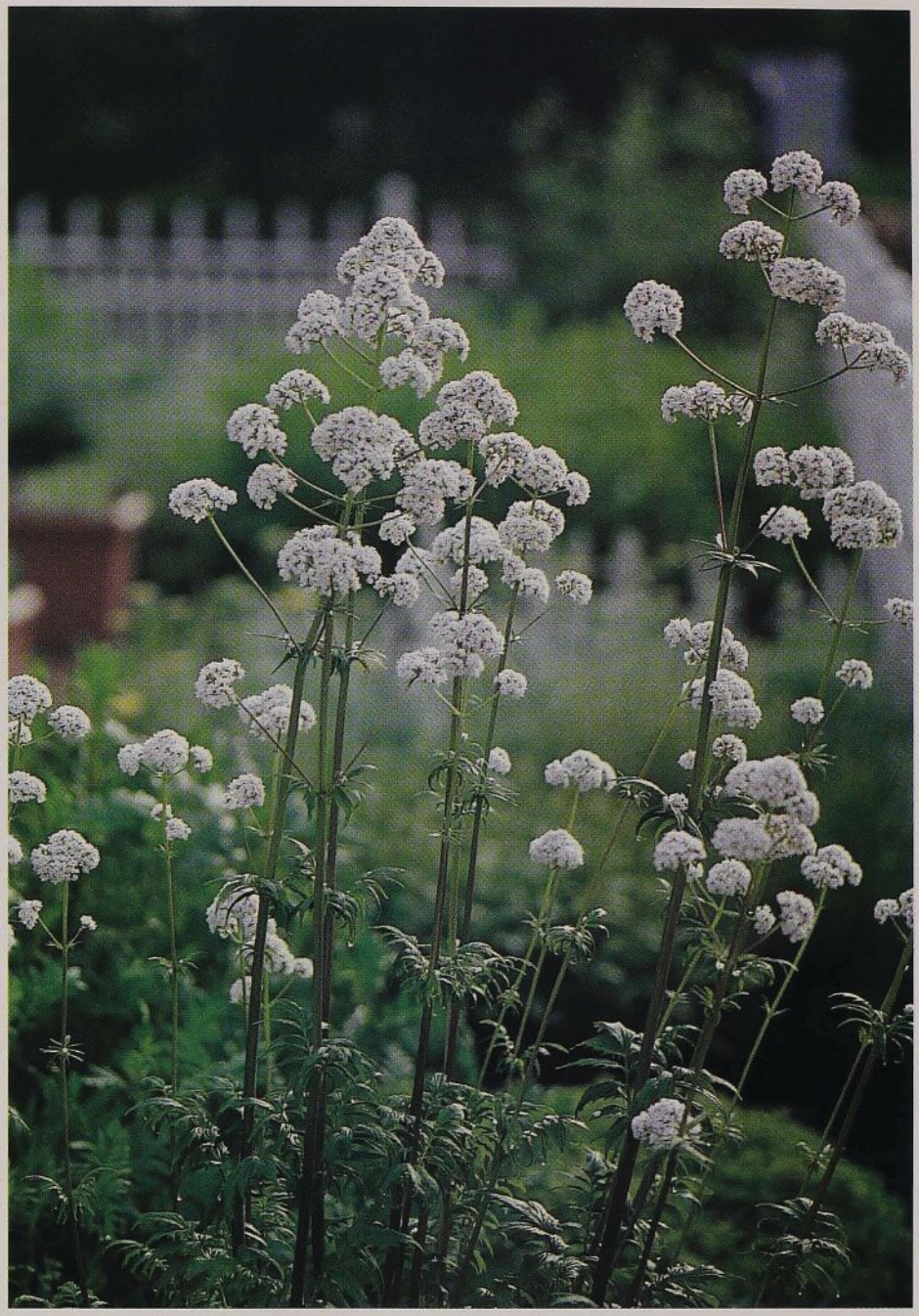
Lovage usually takes two seasons to reach blooming size, however, and may act as a short-lived perennial in warmer, drier regions. It thrives in full sun or part shade in regions where summers are not too hot. Sow seeds indoors in individual



Sweet cicely, with its fernlike foliage and white flower heads, makes a harmonious partner for the tall, delicate blue columbines in this cottage garden in Oregon.

MICHAEL S. THOMPSON





The respective yellow and white flower heads of lovage, above, and valerian, right, add an airy grace to a border, but both plants grow best where summers are not too hot and they receive a consistent supply of moisture.

biodegradable pots about eight weeks before your area's frost-free date, or outdoors about a month before that date.

When I gardened in moister climes, I would partner lovage with the three- to four-foot-tall dinner-plate dahlias: 'Lilac Time', with its seven- to nine-inch-diameter double bluish-lavender blossoms; the apricot-pink 'Otto's Thrill', with its 11-inch flowers; or 'Kelvin Floodlight', which, as you can imagine, bears halogen-bright, golden yellow, nine- to 11-inch blooms.

NON UMBELLIFERS

THOUGH ONE COULD BE satisfied with the range of tall herbs found in the celery family, several other lofty herbs bear consideration in the ornamental border.

Although, as with lovage, the water needs of valerian *(Valeriana officinalis)* are too great for my Southwest garden, it is well suited to gardens in the Pacific Northwest and much of eastern North America, where it can receive a regular supply of moisture. Valerian—sometimes called "wild heliotrope" on account of its vanilla-scented blossoms—can reach four to five feet in height in rich, moist soil. It has attractive feathery leaves and from June through August bears handsome clusters of cream-colored to pinkish flowers. Cultivars include red-flowered selections 'Coccinea' and 'Rubra'.

Valerian looks majestic in colonies offsetting lumps of variegated hostas; try it also interplanted with the two-foot-tall, blue-violet-flowered, green-and-gold variegated Jacob's ladder *(Polemonium* 'Brise d'Anjou'). Valerian spreads slowly by rhizomes and can be divided every few years to produce new plants; it also self sows readily and can be easily propagated from fresh seeds.

Wild quinine *(Parthenium integrifolium),* also known as American feverfew, is a perennial composite native to eastern and central North America. As its common names suggest, it has a history of herbal use for fever reduction. It grows three to five feet tall, with large, coarse, basal leaves and smaller stem leaves. Starting in midsummer, it bears numerous small, flat-topped terminal clusters of tiny white flowers that make charming bouquets.

Hardy to Zone 5 and very heat tolerant, wild quinine thrives in full sun and rich, well-drained soil but adapts surprisingly well to clay soils, moist soils, part shade, or drought. Though it is probably best suited to a meadow or prairie garden, try a big clump guarded on both sides by two- to four-foot blobs of *Tanacetum niveum;* or backed by a (staked!) bank of four to six foot *Aster novae-angliae* 'Harrington's Pink'. Sow seeds outdoors in fall or cold condition and sow indoors in late winter.

LEFT: JOSEPH G. STRAUCH JR.; RIGHT: ROB CARDILLO

MORE HIGH-RISE HERBS FOR ORNAMENTAL BORDERS

Here are some other herbs that will add height and interest in an ornamental border.

Dill *(Anethum graveolens),* USDA Zones 0, AHS Zones 12–1. Another umbellifer, dill grows three to four feet tall and has attractive fernlike foliage and airy umbels of yellowish green flowers in summer. A biennial usually grown as an annual, dill thrives in full sun and fertile, well-drained soil. This plant self sows aggressively.

Horse parsley *(Smyrnium olusatrum),* 6–10, 10–6. This celerylike biennial grows to five feet tall, with ridged stems, shiny cut-lobed leaves, and yellow flower umbels in spring. It thrives in full sun and moist, well-drained soil.

Hybrid lavender *(Lavandula ×allardii),* 9–10, 10–3. A tender perennial subshrub that grows four to five feet tall, this lavender has broad silver, toothed leaves and develops large lavender flower spikes in summer. It thrives in full sun in sandy, well-drained soil. Tolerates heat and humidity.

Lemon grass *(Cymbopogon citratus),* 9–11, 12–1. A popular ingredient in Southeast Asian, Middle Eastern, and African cuisine, this clump-forming tropical perennial grows three to four feet tall, with plumy, grasslike foliage. Can be grown in tubs in temperate climates. Grow in full sun and moist loamy soil.

For an exotic addition to a border, try tree basil, above, or lemon grass, right. These tender perennials are usually grown as annuals in temperate gardens.

Quillquina *(Porophyllum ruderale),* 8–11, 12–1. Often grown as an annual, this tender Bolivian perennial grows five to eight feet tall in one season, with yellow dandelionlike flowers. Its cilantrolike leaves are commonly used in salsas and vegetable dishes. Grow in full sun and well-drained soil.

'Tuscan Blue' rosemary *(Rosmarinus officinalis* 'Tuscan Blue'), 7–9, 10–7. This bushy rosemary has vigorous upright growth to six feet tall, with needlelike evergreen leaves and summer spikes of dark blue blossoms. Grow in well-drained, neutral to alkaline soil, in full sun or part shade.

Tree basil *(Ocimum gratissimum),* 10–11, 11–1. Native to the tropics of Asia and Africa, this shrub grows to five feet tall in temperate gardens. The large, feltlike leaves are used in Indian cuisine. Grow in full sun to part shade in moist, well-drained soil.

—R.B.L.

Cleome gynandra (sometimes listed as *Gynandropsis gynandra)* is a little-known culinary herb related to the garden cleomes. The young leaves, flowers, and seeds can be used in soups, sauces, or stews, or serve as a pungent accompaniment to meats. The plants are true annuals and grow six feet tall, bearing mid- to light green, slightly fuzzy, egg- to lance-shaped leaves, sometimes toothed. The dense flower spikes are carried at the ends of their stalks, and the individual blossoms, with stamens that protrude like whiskers, are white to pink—occasionally yellow or purple.

Because this plant is native to the tropics and subtropics, start it from seed early indoors; do not permit the seedlings to become root-bound or their growth will be severely stunted. Water and fertilize regularly, and plant out when all danger of frost is past in full sun in a well-drained soil. Try growing them in a group in front of a big, dark-leaved rose such as *Rosa alba* Semiplena', *Rosa glauca,* or any of the *Rosa rugosa* tribe.

I could go on about many other tall herbs with potential interest in the ornamental border, including the mulleins *(Verbascum* spp.)—which deserve their own article—but for brevity's sake, the merits of some additional choices are summarized in the box above.

In garden planning as in life, more is lost through timidity than through over-boldness. I am not one of those admirable people with an inborn talent for garden design, but I have learned that it is often rewarding to try plants in unfamiliar roles. Tall herbs flanking a garden gate, skirting the base of a wall, or directing the eye to a far horizon can be more easily experimented with than shrubs. Besides, if you don't like the look of the giants you've grown, you can always find culinary or medicinal uses for them.

A resident of Santa Fe, New Mexico, Rand Lee is president of the American Cottage Gardening Society and a regular contributor to The American Gardener.

LEFT: MARK TURNER; RIGHT: DAVID CAVAGNARO

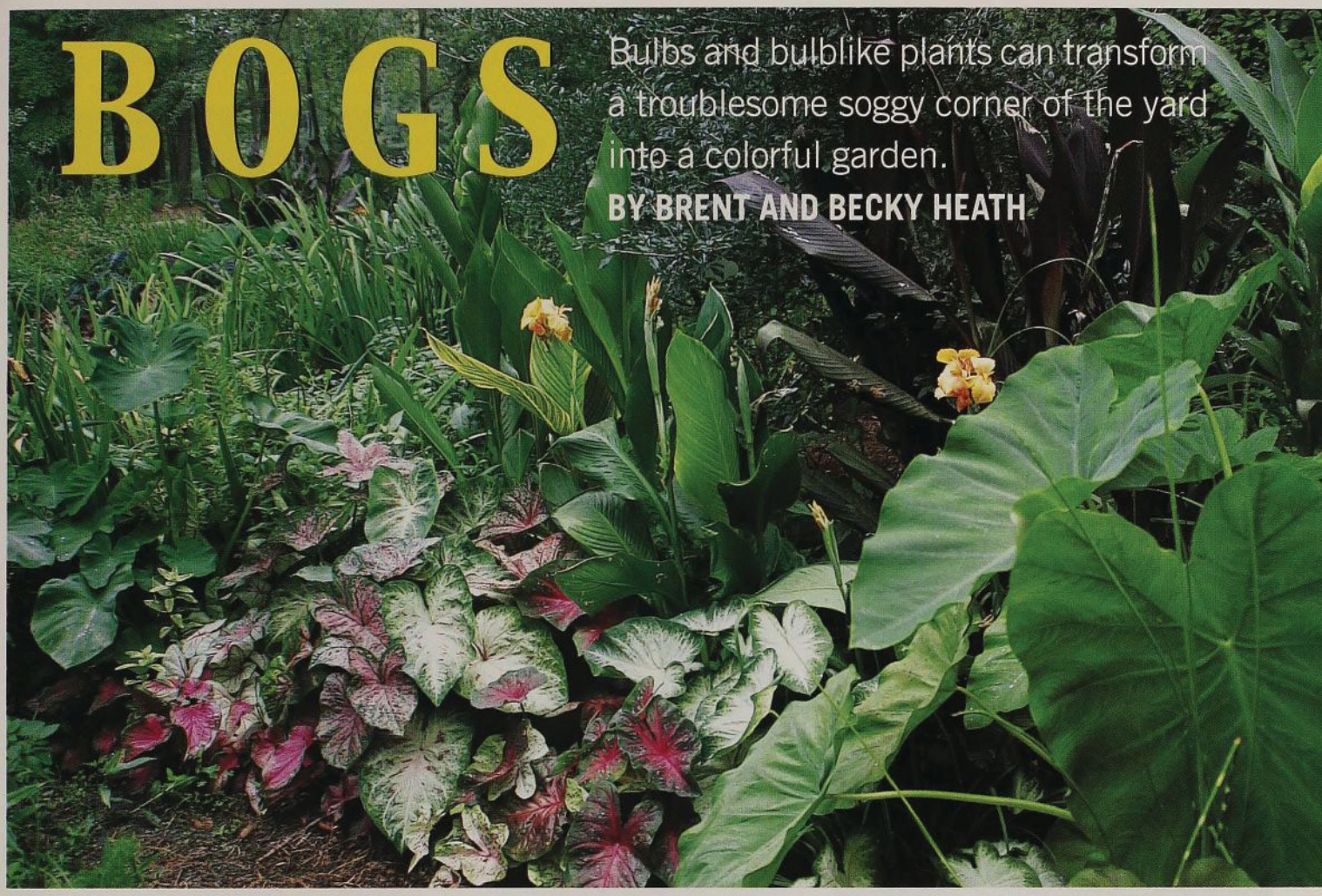
BLOOMING

Cannas, such as the variegated 'Pretoria' shown here, are at home in both boggy and well-drained sites; they can even be grown in a garden pond with their roots completely submerged. Opposite page: This portion of the authors' "tropical jungle paradise" features a mixture of caladiums, elephant's-ears, and cannas.

BOGS

Bulbs and bulblike plants can transform a troublesome soggy corner of the yard into a colorful garden.

BY BRENT AND BECKY HEATH



ALAN AND LINDA DETRICK; BRENT AND BECKY HEATH

WET, POORLY drained areas can challenge a gardener's creativity. Plants that thrive in nearby borders often struggle for mere survival in a constantly wet soil. Forget them! There are lots of plants that actually prosper in bogs, including many bulbs. These moisture lovers won't resent a little extra water or a poorly drained soil; in fact, they will reward you with lush growth for placing them in their preferred, soggy environment.

We have just such a spot on our farm, but through trial and error with a variety of plants, including bulbs, we have developed one of our favorite gardens on the property. Instead of a problem, it has become our "tropical jungle paradise."

A WORD ABOUT BULBS

FOR THIS DISCUSSION, we use the term "bulb" to include true bulbs and other similar storage organs such as corms, tubers, tuberous roots, and thickened rhizomes. While each differs in its specific morphology, all accumulate food reserves that allow the plant to survive in dormancy from one growing season to the next.

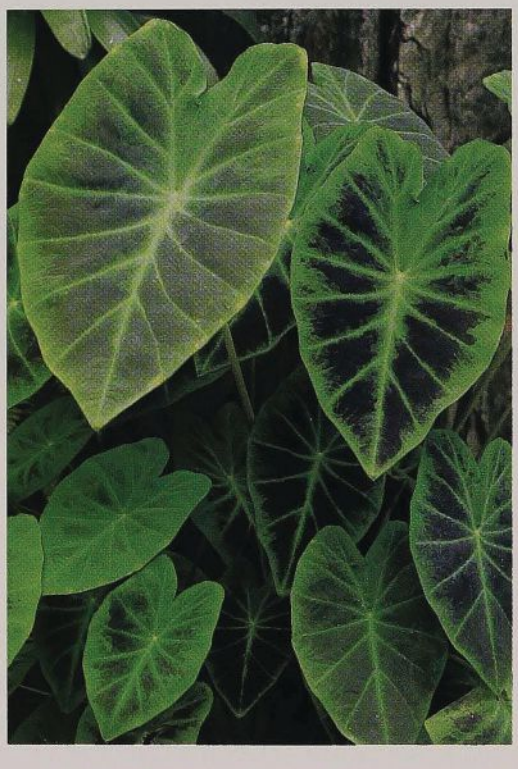
As a general rule, bulbs need good drainage; but there are exceptions. We look at a plant's origin to determine whether or not it is a good candidate for the bog garden. Some genera of bulbous plants like *Canna, Crinum, Eucomis, Zantedeschia,* and *Zephyranthes* are adaptable enough to perform equally well in flower borders and bog gardens. There are others, however, that grow best where water collects during the spring rainy season; these plants often originated in warm tropical regions that have heavy, wet soil.

TRENDY TROPICALS

TROPICAL PLANTS can add an exotic luxuriance to your bog garden. Those that are not hardy in your area can be treated like

annuals, or they will need to be dug in the fall after frost has nipped their foliage and stored indoors over winter for planting again next year.

These bulbs are planted in the spring after the soil warms sufficiently. But don't try to push the season; if planted in a cold soil, they often rot. To get a head start, pot them up indoors as soon as you receive them and put the pot on a heat mat or anything that will warm the soil in the pot. Once the outside nighttime temperature and soil has warmed to 60 degrees Fahrenheit, transplant your bulbs into the garden. Sometimes it takes a while for the plants to become established, but when summer's heat settles in, you can almost watch them grow, and they will put on a spectacular show for months.



The velvety textured, eight-to-12-inch leaves of *Colocasia esculenta* 'Illustris' form a lush two- to three-foot clump.

ELEPHANT'S EAR

ELEPHANT'S EAR and taro are the common names for several plants in the genera *Alocasia* and *Colocasia* that develop large, heart-shaped leaves. Most prosper in a heavy, wet soil and produce dramatic structural backdrops for other plants in the bog garden.

Alocasia macrorrhiza (USDA Hardiness Zones 8–11, AHS Heat Zones 12–5) is widely cultivated in the tropics for its thick, edible rhizome. It makes a bold presence in the bog garden with glossy, three-to four-foot-long leaves on plants that reach eight to 10 feet tall and wide. For a more compact look, try *Alocasia* 'Hilo Beauty' (9–10, 12–5), which develops one-and-a-half-foot-tall clumps of eye-catching cream to lime-green-splotched leaves. Both the species and this cultivar can be grown in sun or shade.

Colocasia esculenta (9–11, 12–4) grows from a tuber, with its huge leaves forming lush clumps four to six feet tall. There are varieties available with textured green, dark-veined leaves that are especially effective when planted so the sun shines through them, accentuating their mot-

Locating and Creating a Bog

A low area of the yard that stays wet throughout the year is an ideal site for a bog garden. Another likely site is the area surrounding a garden pond, where a bog garden serves as a transition between the pond and the rest of the landscape.

Bold textural contrasts and colorful foliage support seasonal flowers for an extended display in the authors' garden.

SUITABLE CONDITIONS

If you do not have such a soggy spot in your yard, you can create a bog by digging out an area—the size is up to you—to a depth of two to three feet, and installing a rubber pool liner before filling the area back up with the soil you removed. Keep the soil level slightly lower than the surrounding area and saturate it with water. The liner prevents water from draining freely, but it may need replenishing from time to time.

In naturally boggy areas, the soil is often rich because it is the destination of runoff containing nutrients. But to ensure your plants receive the nutrients necessary for lush, healthy growth, topdress with well-cured compost. An annual feeding of a slow-release fertilizer is also beneficial.

DIVERSIFYING BOG PLANTINGS

To make the most of your boggy site, include moisture-loving shrubs, trees, perennials, and annuals to complement your bulbs. These provide a wider range of heights, textures, and colors to the garden as well as extend the seasonal interest.

Some of our favorites are the annual touch-me-not *(Impatiens capensis,* 0, 12–1), with yellow to orange blossoms that sway in the breeze in the late summer garden, and the perennial Joe-Pye weed *(Eupatorium fistulosum,* 4–8, 8–2), with its dusky lavender-rose flowers that rise to five feet. The vivid red spikes of cardinal flower *(Lobelia cardinalis,* 2–8, 8–1), another perennial, contrast nicely with Louisiana irises and calla lililes. The waxy yellow flowers of marsh marigold *(Caltha palustris,* 5–9, 9–4) add their bold tones to the summer bog. The multi-colored foliage of coleus cultivars *(Solenostemon scutellarioides,* 11, 12–1) skirting the edges of the bog garden help to tie all the plants together.

Shrubs and trees such as winterberry *(Ilex verticillata,* 4–8, 8–5), swamp magnolia *(Magnolia virginiana,* 5–9, 9–1), and river birch *(Betula nigra,* 4–8, 9–1) give the garden a strong "backbone" by providing winter interest, nesting sites for birds, and a nice background for the smaller flowering plants.

—B. AND B. HEATH

JERRY PAVIA; BRENT AND BECKY HEATH

tling. The cultivar 'Illustris' grows two to three feet tall and produces dark gray- to black-shaded leaves edged in lime green. A popular burgundy-black selection is marketed under several names, including 'Black Magic' and 'Black Beauty'. Its leaves often emerge green but darken as they mature. Colocasias are perfect for the edge of a garden pond and can even be grown in submerged containers.

CANNAS

LIKE COLOCASIAS, cannas *(Canna ×generalis,* 8–11, 12–1) can be grown at the edge of a garden pond, or potted and submerged. These rhizomatous plants are equally adaptable to a flower border. Cannas range in size from tall varieties that grow to eight or 10 feet and provide a lush background planting, to cultivars that top out at two feet.

For sunny locations, cannas offer a selection of flower colors that includes red, pink, salmon, orange, yellow, and combinations thereof. In shadier gardens, cannas produce fewer flowers, but they are often worth planting for their dramatic leaf colors highlighted by stripes, dark veins, and dark shadowy blushes.

Among our favorite cannas are: 'Rose Futurity' with its burgundy leaves and coral pink flowers; 'Pretoria' (also sold as 'Bengal Tiger') with its variegated cream, green, and yellow bananalike leaves; and 'Striped Beauty', a dwarf specimen highlighted by green-and-yellow-striped leaves that are lovely even before the red-budded, white-striped flowers appear. Cannas are perfect combination plants, especially as a foil for more delicately textured companions.

CALLA LILIES

A SOUTH AFRICAN NATIVE, the common calla *(Zantedeschia aethiopica,* 8–10, 10–4) grows from a tuber to three to four feet tall and spreads to form large clumps. The graceful, long-stemmed flowers add elegance to our tropical garden, and 'Green Goddess' is probably our favorite. It is planted right on the edge of our pond, where its luxuriant foliage demands attention. Close inspection reveals the green vaselike flowers that bear creamy white brush marks and white hearts.

Another favorite is *Zantedeschia* 'Pink Mist', which has exceptionally long-lasting, delicate white flowers with a pink overlay and a darker pink eye. Callas bloom from mid- through late summer and are often the last summer-blooming bulbs to be affected by cold weather. They grow best in a mostly sunny site and with a good winter mulch have been known to survive winters in USDA Zone 6.

A southeastern native, the Atamasco rainlily *(Zephyranthes atamasco)* produces abundant white, starry flowers on 12-inch stems.

MORE ADAPTABLE TROPICALS

CRINUMS OR swamp lilies, *(Crinum* spp.) grow from very large bulbs, developing impressive clusters of trumpet-shaped white, pink, or wine-red flowers and sword-shaped leaves. They grow best in full sun or light shade. *Crinum americanum* (8–11, 12–8) bears fragrant, six-inch-long white flowers from late spring through summer. *C. ×powellii* grows to 30 inches tall and produces up to 15 white or light pink flowers per stem. *Crinum* 'Ellen Bosanquet' is a hybrid featuring deep burgundy flowers and gently ruffled leaves. These pest-proof plants seem to be happy no matter where they are planted; they tolerate both drought and boggy soil. Their fragrant flowers provide color all summer.

Another genus that is adaptable, fills in gaps, and adds a different form to the bog garden is *Hymenocallis,* often called spider lilies. The pest-resistant bulbs in this genus bloom very quickly after planting. The flowers resemble a daffodil—there is a distinct "cup" and six petals. *Hymenocallis* 'Sulphur Queen' (9–11, 12–9) is our favorite, with its heavenly citruslike fragrance that is especially intense at night. Another good choice for the bog is *H. harrisiana* (9–11, 12–9), with its pendulous petals and tiny white cups.

Voodoo lily *(Sauromatum venosum,* 9–11, 12–7) is an unusual tuberous plant that produces a purple-green spathe—a leaflike bract—with dark purple markings that surrounds a blackish purple spadix—a fleshy flower spike. Surrounded by the spathe, the spadix looks as if it is sitting in its own vase. After the flowers bloom, large two- to three-foot-long fingerlike green leaves emerge on two-foot stems mottled with purple. The leaves shade the roots like an umbrella.

FRONT-ROW PERFORMERS

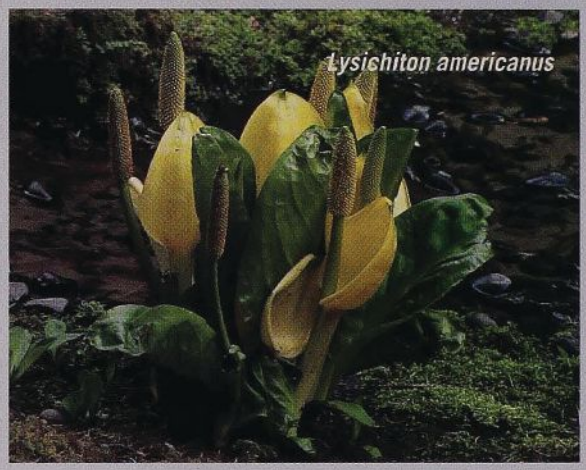
TO DRESS the foreground of the tropical bog garden, we add low-growing "shoes and socks" plants, such as *Caladium bicolor* (10–11, 12–8), one of the best performers. Available in an array of foliage colors, shapes, and sizes, these

JOSEPH G. STRAUCH JR.

MORE BULBS AND BULBLIKE PLANTS FOR THE BOG GARDEN

	Height	Foliage	Flowers	Zones	Origin
Canna glauca	54"	upright, lance-shaped	pale yellow	8–10, 12–1	American tropics
Crinum bulbispermum	36"	arching, gray-green	fragrant, white to pink	7–11, 12–8	South Africa
Dierama pulcherrimum	36-60"	thin, grasslike	pink, bell-shaped	7–10, 10–8	South Africa
Eucomis bicolor	16-20"	lance-shaped	greenish white	8–11, 12–8	South Africa
Eucomis comosa	18-24"	purple-spotted	green, purple, white	8–11, 12–8	South Africa
Hymenocallis caroliniana	15-18"	strap-shaped	fragrant, white	6–10, 12–8	Southeastern U.S.
Iris laevigata	24-36"	broad	flat, blue	4–9, 9–1	Eastern Asia
Iris versicolor	18-32"	narrow, slightly arched	shades of purple	3–9, 9–1	Eastern U.S.
Iris virginica	30"	bold, semi-evergreen	purple-blue	3–9, 9–1	Eastern U.S.
Lysichiton americanus	36"	leathery, glossy green	bright yellow spathes	7–9, 9–7	Western North America


Dierama pulcherrimum


Lysichiton americanus

tuberous plants can be grown in mixtures or as a single selection. 'Carolyn Whorton' has dark green leaves mottled with carnation-pink and deep red midribs. 'Gingerland' produces white leaves edged in green and spotted with green and red. The leaves of 'Pink Gem' are pink with dark green and red veins.

The 'Florida' series of caladiums have thicker leaves and are therefore more sun tolerant. 'Florida Sweetheart' bears rosy leaves with dark rose veins outlined in green. If your bog garden gets a fair amount of sunlight, this series is the best choice.

A native of the southeastern United States, the Atamasco rainlily *(Zephyranthes atamasco,* 10–11, 12–10) is another likely candidate for the foreground of the bog garden. From a clump of glossy strap-shaped leaves that resemble liriope, 12-inch flower stems arise in summer. The flowers are star-shaped and white, though some are lightly blushed with purple. Plant them in full sun.

The genus *Oxalis* offers several low-growing, mound-forming species useful in the foreground of the bog garden. Our favorite is the rhizomatous *O. regnellii* var. *triangularis* (8–10, 10–8) from South Africa. It has rich burgundy, triangular leaves and soft pink flowers. Another favorite is *O. tetraphylla* 'Iron Cross' (8–10, 10–8), which grows from a bulb and bears carmine flowers. Port-wine-colored blotches decorate the bases of each set of four green leaflets.

Oxalises grow well in pots and in the flower border but are especially lovely around the ankles of the taller plants in the bog garden.

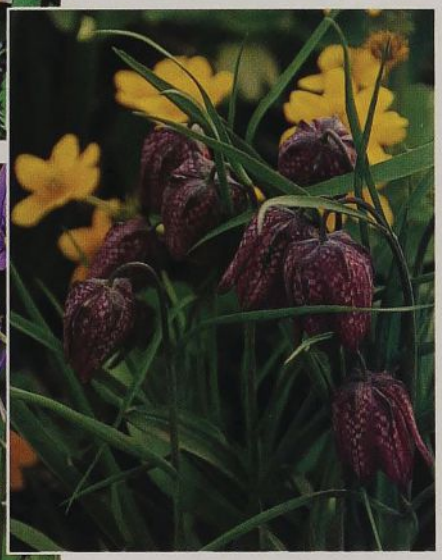
HARDY BULBS FOR THE BOG

ONCE YOU GET started in the bog garden, you will probably want to expand the plant selection by including some hardy bulbs. These are normally planted in the fall, and, within their hardiness range, will survive the winter without your having to dig and store them.

Camassias, native to the Pacific Northwest, are late-spring and early-summer bloomers. Starry flowers form spikes that emerge from a clump of swordlike leaves. Camassias grow two to three feet tall and come in various shades of blue—from ice-blue *Camassia cusickii* (4–11, 12–1) to dark blue *C. leichtlinii* (4–11, 12–1); a cultivar of the latter species, 'Semiplena', produces semi-double, creamy white blooms. Slightly shorter is *C. quamash* (4–10, 12–1), which bears dark blue or purplish flowers. Camassias appreciate abundant moisture and will self sow when happy with their site. These adaptable bulbs are also suitable for the well-drained flower border.

Summer snowflakes *(Leucojum aestivum,* 4–9, 9–1) and common snowdrops *(Galanthus nivalis,* 3–8, 8–1) are both spring-blooming bulbs that are perfect at the edge of a pond. The first bears pure white, pendulous bells with green

LYNNE HARRISON (2)



Low-growing *Oxalis tetraphylla* 'Iron Cross', left, suits the foreground of a bog garden. *Camassia leichtlinii* 'Blue Danube', bottom left, adds late spring color. Below: The purple, bell-shaped flowers of *Fritillaria meleagris* are set off by yellow-flowered *Caltha palustris.*

tips on stems one to two feet tall. The flowers provide a delicate contrast to the lush foliage at the pond's edge. The cultivar 'Gravetye Giant' is especially tall and strong. Summer snowflakes are resistant to "critter" depravation, which ensures their perennialization.

Snowdrops bear white, green-tipped, bell-shaped flowers and are also resistant to deer, voles, and other grazers. They bloom very early in spring and grow only about four to five inches tall, so place them in a shady spot near the front of the bog garden so you can appreciate their precocious flowers up close. Where snowdrops are happily situated, they often re-seed.

Fritillaria meleagris (4–9, 8–2) is small, precious, and quite variable in coloration. Its bell-shaped flowers can be pure white, reddish purple, or plum purple and are often checkered, hence its common names, guinea-hen flower and checkered lily. Combining them with the contrasting golden blooms of marsh marigolds *(Caltha palustris)* in a damp meadow is a wonderful way to display these flowers that rise on 10 to 15 inch stems. Most animals that forage for bulbs also seem to find fritillarias distasteful.

EMBRACING OPPORTUNITY

BULBS ARE JUST the beginning for your bog garden. There are lots of other plants that are ready to help you turn that soggy corner from an "ugly duckling" into a beautiful swan (see the sidebar on page 46). So the next time you sink in the mud to your ankles as you cross the low end of your yard, stop grumbling—for in that mud lies the opportunity to add a new and distinctive dimension to your landscape.

Owners of Brent and Becky's Bulbs, a mail-order nursery in Gloucester, Virginia, Brent and Becky Heath also write, lecture, and photograph a variety of gardening subjects. The Heaths are the recipients of this year's AHS Commercial Award for individuals.

Sources

Brent and Becky's Bulbs, Gloucester, VA. (877) 661-2852. *www.brentandbeckysbulbs.com.* Catalog free.
Alocasia macrorrhiza, A. 'Hilo Beauty'; *Caladium bicolor* 'Carolyn Whorton', 'Red Flash', 'Pink Gem', 'Gingerland'; *Camassia cusickii; C. leichtlinii* 'Semiplena', *C. quamash; Canna ×generalis* 'Rose Futurity', 'Pretoria', 'Striped Beauty'; *Colocasia esculenta* 'Black Magic'; *Crinum americanum; C. ×powellii; Fritillaria meleagris; Galanthus nivalis; Hymenocallis harrisiana; H.* 'Sulphur Queen'; *Leucojum aestivum; L. aestivum* 'Gravetye Giant'; *Oxalis regnellii* var. *triangularis; O. tetraphylla* 'Iron Cross'; *Sauromatum venosum; Zantedeschia aethiopica* 'Green Goddess', 'Pink Mist'.

Heronswood Nursery, Kingston, WA. (360) 297-4172. *www.heronswood.com.* Catalog $5. *Caltha palustris; Canna glauca; Dierama pulcherrimum.*

Plant Delights Nursery, Inc., Raleigh, NC. (919) 772-4794. *www.plantdelights.com.* Catalog 10 stamps or a box of chocolates. *Colocasia esculenta* 'Illustris'; *Crinum bulbispermum; C.* 'Ellen Bosanquet'.

We-Du Nurseries, Marion, NC. (828) 738-8300. Catalog $2. *Eucomis comosa; Hymenocallis caroliniana; Iris laevigata, I. versicolor, I. virginica; Zephyranthes atamasco.*

Resources

Garden Bulbs for the South by Scott Ogden. Taylor Publishing, Dallas, Texas, 1994.

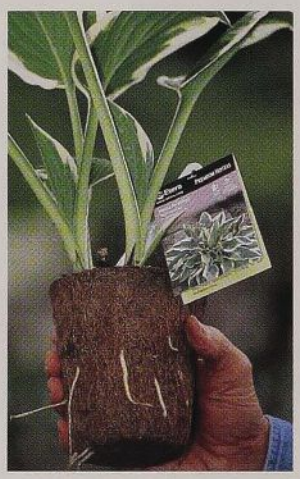
RHS Manual of Bulbs, consultant editor, John Bryan; series editor, Mark Griffiths. Timber Press, Portland, Oregon, 1995.

CLOCKWISE FROM TOP LEFT: DAVID CAVAGNARO; BRENT AND BECKY HEATH; ALAN AND LINDA DETRICK

Seasonal Garden Goods

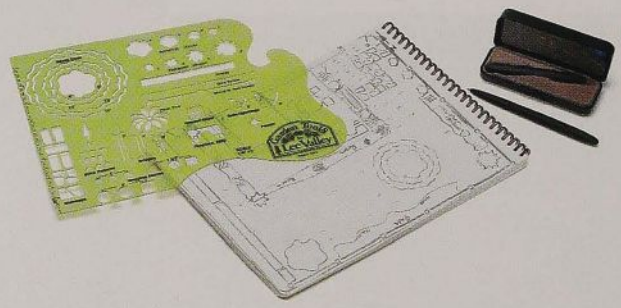
Another gardening season has arrived, and it's time to roll up your sleeves again. Here are some products to give your spring landscape a fresh look and make planning and maintenance easier.

Etera



Gardening supplier Etera's unique, environmentally sound growing methods give its herbaceous perennials, ferns, and ornamental grasses a leg up before they reach your garden. Using its patented Etera Growing Process, the company's plants are field grown for an entire season in bottomless pots, then transferred to biodegradeable coconut fiber pots for shipment. Plants can be popped directly into the soil pot and all when they reach your garden—a shock-free start that promotes accelerated growth and better chances of success. Contact the company to find a retail nursery supplier near you.

Etera, Corp., 14113 River Bend Road, Mount Vernon, WA 98273. (800) 753-8372. *www.etera.com.*



Lee Valley Landscape Notebook

The place to start designing a garden is on paper, before you go to the expense of building and planting. This notebook consists of 42 8 1/2-by-11-inch spiral-bound, moisture-resistant pages printed with quarter-inch grid lines. A separate design template with all the common landscaping symbols is available to give your plans a professional look. The notebook retails for $15.95; the template for $8.50.

Lee Valley Tools, Ltd., P.O. Box 1780, Ogdensburg, NY 13669-6780. (800) 871-8158. *www.leevalley.com.*

Carefree Tire

Is your wheelbarrow prone to getting a flat? Carefree Tire company has introduced a flat-proof tire made especially for wheelbarrows. Instead of being filled with air, the tires are made of lightweight, micro-cellular polyurethane that resists punctures and cracking. Available in three tread patterns and priced at $49.95.

Carefree Tire, 5141 Firestone Place, South Gate, CA 90280. (877) 352-8776. *www.carefreetire.com.*

Terra Nova Nurseries

Begun 10 years ago in an effort to bring new plants to American consumers, Terra Nova Nurseries supplies unusual plants from Japan, England, and the United States—such as the 'King of Hearts' bleeding heart shown—to retail nurseries all over the country. Contact the company to find a retail source in your area.

Terra Nova Nurseries, Inc.,
P.O. Box 23938, Tigard,
OR 97281-3938.
(503) 263-3150.
www.terranovanurseries.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.

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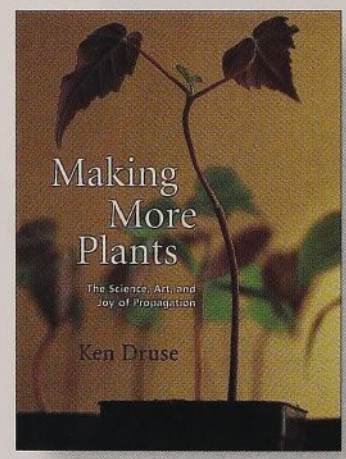
Book Reviews

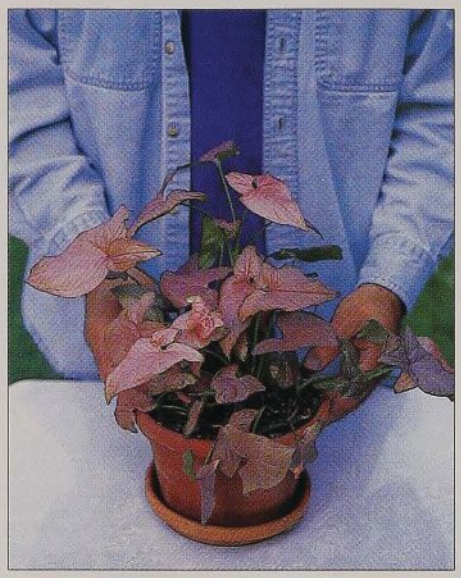
Making More Plants: The Science, Art and Joy of Propagation.
Ken Druse. Clarkson Potter Publishers, New York, New York, 2000. 256 pages. Publisher's price, hardcover: $45.

MOST OF US know Ken Druse's earlier books by their stunning photography and down-home style. They are large-format, coffee-table books, which never fail to capture attention. Druse has done it again with his new book on plant propagation; it is a beautifully photographed book—a delight to the eye. The subject, however, is a departure from his earlier efforts. This book is really a how-to book disguised as a coffee-table tome.

In 1996, Druse purchased a country property and made plans to expand his gardening beyond what was possible in the yard of his Brooklyn townhouse. He decided to increase his stock of plants by propagation rather than spending a fortune at the nursery, and his efforts with both the scientific and practical aspects of propagation were the inspiration for this book. We are fortunate he chose to share his knowledge with us, as well as his photography.



Druse provides a wealth of information in 13 chapters, a plant propagation guide to 700 genera, a common name cross-reference, a list of resources, a glossary, a bibliography, and an index. Druse indicates that propagation is different for everyone and must be practiced on a personal level: A gardener can choose from among at least 12 basic propagation methods, and with the information provided, time them correctly for success. Some unusual techniques, probably trade secrets, including basketing, gouging, chipping, and scooping—you'll have to look them up—are revealed. A gardener cannot read this book without feeling inspired to try *something* in it.



Repotting a layered arrowhead vine, from *Making More Plants*. Photo by Ken Druse.

The book is doubly compelling because of the photography. Every method is illustrated with a series of photographs, all carefully identified so you're not left wondering what the photos are about. Druse's own hands are in many of them, photographed by the author with a "non-mechanical cable shutter release," according to the photography notes.

You must also read the text, however, because Druse explains the mysteries of seeds, cuttings, roots, leaves, layering, grafting, division, vegetative reproduction, and propagation of bulbous plants in easy-to-read prose. In fact, his description of propagation techniques sometimes makes it sound so easy, my only concern is that some readers might feel inspired with false confidence about propagation. But Druse enthusiastically reminds us that if you don't try, you won't succeed, and that some failures are par for the course. Many of his propagation efforts are actually experiments to determine what works. He describes dividing up propagules into lots and providing them with varying treatments to see what works best. All of us would like to do this, but few of us take the time.

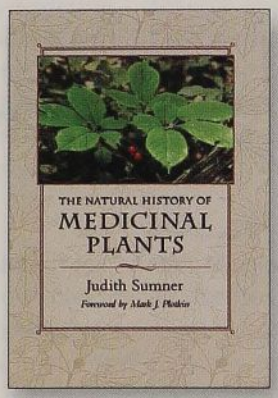
The price is right for this large, impressive book, especially when you realize it includes far more than pictures. If you're looking for a manual on propagation illustrated with inspirational photography, this is the book for you. —*Jim Bennett*

An environmental botanist in the Institute for Environmental Studies at the University of Wisconsin-Madison, Jim Bennett is also president of the Madison Area Master Gardeners Association.

The Natural History of Medicinal Plants.
Judith Sumner. Timber Press, Portland, Oregon, 2000. 252 pages. Publisher's price, hardcover: $24.95.

ACCORDING TO the Doctrine of Signatures, which was practiced during the Middle Ages, the physical appearance of a plant was thought to indicate its medicinal use. A number of daisies with bright yellow centers, commonly called eyebrights, were recommended to cure impaired vision. Those that were liver-shaped, like the liverwort, were suggested for liver disease. And the long, black, satiny stem of the maidenhair fern was recommended to promote healthy hair. The Doctrine seems fantastic today in the light of modern scientific discoveries, but there is still much folklore and a bit of mysticism surrounding the use of medicinal plants. Judith Sumner's new book, *The Natural History of Medicinal Plants,* demystifies as well as summarizes the current state of knowledge on this

sometimes confusing and controversial topic.



The author reports that in 1994, Congress passed the Dietary Health and Education Act allowing any substance found naturally in foods to be sold as a dietary supplement. The passage of this act signaled the beginning of the recent herbal medicine trend and the onslaught of commercially available herbal products. Although many herbal supplements have made their way into the average household medicine cabinet, most of us are still in the dark regarding the origin, history, and science of herbal plants. Sumner uses 30 color plates, numerous illustrations, layman's language, relevant explanations, and little-known, entertaining accounts to simplify the subject for the average reader.

Sumner's experience as a botany teacher at the Arnold Arboretum of Harvard University is clearly apparent as she elucidates a broad array of topics ranging from zoopharmacognosy—or the recognition and use of medicinal plants by animals—to the chemistry of alkaloids, glycosides, and terpenes. In addition, there are chapters on the history of medical botany, plant–insect–animal interactions, the discovery of plants as toxins and as cures, and the preservation of biodiversity. Although these are often very heady and not necessarily related topics, the author weaves them together neatly and effortlessly.

What I like best about this book is the stories it tells. Most of what man knows about the use—and misuse—of medicinal plants has been handed down from one generation to another. In many primitive cultures, the guardianship of this folklore is the task of very specific essential individuals. The author continues the tradition by using stories to pass on knowledge. Sumner tells us about Achilles using yarrow to stop the flow of blood from battle wounds, Pre-Columbian Indians chewing coca leaves for their euphoric effects, and 19th-century Shakers using mayflower as a cure for kidney stones.

The Natural History of Medicinal Plants makes a wonderful read because, although written by a college teacher, it does not read like a weighty textbook. Moreover, this timely tome is not a handbook or guide to the use of medicinal herbs; the author does not bore us with the details on which herb to use for a particular ailment, nor does she suggest any dosages. Rather, Sumner focuses on the story of man's—and other animals'—long and almost forgotten relationship with medicinal plants.

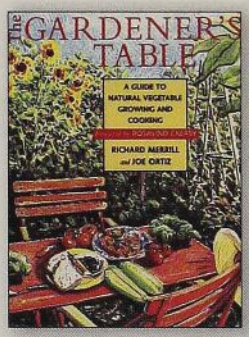
—Barbara S. Arter

Free-lance science editor and writer Barbara S. Arter teaches biology and botany at the University of Maine at Augusta.

The Gardener's Table.
Richard Merrill and Joe Ortiz. Ten Speed Press, Berkeley, California, 2000. 468 pages. Publisher's price, softcover: $24.95.

I DISCOVERED the world of vegetable gardening shortly after I discovered the world of cooking, and my interest in the two subjects grew in tandem. So I take particular delight in a book such as *The Gardener's Table,* which makes an impressive and largely successful attempt to integrate these two closely related subjects in a single book.

Merrill and Ortiz's book has an unusual organization, alternating between discussions of gardening principles and cooking techniques. Overall, this structure works surprisingly well, as in the enlightening comparison between compost and soup in the chapter "Nourishing the Soil & Body." Occasionally, however, the connection seems forced or overly cute, as in the chapter "Controlling Garden Pests & Feeding Kitchen Guests."



Much of the book is dedicated to developing a thorough understanding of the processes that make things work in the garden and in the kitchen. For ex-

ample, the section on compost not only discusses how to keep your compost pile in an aerobic state, it provides an in-depth exploration of the nine principles of successful composting. Some of the sidebars and color plates provide direct "how-to" in a very basic format, others cover rather involved supplemental concepts, such as a short treatise on the four modes of decay—humification, putrefication, peat decay, and dry decay—in the compost chapter.

Couched within the discussions of gardening and kitchen basics are some jewels of advanced information. I particularly appreciated the details about custom-blending your own organic fertilizers. Such clear instructions for adapting materials and practices to our individual needs are invaluable.

In the kitchen, the discussion of infusing pastas opened up a whole new world of culinary experimentation in our household. The combination of general and specific instructions gave us sufficient confidence to investigate further variations on this theme.

The specific growing instructions for each crop are exhaustive and informative and are grouped into logical categories such as edible plant parts and botanical family. Unfortunately, the recipes for each crop are located in a separate section. The appendices are as thorough as the growing instructions, including descriptions of each of the seed and supply companies referenced.

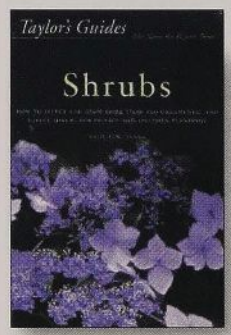
I wish I had had this book when I began my culinary and horticultural adventuring 11 years ago. At the outset, I acquired numerous cookbooks and gardening guides that provided ample information on the correct spacing for tomatoes and recipes for using them, but few that provided a real understanding of the processes involved. Acquiring a thorough understanding of what is going on in the field and in the skillet has taken a considerable amount of time and more than a few blunders. As a professional vegetable grower, I found this book both entertaining and enlightening.

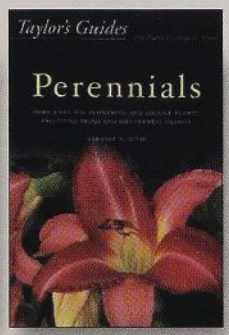
—Chris Blanchard

Chris Blanchard and his wife, Kim, raise and cook organic vegetables at Rock Spring Farm near Highlandville, Iowa.

Gardeners' Books

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





Taylor's Guide to Shrubs.
Kathleen Fisher. Houghton Mifflin, New York, New York, 2000. 441 pages. Publisher's price, softcover: $23.

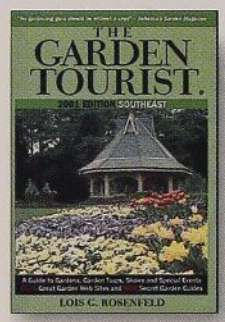
Taylor's Guide to Perennials.
Barbara Ellis. Houghton Mifflin, New York, New York, 2000. 490 pages. Publisher's price, softcover: $23.

FROM TWO former American Horticultural Society editors come two easy-to-use references on shrubs and perennials. Each provides chapters on selection and care of plants as well as a photo gallery and an extensive encyclopedia of plants that includes many new cultivars. *Shrubs* also covers landscaping and pruning techniques. *Perennials* offers solutions to dealing with insects and other pests as well as a discussion of propagation methods. Each book includes a thorough index.

The Garden Floor: From Gravel Gardens to Camomile Lawns.
Nigel Colborn. Trafalgar Square Publishing, North Pomfret, Vermont, 2000. 127 pages. Publisher's price, hardcover: $29.95.

THIS BOOK offers inspiring photographs and step-by-step illustrations for a dozen design projects for the "floor" of your garden. Projects include an alpine scree bed, an Oriental-style moss garden, a deck garden, and a thyme-and-camomile lawn. An extensive chapter on design helps you select the project best suited to your landscape and style. Maintenance of both plants and hardscaping materials is covered.

The Garden Tourist.
Lois G. Rosenfeld. The Garden Tourist Press, Ridgewood, New Jersey, 2000. Five regional editions, 104 pages each. Publisher's price, softcover: $12.95 each.



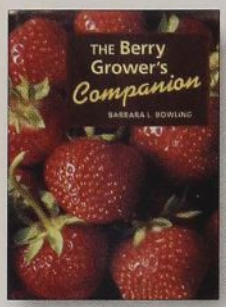
THE 2001 edition of this series of guides to gardens and garden events is divided by region: Northeast, Southeast, Midwest, Southwest and Rockies, and West. Gardens are listed by state—with a description, address, phone number, and Web site—as well as by events by state, city, and date, including contact information.

A Man's Garden.
Warren Schultz. Houghton Mifflin Company, Boston, Massachusetts, 2001. 160 pages. Publisher's price, hardcover: $40.

WHAT MAKES a man's garden unique? Warren Schultz offers answers in this colorfully written book that profiles 15 male gardeners from across North America. Ranging from ordered vegetable plots and expansive borders to a wildly fanciful cottage garden that includes a bathtub shrine,

the gardens represent widely differing styles that reflect the personalities and preferences of their creators and caretakers. The easy-to-read prose and abundant photographs make this an ideal gift for any man who considers the garden his personal paradise.

The Berry Growing Companion.
Barbara L. Bowling. Timber Press, Portland, Oregon, 2000. 308 pages. Publisher's price, hardcover: $29.95.



THIS book covers strawberries, raspberries, blackberries, blueberries, cranberries and more—small fruit that can produce bountiful harvests as well as significant ornamental interest to your garden. Bowling presents information on the history, biology, site and growth requirements, harvesting, and potential pest and disease problems for each crop. Recommended cultivars for each region are included. Additionally, each chapter contains a section "Niches in the Landscape," where Bowling offers useful suggestions for incorporating these fruitful plants into the landscape.

Natural Disease Control.
Beth Hanson, guest editor. Brooklyn Botanic Garden, Inc. Brooklyn, New York, 2000. 111 pages. Publisher's price, softcover: $9.95.

PART OF THE 21st-Century Gardening Series, this full-color handbook covers all the basics of disease prevention and control. It includes charts to help diagnose plant problems, an illustrated encyclopedia of plant diseases, and a chapter on making your own least-toxic remedies.

The Herbal Epicure.
Carole Ottesen. Ballantine Wellspring, New York, New York, 2001. 264 pages. Publisher's price, softcover: $16.

SUBTITLED "Growing, Harvesting, and Cooking Healing Herbs," this book covers in alphabetical order a gamut of vegetables, fruits, and herbs. Innovative recipes from organic chefs from across the country provide abundant ideas for their culinary use. Ottesen also includes botanical facts and healing traditions associated with each plant.

Plant This!
Ketzel Levine, illustrated by René Eisenbart. Sasquatch Books, Seattle, Washington, 2000. 216 pages. Publisher's price, softcover: $21.95.

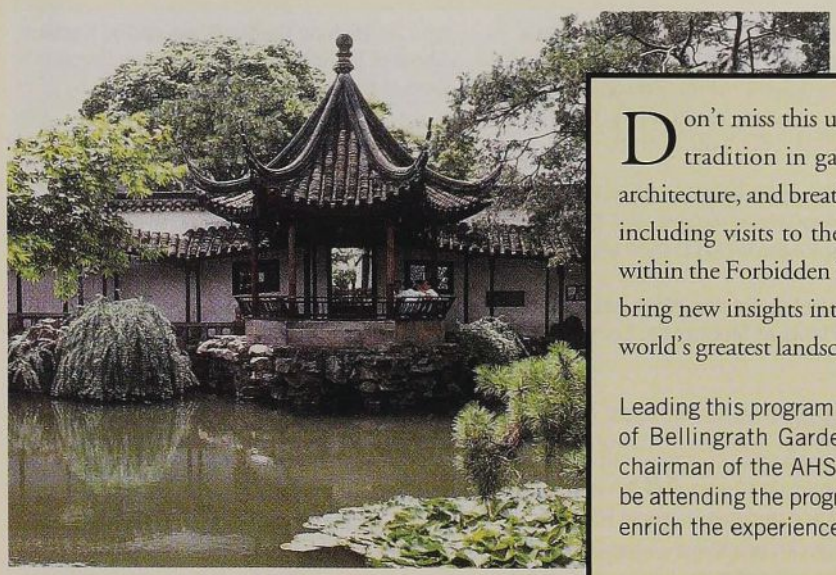
THESE essays by NPR's "Doyenne of Dirt" were drawn from Levine's popular column in *The Oregonian.* The book includes "stories" of her favorite plants organized by season—lively advice on growing them, along with gardening-world gossip, Latin roots, and plant lore. Each plant is accompanied by a watercolor illustration by Rene Eisenbart.

AMERICAN HORTICULTURAL SOCIETY

2001 American Horticultural Society TRAVEL STUDY PROGRAM

Gardens of China

September 3–18, 2001



Don't miss this unique opportunity to experience a culture with a long tradition in gardening—a land full of unusual plants, distinctive architecture, and breathtaking views. Each day of this remarkable program—including visits to the 18th-century private gardens of Emperor Qianlong within the Forbidden Palace and the splendid water gardens of Suzhou—will bring new insights into why Asian style inspired the creation of some of the world's greatest landscapes, and why it is still so influential in today's gardens.

Leading this program for AHS will be William E. Barrick, executive director of Bellingrath Gardens and Home in Theodore, Alabama, and a past chairman of the AHS Board of Directors. Barrick's wife, Jessica, will also be attending the program; the couple's avid interest in plants and travel will enrich the experience of this one-of-a-kind program.

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

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

Regional Happenings

NORTHEAST

MAR. 17–25. **New England Spring Flower Show.** Bayside Expo and Conference Center, Boston, Massachusetts. (617) 536-9280.

MAR. 23–25. **14th Annual Capital District Garden and Flower Show.** Hudson Valley Community College, Troy, New York. (518) 356-6410.

MAR. 28. **Living Fantasies: Gardens of Delight.** Lecture by Charlotte Frieze. New York School of Interior Design. New York, New York. (212) 472-1500.

MAR. 31. **Meet the Natives: 2001 Wildflower Symposium.** The Native Plant Center at Westchester Community College, Valhalla, New York. (914) 785-7870.

APR. 20 & 21. **Territories: Contemporary European Landscape Design.** Conference and exhibition. Harvard University Graduate School of Design, Cambridge, Massachusetts. (617) 495-4784.

MID-ATLANTIC

MAR.17–APR. 15. **Spring Flower Show.** Phipps Conservatory and Botanical Gardens, Pittsburgh, Pennsylvania. (412) 622-6914.

MAR. 23. **The Tropical Touch: Planting Paradise in Cooler Climates.** Symposium. Hosted by the University of Delaware's Graduate Program. Longwood Gardens, Kennett Square, Pennsylvania. (302) 831-2517.

MAR. 29–APR. 1. **Washington Flower & Garden Show.** Washington Convention Center, Washington, D.C. (703) 823-7960.

MAR. 31. **Native Plants: A Growing Partnership with Nature.** Symposium. U.S. National Arboretum, Washington, D.C. (202) 245-4523.

AHS. APR. 7. **Gardening 2001: Do It The Smart Way.** Symposium. Keynote speaker is H. Marc Cathey, AHS president emeritus. Christopher Newport University, Newport News, Virginia. (757) 594-7158.

APR. 21. **Garden Fair and Plant Sale.** Sponsored by Friends of the National Arboretum. U.S. National Arboretum, Washington, D.C. (202) 544-8733.

APR. 21–28. **68th Annual Historic Garden Week in Virginia.** Sponsored by the Garden Club of Virginia. (804) 644-7776.

APR. 21–MAY 6. **Garden Days.** George Washington's Mount Vernon: Estate and Gardens, Mount Vernon, Virginia. (703) 780-2000.

AHS. APR. 22–24. **Practical Gardening in a Changing World.** Colonial Williamsburg's 55th Garden Symposium. Presented by the Williamsburg Institute and AHS. Williamsburg, Virginia. (800) 603-0948.

APR. 24. **Thomas Jefferson, Gardener.** Lecture by Peter Hatch. Monticello, Charlottesville, Virginia. (804) 984-9822.

APR. 26. **Historic Garden Week Lecture: Historic Plants at Monticello.** Lecture by Peggy Cornett. Monticello, Charlottesville, Virginia. (804) 984-9822.

APR. 28. **Herbs In Bloom: 17th Annual Herbs Galore Festival.** Maymont, Richmond, Virginia. (804) 358-7166.

APR. 28. **Historic Garden Week on the Eastern Shore of Virginia.** Sponsored by the Garden Club of the Eastern Shore. (757) 678-5755.

MAY. 5. **Georgetown Garden Day.** Tour of 12 private gardens and estates. Washington, D.C. (202) 333-3921.

SOUTHEAST

MAR. 11 & 12. **Third Emily Whaley Memorial Garden Tour and Lecture.** Tour Charleston gardens; lecture by Louisa Pringle Cameron. Charleston, South Carolina. (843) 953-7691.

MAR. 15–APR. 14. **54th Annual Festival of Houses and Gardens.** Sponsored by the Historic Charleston Foundation. Charleston, South Carolina. (843) 722-3405.

MAR. 15–MAY 15. **Spring Flower Festival.** Cy-

AHS Spring Plant Sale and Garden Festival

IN PARTNERSHIP with the Alexandria Council of Garden Clubs, the American Horticultural Society and the Friends of River Farm will hold its annual Plant Sale and Garden Festival on April 27 and 28 at River Farm, the AHS headquarters in Alexandria, Virginia. Unusual annuals and perennials, native plants, hostas, ferns, and herbs will be available, along with hanging baskets and crafts. As always, the scenic gardens and grounds of River Farm will be open for strolls and picnicking.

One of River Farm's scenic display gardens

AHS members can preview and purchase plants for sale on a special AHS Member Night on the evening of April 26; be sure to bring your AHS membership card for admittance. For more information and directions, check the AHS Web site at *www.ahs.org* or call (703) 768-5700, extension 110.

—Margaret T. Baird, Communications Assistant

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.*

PETER A. HOGG/MONROVIA

PETER A. HOGG/MONROVIA

Vibrant, Flowing Fields of Flowers

KAREN L. DARDICK

FROM EARLY MARCH TO MID-MAY, more than 50 acres of rolling hillside in Carlsbad, California, overlooking the Pacific Ocean and frenetic Interstate 5 are ablaze with 200 million vivid yellow, orange, salmon, pink, red, and white ranunculus flowers, beckoning flower lovers of all ages.

The Flower Fields at Carlsbad Ranch—a sister company to the commercial poinsettia grower, Paul Ecke Ranch—is a working farm, where each year, giant Tecolote hybrid ranunculus are grown as a commercial crop. When the 8.5 million tubers are harvested in fall, they're shipped to nurseries around the nation. But in spring, when the fields are in full flower, hundreds of thousands of visitors come to view the spectacular sight and walk through designated paths among the billowing blooms.

These growing fields have been in existence for 65 years. Until recently, visitors strolled on dirt paths among the plants. Several years ago, the area was redesigned into a horticultural tourist attraction with designated pathways, informational signage, and several different landscaped gardens, including a 3,000 square-feet All-America Rose Selection (AARS) garden. It contains each of the 173 AARS winners since 1940 and an AARS test garden where 50 new rose varieties are tested during two-year evaluation programs. An adjacent nursery offers fresh-cut ranunculus bouquets. One educational and artistic display is called the Color Project, an art-meets-nature exhibit by a different artist every year, in which flowers become the palette for creating works of art.

"The Flower Fields is a working farm, one of the few in North America that allows visitors to stroll the fields and commune with nature," said Michael Cardosa, general manager of the Flower Fields. "What we have also created is a broader horticultural experience where people can see different kinds of flower species and learn how to incorporate them into their own gardens."

Located east of Interstate 5 off Palomar Airport Road, the Flower Fields are open daily, 10 a.m. to one hour before dusk, weather permitting. Admission ranges from $3 to $7. For information and driving directions, call (760) 431-0352 or visit the company's Web site at *www.theflowerfields.com.*

—Karen L. Dardick, special from Los Angeles

press Gardens, Winter Haven, Florida. (800) 282-2123.

MAR. 17 & 18. **Orchids, Nature's Fine Art.** The Jacksonville Orchid Society's spring show and sale. The Garden Club of Jacksonville, Jacksonville, Florida. (904) 264-6619.

MAR. 22–25. **2001: A Garden Odyssey.** Flower festival. Providence Hospital Foundation. Spring Hill College, Mobile, Alabama. (334) 639-2050.

MAR. 29. **The Gardener's Eye.** 11th annual gardening symposium of the South Carolina Midlands Master Gardeners Association and Riverbanks Botanical Garden. Columbia, South Carolina. (803) 438-6486.

APR. 1–30. **4th Annual Art In The Garden.** Sandhills Community College Horticultural Gardens, Pinehurst, North Carolina. (910) 695-3884.

APR. 6 & 7. **Spring Fiesta.** Plant sale. Birmingham Botanical Gardens, Birmingham, Alabama. (205) 414-3900.

APR. 7–9. **South Carolina Native Plant Society's Annual Symposium.** Lectures and workshops. Columbia, South Carolina. (864) 985-0505.

AHS. APR. 20–JUNE 3. **8th Annual Epcot International Flower & Garden Festival.** Walt Disney World's Epcot Center, Orlando, Florida. (407) 824-4321.

APR. 27–29. **"2001 A Bromeliad Odyssey."** Show and sale. Exhibits, sales, rare plant auction. Selby Botanic Gardens, Sarasota, Florida. (941) 955-7531 ext. 10.

NORTH CENTRAL

MAR. 9–11. **Quad Cities' Symphony In Bloom.** Lawn and garden show. QCCA Expo Center, Rock Island, Illinois. (800) 747-7800.

MAR. 10. **Great Gardens Symposium.** Hosted by the Nebraska Statewide Arboretum. Lincoln, Nebraska. (402) 472-2971.

MAR. 10–18. **Indiana Flower & Patio Show.** Indiana State Fairgrounds, Indianapolis, Indiana. (317) 576-9933.

MAR. 11. **Keeping the Balance: Art and Nature.** Lecture by Penelope Hobhouse. Chicago Botanic Garden, Glencoe, Illinois. (847) 835-8261.

MAR. 22–25. **GMC Builders Home & Garden Show.** Cobo Center, Detroit, Michigan. (248) 862-1019.

MAR. 31 & APR. 1. **Cook Energy Information Center's Orchid Show.** Cook Energy Information Center, Bridgman, Michigan. (800) 548-2555.

APR. 7–MAY 13. **Springtime in Paris: Spring Flower Show.** Garfield Park Conservatory, Chicago, Illinois. (312) 747-2623.

APR. 8. **Ten Years to Make a Garden.** Lecture by Dan Hinkley. Chicago Botanic Garden, Glencoe, Illinois. (847) 835-8261.

APR. 20–22. **Chicago Botanic Garden's Antiques & Garden Fair.** Glencoe, Illinois. (847) 835-8326.

APR. 25–29. **Cincinnati Flower Show.** Ault

Park, Cincinnati, Ohio. (800) 670-6808.

MAY 11 & 12. **Olbrich's Spectacular Plant Sale.** Olbrich Botanical Gardens, Madison, Wisconsin. (608) 246-4550.

SOUTH CENTRAL

MAR. 16–18. **Fort Worth Home and Garden Show.** Will Rogers Center, Fort Worth, Texas. (713) 529-1616.

MAR. 30 & APR. 1. **San Antonio Home and Garden Show.** Home Center, San Antonio, Texas. (713) 529-1616.

MAR. 31. **Creating a Sense of Place: Colors of the Great Plains.** Symposium. Botanica: The Wichita Gardens, Wichita, Kansas. (316) 264-0448.

APR. 18. **Fresh Flavors from the Herb Garden.** Seminar. McAshan Herb Gardens at Festival Hill, Round Top, Texas. (979) 249-5283.

APR. 24 & 25. **Florescence: The Arts in Bloom.** Flower show. Museum of Fine Arts, Houston, Texas. (713) 639-7300.

SOUTHWEST

MAR. 14–18. **Spring Home and Patio Show.** National Western Complex, Denver, Colorado. (303) 892-6800.

MAR. 16–APR. 1. **Annual Spring Landscaping Festival and Plant Sale.** Boyce Thompson Arboretum, Superior, Arizona. (520) 689-2811.

MAR. 17–APR. 1. **Art al fresco...In the Gardens.** 9th annual garden art exhibit. Tucson Botanical Gardens, Tucson, Arizona. (520) 326-9686.

APR. 21. **13th Annual Herb Fair.** Tucson Botanical Gardens, Tucson, Arizona. (520) 326-9686.

NORTHWEST

APR. 28 & 29. **FLORAbundance Spring Plant Sale.** Benefit for Washington Park Arboretum. Sand Point Naval Station, Seattle, Washington. (206) 325-4510.

APR. 28 & 29. **35th Glide Wildflower Show.** Glide Community Building, Glide, Oregon. (541) 677-3797.

WEST

MAR. 17 & 18. **Spring Symphony: A Celebration of Art, Food, Wine, and Daffodils.** Ironstone Vineyards, Murphys, California. (209) 728-1251.

MAR. 21–25. **San Francisco Flower & Garden Show.** Cow Palace, San Francisco, California. (800) 829-9751.

MAR. 23–25. **Orchid Illusions.** Santa Barbara International Orchid Show. Earl Warren Showgrounds, Santa Barbara, California. (805) 967-6331.

APR. 14. **2001 Grand Opening of the Ruth Bancroft Garden & Spring Plant Sale.** Walnut Creek, California. (925) 210-9663.

APR. 22–MAY 20. **Pasadena Showcase House of Design.** House and garden tours. San Marino, California. (626) 792-4661.

APR. 28 & 29. **Green Scene Garden Show.** Fullerton Arboretum, Fullerton, California. (714) 278-3579.

APR. 29. **7th Annual Spring Garden Tour & Tea.** Ruth Bancroft Garden, Walnut Creek, California. (925) 210-9663.

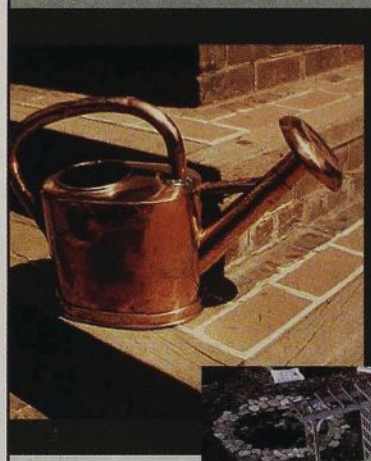
MAY 5 & 6. **10th Garden Festival.** Sponsored by San Luis Obispo Botanical Garden. El Chorro Regional Park, San Luis Obispo, California. (805) 546-3501.

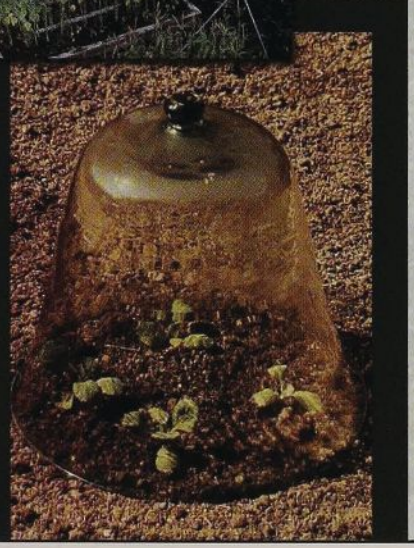
Williamsburg Institute

COLONIAL WILLIAMSBURG

55th Garden Symposium

Practical Gardening in a Changing World





Co-sponsored by the:

AMERICAN HORTICULTURAL SOCIETY

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
tkinkead@cwf.org

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Pronunciations and Planting Zones

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

A–E

Allium caeruleum AL-ee-um see-ROO-lee-um (4–11, 12–1)
Alocasia macrorrhiza al-o-KAY-see-uh A. mak-ro-RY-zuh (8–11, 12–5)
***Alocasia* 'Hilo Beauty'** (9–10, 12–5)
Angelica archangelica an-JEL-ih-kuh ark-an-JEL-ih-kuh (4–9, 9–1)
A. atropurpurea A. at-ro-per-PER-ee-uh (4–9, 9–1)
A. gigas A. JEE-gus (4–9, 9–1)
Anthriscus sylvestris an-THRIS-kus sil-VES-triss (7–10, 10–7)
Antirrhinum majus an-tihr-RYE-num MAY-juss (7–9, 9–1)
Arisaema triphyllum air-ih-SEE-muh try-FIL-lum (4–9, 9–1)
Artemisia ludoviciana ar-teh-MEEZ-yuh loo-doh-vik-ee-AN-uh (4–9, 9–1)
Asarum arifolium uh-SAR-um air-ih-FO-lee-um (6–9, 9–6)
A. heterophyllum A. het-ur-o-FIL-lum (6–9, 9–6)
Betula nigra BET-yew-luh NY-gruh (4–8, 9–2)
Caladium bicolor kuh-LAY- dee-um BY-kuh-lur (10–11, 12–8)
Callicarpa dichotoma kal-lih-KAR-puh dy-KOT-o-muh (5–8, 8–7)
Caltha palustris KAL-thuh pah-LUS-triss (5–9, 9–4)
Camassia cusickii kuh-MASS-ee-uh koo-SIK-ee-eye (4–11, 12–1)
C. leichtlinii C. lykt-LIH-nee-eye (4–11, 12–1)
C. quamash C. KWAH-mash (4–10, 12–1)
***Canna* ×*generalis* cultivars** KAN-nuh x jen-er-RAY-liss (8–11, 12–1)
Caulophyllum thalictroides kaw-lo-FIL-lum thal-ik-TROY-deez (3–8, 8–1)
Chimaphila maculata ky-MAF-ih-luh mak-yew-LAY-tuh (4–8, 8–1)
Cimicifuga racemosa sih-mih-SIF-yew-guh ras-eh-MO-suh (3–8, 12–1)
Clematis viorna KLEM-uh-tiss vy-OR-nuh (5–9, 9–1)
Cleome gynandra klee-O-mee jy-NAN-druh (0, 12–3)
Clethra alnifolia KLETH-ruh al-nih-FO-lee-uh (3–9, 9–1)
Colocasia esculenta kol-o-KAY-see-uh es-kyew-LEN-tuh (9–11, 12–4)
Crinum americanum KRY-num uh-mair-ih-KAN-um (8–11, 12–8)
***Crinum* 'Ellen Bosanquet'** (7–11, 12–8)
Cypripedium acaule sip-rih-PEE-dee-um uh-KAWL-ee (3–7, 7–1)
Euonymous americanus yew-ON-ih-mus uh-mair-ih-KAN-us (6–9, 9–3)
Eupatorium fistulosum yew-puh-TOR-ee-um fis-tyew-LO-sum (4–8, 8–2)

F–L

Foeniculum vulgare fee-NICK-yew-lum vul-GAIR-ree (5–9, 12–1)
Fothergilla major fah-ther-GIL-uh MAY-jer (4–8, 9–2)
Fritillaria meleagris frit-ih-LAIR-ee-uh mel-ee-AH-gris (4–9, 8–2)
Galanthus nivalis guh-LAN-thus nih-VAL-iss (3–8, 8–1)
Hamamelis virginiana ham-uh-ME-liss vir-jin-ee-AN-uh (3–8, 8–1)
Hepatica americana heh-PAT-ih-kuh uh-mair-ih-KAN-uh (3–8, 8–1)
Hymenocallis harrisiana hy-men-o-CAL-lis har-riss-ee-AN-uh (9–11, 12–9)
***Hymenocallis* 'Sulphur Queen'** (9–11, 12–9)
Ilex verticillata EYE-leks vur-tih-sih-LAY-tuh (5–8, 8–5)
Illicium floridanum ih-LISS-ee-um flor-ih-DAN-um (7–9, 9–4)
Impatiens capensis im-PAY-shenz kuh-PEN-sis (0, 12–1)
Itea virginica eye-TEE-uh vir-JIN-ih-kuh (5–9, 10–7)
Lavandula* ×*allardii lah-VAN-dyew-luh al-LAR-dee-eye (8–10, 10–3)
Levisticum officinale leh-VIS-tih-kum oh-fiss-ih-NAL-ee (5–8, 8–4)
Liriodendron tulipifera leer-ee-o-DEN-dron too-lih-PIF-ur-uh (5–9, 9–2)
Lobelia cardinalis low-BEEL-yuh kar-dih-NAL-iss (2–8, 8–1)

M–O

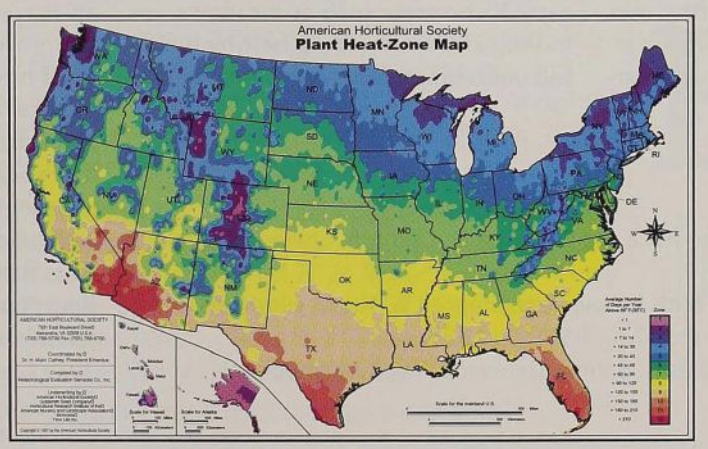
Miscanthus sinensis miz-KAN-thus sy-NEN-siss (4–9, 9–1)
Mitchella repens mih-CHEL-luh REP-enz (3–9, 9–1)
Myosotis sylvatica my-o-SO-tiss sil-VAT-ih-kuh (5–9, 9–5)
Myrrhis odorata MY-riss o-doh-RAY-tuh (4–8, 8–1)
Ocimum basilicum AH-sih-mum buh-SIL-ih-kum (0, 11–1)
Origanum laevigatum o-RIG-uh-num lee-vih-GAY-tum (7–11, 12–7)
O. libanoticum O. lih-buh-NOT-ih-kum (5-8, 8-5)
Oxalis regnellii* var. *triangularis auk-SAL-iss reg-NEL-ee-eye var. try-ang-yew-LAIR-iss (8–10, 10–8)
O. tetraphylla O. teh-truh-FIL-luh (8–10, 10–8)

P–S

Parthenium integrifolium par-THEE-nee-um in-teg-rih-FO-lee-um (5–9, 9–3)
Pedicularis canadensis ped-ik-yew-LAIR-iss kan-uh-DEN-siss (4–9, 9–1)
Phlox paniculata FLOKS pan-ik-yew-LAY-tuh (3–9, 9–1)
Podophyllum peltatum pah-doh-FIL-lum pel-TAY-tum (4–8, 8–2)
***Polemonium* 'Brise d'Anjou'** pahl-eh-MO-nee-um (4–8, 8–1)
Polygonatum biflorum pah-lih-go-NAY-tum by-FLOR-um (3–9, 9–1)
Pyrethrum roseum py-REE-thrum ro-ZAY-um (5–9, 9–3)
Quercus rubra KWER-kus ROO-bruh (4–9, 9–1)
Rhododendron austrinum ro-doh-DEN-dron aw-STRY-num (6–10, 11–7)
R. calendulaceum R. kuh-len-dew-LAY-see-um (5–8, 9–4)
Ribes sanguineum RY-beez san-GWIN-ee-um (6–8, 8–6)
***Rosmarinus officinalis* 'Tuscan Blue'** roze-muh-RY-nus o-fiss-ih-NAL-iss (8–10, 10–8)
Sanguinaria canadensis san-gwi-NAIR-ee-uh kan-uh-DEN-siss (3–8, 8–1)
Sassafras albidum SASS-uh-frass AL-bih-dum (4–8, 8–3)
Sauromatum venosum saw-ro-MAY-tum veh-NO-sum (11, 12–10)
Solenostemon scutellareoides so-len-O-steh-mon skoo-tuh-LAIR-ee-OY-deez (11, 12–1)

T–Z

Tanacetum niveum tan-uh-SEE-tum nih-VEE-um (5–9, 9–1)
Thalictrum thalictroides thal-IK-trum thal-ik-TROY-deez (5–9, 9–5)
Tiarella cordifolia tee-ah-REL-uh kor-dih-FO-lee-uh (3–7, 7–1)
Tipularia discolor tip-yew-LAIR-ee-uh DIS-kul-ur (6–8, 8–6)
Tricyrtis hirta try-SUR-tiss HUR-tuh (4–9, 9–1)
Trillium catesbaei TRIL-ee-um KAYTS-bee-eye (4–8, 8–1)
Uvularia sessilifolia yew-vu-LAIR-ee-uh ses-sih-li-FO-lee-uh (4–9, 9–3)
Valeriana officinalis val-air-ee-AN-uh oh-fiss-ih-NAL-iss (3–9, 9–1)
Viola tripartita VY-o-luh try-par-TEE-tuh (7–8, 8–6)
Zantedeschia aethiopica zan-teh-DES-kee-uh ee-thee-O-pih-kuh (8–10, 10–4)
***Zantedeschia* 'Pink Mist'** (11, 12–7)



Notes from River Farm

A Garden Takes Wing

by David J. Ellis

SOME MAGAZINES would have you believe that gardening is as easy as painting by numbers—you just follow a few simple steps and you have a beautiful, carefree garden without having to lift another finger. Those of us who have dirt encrusted under our fingernails for at least nine months of the year know better; gardening is a work in progress that involves experimenting, learning from mistakes, and constant adjustments.

The same can be said for the process of attracting birds to gardens. It's not just a cookie-cutter process of putting out birdhouses, seed dispensers, and a birdbath and waiting for the flocks to arrive. As Stephen W. Kress writes in *Bird Gardens: Welcoming Wild Birds to Your Yard,* "To attract birds throughout the year, gardeners must create and maintain the conditions that a variety of birds favor. Feeders and birdbaths alone will not do the job."

Thanks to its setting along the Potomac River, the Society's headquarters at George Washington's River Farm has always been a haven for wild birds. This past December, the Society opened its gates to members of a local conservation group, which was tallying birds for the National Audubon Society's annual bird count. Fifty-eight different bird species were spotted by watchers at various sites in and around River Farm that day, slightly more than the 54 species that were recorded the year before. Among the more unusual sightings were a hermit thrush and tundra swans.

To encourage even more diversity, over the last two years the Society's horticultural department staff has begun incorporating habitat for birds and other wildlife into the overall master plan for this historic landscape. Among the principal components of this effort are preserving "wild" areas for shelter, creating and managing naturalistic areas such as meadows, installing and maintaining nesting boxes, and integrating a variety of plants that provide food or nesting materials for birds into the more formal areas of the gardens.

Two fledglings peek from the lower opening of this occupied purple martin house while an adult male perches above.

As noted in the September/October issue, a nesting box for purple martins was installed on the grounds last fall, and early this spring two bluebird boxes were put up. "Placing nesting boxes in the correct locations and monitoring them regularly is critical for encouraging nesting," says Janet Walker, the Society's director of horticulture.

Of course, most suburban gardens are not large or open enough to serve as nesting sites for bluebirds and martins, which have demanding territorial requirements. But even the smallest townhouse garden can attract and help support bird populations by providing the three essential components of the bird-friendly garden: shelter, food, and water. And with the increasing loss of habitat caused by urban sprawl, our gardens are becoming critical to the survival of many wild birds.

Taking a little time to learn how to provide habitat in your garden for birds is an investment that will pay dividends many times over. Arm yourself with a good bird identification guide, some resources on gardening for birds (see box), and a diary to record your bird sightings. Then begin adding a variety of plants that offer food or shelter to birds. And be sure to provide a year-round source of water. That first glimpse of a hummingbird visiting your agastache will make your effort worthwhile.

David J. Ellis is editor of The American Gardener.

Resources

The Backyard Birdhouse Book by René and Christyna M. Laubach. Storey Books, Pownal, Vermont. 1999.

Bird Gardens: Welcoming Wild Birds to Your Yard, Stephen W. Kress, guest editor. Brooklyn Botanic Garden, Inc., Brooklyn, New York. 1998.

Gardening for the Birds by Thomas G. Barnes. University Press of Kentucky, Lexington, Kentucky. 1999.

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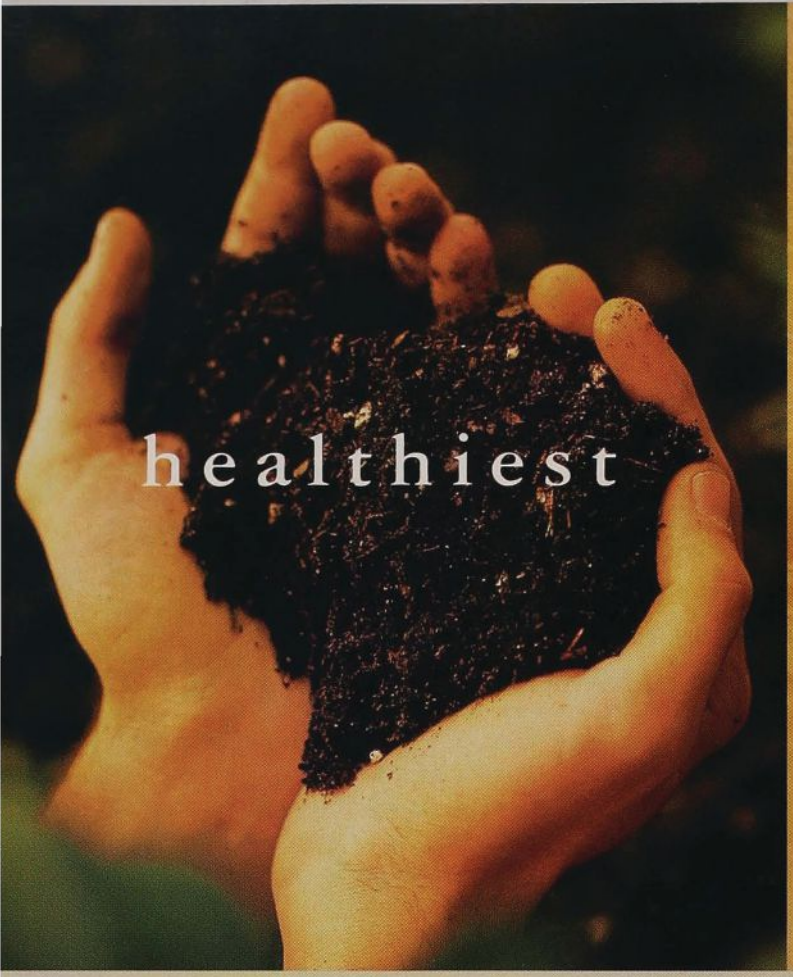

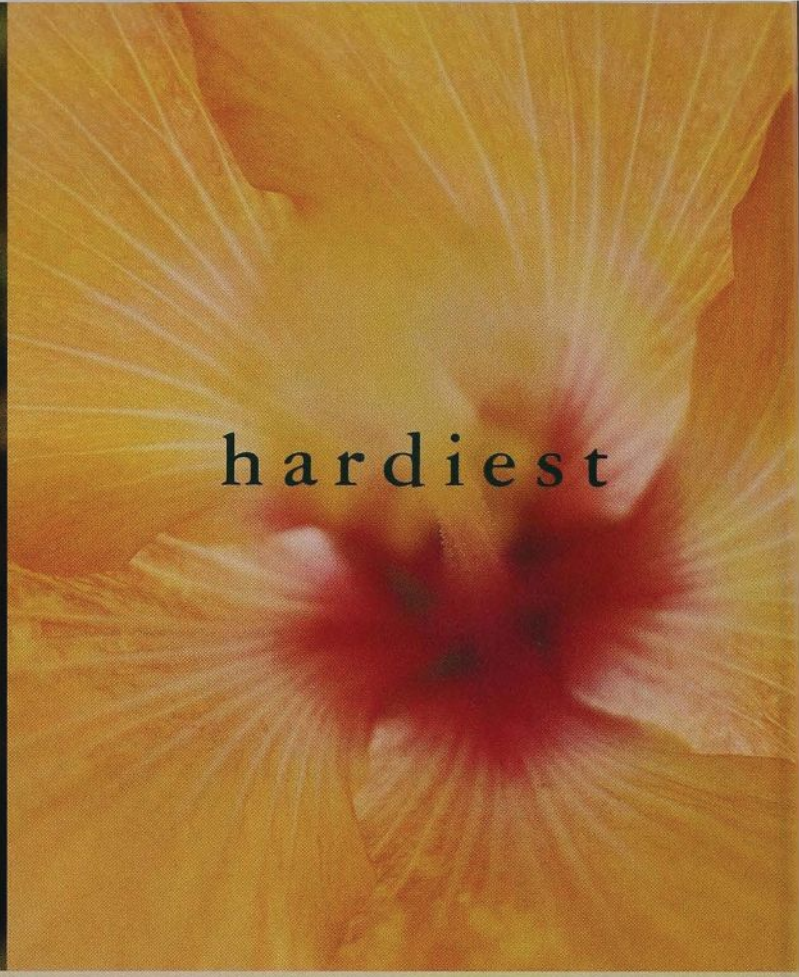

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