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# The American GARDENER

*The magazine of the American Horticultural Society*

JANUARY / FEBRUARY 2000

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### INTERN PROGRAM

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### TRAVEL STUDY PROGRAM

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

### WEB SITE: WWW.AHS.ORG

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

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*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 *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 \$5 per copy.

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Printed in the U.S.A.

## An Inside Look

"My grandmother had acres of pastures and bordering woodlands that she managed for 50 years. I learned much of my early botany during rambles through this area."

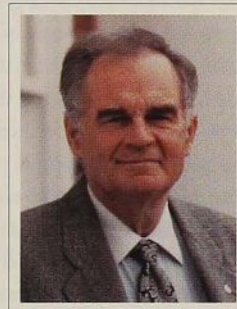
AS WE MOVE INTO THE NEW MILLENNIUM, one of the top gardening trends is a rising appreciation for naturalistic gardens that are in keeping with the "wild" landscapes around us. For this we can probably thank Lady Bird Johnson and her ongoing support of wildflowers and natural areas. To meet this interest in naturalistic gardening, we are debuting a new department this year, titled "Habitat Gardening." The first installment of this new department is a feature-length article in this issue that explores how gardeners can create diverse habitats for wildlife at transition zones between lawns and woodland.

My grandmother, Miss Nannie, had acres of her own pastures and bordering woodlands that she managed for 50 years by a quick jerk—when the ground was moist—or a chop with her mattock for deeper-rooted plants. I learned much of my early botany during rambles through this area, which bore few signs of Miss Nannie's gentle touch. The habitat supported a variety of wildlife, including birds, chipmunks, and squirrels, that shared with us the harvests of wild berries, persimmons, passionflowers, and pawpaws. There Miss Nannie also sought out culinary and medicinal plants that she used for hair dyes, teas, and controlling upset stomachs. Her secret weapon was Friday, a little Jersey cow that helped keep weedy areas in check. In addition, its manure was the booster for Miss Nannie's compost piles.

Looking ahead to the AHS Annual Meeting in Houston this coming March, we profile Peckerwood Gardens, a private garden in Hempstead, Texas, that achieves a unique synthesis of art, horticulture, and conservation. This acclaimed garden is one of many outstanding tour stops scheduled during the meeting.

Also in this issue is a detailed profile of hardy gingers (*Asarum* spp.), those subtle woodland wildflowers native to North America, Europe, and Asia; an article on how to use contrasting and complementary plant shapes in designing mixed borders; and a photographic essay on plants that brighten a winter greenhouse with their foliage and flowers.

Our special millennium Focus section explores how the Internet is changing the way gardeners find resources and share information. Had Miss Nannie lived a few decades later, I'm sure that one of her five sons and four daughters would have introduced her to the electronic age. She wanted to know what was happening with her family: Education, gardening, and patriotism were our family's goals. Now let us make them the AHS goals in the 21st century.



*H. Marc Cathey*

—H. Marc Cathey, AHS President Emeritus



# Members' Forum

"Hellebores sold with the name *H. orientalis* are for the most part garden hybrids that should more correctly be called *H. ×hybridus*. What is carried in the nursery trade as *H. orientalis* has long since lost most or all of its resemblance to the species."

## PRUNING GINKGOS

IN RESPONSE to the question about pruning ginkgos that was published in the Gardeners Information Service page in the September/October issue, I would like to contribute more information about keeping a ginkgo dwarf, or at least shorter than normal.

In my rock garden I have a 25-year-old ginkgo that is 4½ feet wide and 2½ feet tall. The trunk is five inches in diameter. When the original plant was eight inches high, I began heading it back to create a multi-branch growth pattern. Keeping in mind the need to keep a fairly balanced overall shape, whenever a new stem develops four or five leaves, I then cut it back to one, two, or three leaves. When the plant is dormant, I also thin it out by removing branches at the site of origin.

My ginkgo specimen is now a multi-twigged plant and quite attractive. It is very healthy and never fed. When visitors ask if the plant has a name, I tell them it is a "secateur dwarf." I believe this technique can be successfully used to keep many woody plants small, but the larger the plant is when the pruning process is started, the more labor-intensive it will be.

Planted near the ginkgo is a 40-year-old *Enkianthus perulatus* var. *compactus*. In contrast to the ginkgo, this compact shrub—less than two feet tall and four feet in diameter—has never had to be pruned.

Nickolas Nickou  
Branford, Connecticut

## HELLEBORES REDUX

EDITOR'S NOTE: *In testament to the passion inspired by hellebores, we received several letters in response to a request by*



*Norman Deno in our September/October issue for information concerning forms of Helleborus orientalis with superior flower colors and whether there are forms of Helleborus niger that bloom in fall. A selection of the letters is printed below.*

I WOULD LIKE to say thank you, along with a round of applause, to Mr. Deno for his research and publications on seed germination. His work is very much appreciated by those of us who grow our own plants from seed.

As Colston Burrell pointed out in his article on hellebores in *The American Gardener* last year (January/February), when discussing *H. orientalis* we first need to make sure we are speaking of the same plant. Hellebores sold with the name *H. orientalis* are for the most part garden hybrids that should more correctly be called *H. ×hybridus*. Will McLewin, a British hellebore expert, has been advocating this nomenclature for some time. What is car-

ried in the nursery trade as *H. orientalis* has long since lost most or all of its resemblance to the species.

The true species *H. orientalis* is coming back into the trade as interest grows in hellebores in England, Germany, Australia and here in America. In a few collectors catalogs you will now find both *H. ×hybridus* and *H. orientalis* along with color selections of each due to the numerous breeding programs being conducted today. There are good color forms of each available, so I would suggest a trip to the library to browse any of the books specializing in hellebores currently on the market. All provide a wealth of color photos and information. A favorite of mine is *The Gardener's Guide to Growing Hellebores* by Graham Rice and Elizabeth Strangman, published by Timber Press.

Plants and seeds of good color forms of *H. ×hybridus* and *H. orientalis* are available commercially. In addition to the sources listed in Burrell's article, McLewin sells



seeds from his collecting expeditions and his garden where his breeding program takes place. Helen Ballard also offers many of the better color forms from her breeding programs. Often individual collectors and growers are quite easily located and contacted through the Internet.

The Christmas rose (*H. niger*) sets buds above ground toward the end of January here in southern Indiana, but no real bloom occurs until the latter part of February and into March. The number, timing, and quality of flowers is very much weather dependant. Dormant buds replace flowers damaged by hard freezes and lack of snow cover, but there is always a show to some degree.

If Mr. Deno saw *H. niger* blooming in November, it was more than likely a different strain than the one currently on the mass market. A strain of early-winter blooming *H. niger* was in circulation some years ago but seemed to have somehow gotten lost in the trade for a while. Of late, fortunately, that particular strain seems to be more readily available once again. I have *H. niger* in three locations in my garden. Two were planted in quite poor locations back when I was a novice gardener. I feel the reputation *H. niger* has gained for being a bit of a problem is more myth than actual gardening experience.

Gene Bush  
Depauw, Indiana

EDITOR'S NOTE: Formerly a chemistry professor at the Pennsylvania State University in State College, Deno is best known in gardening circles for his research on seed germination requirements. He has self-published three references on seed germination, beginning with *Seed Germination Theory and Practice* in 1993. For information about his publications, send a stamped, self-addressed envelope to Norman Deno, 139 Lenor Drive, State College, PA 16801.

OF THE VARIOUS HELLEBORES that I have tried in my Zone 7 Piedmont garden, *H. niger* has been the most challenging. While it did not perform for me at all, in a friend's garden just 12 miles away, a single specimen planted some five years ago has now become a large, shrublike species some two feet in diameter producing some 30 blooms yearly. This plant invariably blooms at Christmas time, its first flower

generally opening on Christmas Day. Frustrated at my failure, I finally consulted Don Jacobs of Eco Gardens in Decatur, Georgia, who grows and offers a variety of hellebore species and selections. According to him, *H. niger* does not tolerate acid soil. While hellebores such as *H. orientalis*, *H. foetidus*, and *H. argutifolius* will tolerate generally acidic soils and grow well, as they have for me, *H. niger* will do so only with the addition of generous quantities of lime.

I should also mention that some lovely selections of *H. ×hybridus* are available from Jacobs, among them a lovely pink, 'Eco Frosted Plum', which has continued to increase in size and bloom regularly from the first year I planted it.

Two good resources on hellebores are: *Hellebores* by Brian F. Mathew, published by the Alpine Garden Society, Woking, 1989.

A scholarly and fascinating six-part study on hellebores by Will McLewin and Brian Mathew was published in *The New Plantsman* from 1996 to 1998. There is also a short note on *H. orientalis* subsp. *guttatus* by Mathew in *The New Plantsman*, 1994. vol. I, part 3.

Rekha Morris  
Pendleton, South Carolina

IN RESPONSE to Norman Deno's query about where good color forms of *Helleborus orientalis* hybrids can be obtained, I would like to recommend the selections of British hellebore breeder Graham Birkin. Birkin breeds for color and has only recently offered divisions of his hybrid hellebores via mail-order for American gardeners. His new Web catalog can be found at [www.hellebores.hort.net](http://www.hellebores.hort.net)

Birkin's catalog is an image catalog, so it may be slow to load for those with slow modems, but it's worth the wait to see all those gorgeous flowers! He offers doubles and anemone-flowered forms as well as "blacks" and blues, pink and red ranges, yellows, apricots, and whites.

Orders can now be placed for delivery this spring or fall. A selection of his hybrids is also available at the following American nurseries:

Russell Graham—Purveyor of Plants, 4030 Eagle Crest Road, N.W., Salem, OR 97304. (503) 362-1135. Catalog \$2. E-mail: [grahams@open.org](mailto:grahams@open.org)

Plant Delights Nursery, 9241 Sauls

Road, Raleigh, NC 27603. (919) 772-4794. Catalog 10 stamps or a box of chocolates. Owner Tony Avent lists some of the dark forms under 'Birkin's Blacks' in his online catalog. [www.plantdel.com](http://www.plantdel.com)

Marge Talt  
Potomac, Maryland

MY EXPERIENCE with *H. niger* contrasts with that of Brian Mathew in his book, *Hellebores*. He noted that the Christmas rose rarely blooms as early as Christmas and went on to say that "it is not the easiest plant to grow and one seldom sees good plants in gardens." In this region at least, given conditions to its liking, the common form of *H. niger* will, in time, form luxuriant clumps elegant in flower and foliage—and yes, I do have one clone that truly deserves the designation "Christmas Rose."

This selection was obtained in 1978 from Wayside Gardens, which was then located in Mentor, Ohio. This plant has bloomed as early as Thanksgiving—which may explain Deno's fall sighting—but it tends to flower with near clockwork precision between December 1 and December 10 and is at or near its peak for Christmas.

A much smaller plant than my younger, later-blooming clones, it normally produces 12 to 20 flowers a year. These are unusually large, to four and a half inches in diameter, compared to four inches for the later-flowering types. Its leaf segments are also distinctive in that they are only half as wide, much less strongly toothed, and lack the occasional deep embayments of the later flowering forms. These distinctive features suggest this particular early-flowering selection may represent a separate genetic strain.

Over the past 21 years, the early flowering clone has produced only a single seedling. If typical, this lack of sexual and vegetative vigor may help explain the scarcity of this selection in cultivation.

George Phair  
Potomac, Maryland

**WRITE US!** Do you want to voice an opinion or share some gardening information? We'd like to hear from you. Letters to the editor 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](mailto:editor@ahs.org). Letters we print may be edited for length and clarity.





# News

AHS Programs and Events • Horticultural News and Research

## Unveiling the SMARTGARDEN™

PRAGMATISTS SCOFF AT THE IDEA that entering a new century and millennium is anything beyond a statistical oddity. Purists insist that we won't actually enter the new millennium until 2001. Both groups may be right, but it is human nature to take notice of numerical milestones in our lives.

Indeed, the arrival of any new year prompts many of us to make resolutions about our lifestyles, our health, and our careers. In light of the gloomy statistics floating around about the future of our planet—more people, fewer natural resources, higher temperatures, more pollution—perhaps now is the time to add better gardening practices to our list of resolutions for the millennium.

With that in mind, the American Horticultural Society, which has historically led the way in promoting scientifically sound and environmentally responsible gardening practices, is introducing the SMARTGARDEN™, a holistic approach to gardening that will help gardeners become even more active stewards of the earth.

The SMARTGARDEN™ concept combines the needs of our changing lifestyles with the environmental imperatives of the 21st century by linking all of the environmentally responsible gardening techniques that many of us try to put into practice in our gardens—selecting plants appropriate for climate, soil, and light exposure; practicing efficient watering methods; using integrated pest management (IPM) to minimize applications of synthetic pesticides; and composting to reduce waste entering landfills and create rich soil amendments.

Having a SMARTGARDEN™ doesn't mean sacrificing a beautiful landscape, it simply means practicing good stewardship of the earth in the course of creating and maintaining the garden of your dreams. "Stewardship is an individual commitment to the earth that transcends the immediate goal of a beautiful garden," says H. Marc Cathey, president emeritus of AHS and national spokesperson for the SMARTGARDEN™. "Heroic efforts in the past to maintain delicate or demanding gardens were predicated on abundant natural resources and are no longer justifiable given today's environmental awareness."

The coming century will present many challenges. The last decade of the 20th century brought the highest average global temperatures on record and it looks like more of the same is in store. As the earth's population continues to increase, we must all look for ways to minimize our environmental "footprint." Our choices will affect not only our landscapes, but the environment as a whole. This means cutting our output of pollutants while at the same time

## Lecture Schedule

Marc Cathey will lecture on the SMARTGARDEN™ concept at the following locations in 2000:

JAN. 22–28 Callaway Gardens, Pine Mountain, Georgia (706) 663-2281

FEB. 2–6 Northwest Flower & Garden Show, Seattle, Washington (206) 543-8618

FEB. 12 Oklahoma County Cooperative Extension Building, Oklahoma City. (405) 945-3358.

FEB. 17 Beverly Hills Garden Club, Alexandria, Virginia (703) 335-1269

FEB. 23 Olney Garden Club, Olney, Maryland (301) 774-3855

FEB. 26 The Nature Center, Westport, Connecticut (203) 227-7253

reducing our consumption of precious natural resources.

The key is to work *with* rather than against nature. This requires a thorough and eyes-wide-open assessment of our garden sites—both their potential and limitations. What has been successful in the past, and what has been troublesome or simply too much work?

Selecting plants that are compatible with your growing conditions is one of the principal tenets of the SMARTGARDEN™. To make this process easier for gardeners, Cathey has created a SMARTGARDEN™ coding system that will be applied to all ornamental plants. Codes will indicate each plant's light requirements, soil moisture requirements, height and width, USDA hardiness zones and AHS heat zones. Plants are being now being coded and will



Here's how the SMARTGARDEN™ coding system will look for Texas sage (*Leucophyllum frutescens* 'Compactum').



be released on the AHS Web site ([www.ahs.org](http://www.ahs.org)) as they become available.

We must also reassess our gardening practices. To realize the greatest benefits from our time and efforts we need to take advantage of the horticultural tools, technology, and knowledge that are available and can help us garden smarter and more efficiently. And finally, we need to measure every gardening decision against its environmental impact; in this way we recognize our stewardship of the earth.

Look for more on the SMARTGARDEN™ in upcoming issues of *The American Gardener* and on the AHS Web site. H. Marc Cathey will be lecturing on smart gardening practices throughout North America this year; a schedule of his upcoming lectures is listed on the opposite page and will be updated on the Web site.

We'd also like to learn what successful and environmentally responsible gardening practices you use in your garden. We'll feature the best ideas we receive in the magazine and on our Web site. Write to *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308-1300; or e-mail to [editor@ahs.org](mailto:editor@ahs.org).

### HOW SMART IS YOUR GARDEN?

Take a good look at your garden and ask yourself what parts of it are successful and what parts are troublesome. Here's a quick self-assessment survey to help identify problems or ways you can garden smarter. A more comprehensive evaluation can be found on the SMARTGARDEN™ page of the AHS Web site ([www.ahs.org](http://www.ahs.org)).

- Do you have any plants that are constantly diseased or struggling to survive that could be replaced by more appropriate selections?
- Are you composting your organic yard

and kitchen waste to reduce pressure on our landfills and to create healthy soil amendments?

- Have you tested the soil in various parts of your garden to determine if it is appropriate for the types of plants you are growing?
- Are your watering practices efficient? Do you water early in the morning or use drip irrigation systems to reduce evaporative loss?
- Are you using the USDA Plant Hardiness Zone map and the AHS Plant Heat Zone map to help select plants appropriate for the area in which you live?

## AHS Children's Garden Underway

CONSTRUCTION WILL BEGIN IN MARCH on the AHS Children's Garden that will be unveiled as part of the Epcot International Flower and Garden Festival from April 28 to June 11 at Walt Disney World in Orlando, Florida. The garden will also be a focal point of the eighth annual AHS National Youth Garden Symposium, titled "Celebrating Children's Gardens in the New Millennium: Design is Key," which will be held June 8 to 10 at Disney's Coronado Springs Resort.

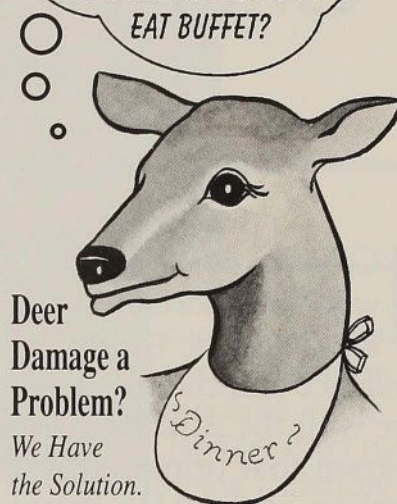
To create an innovative design for the Children's Garden, a panel of 17 landscape architects and horticultural educators from around the country participated in a design charette at Epcot last fall. The goal was to design a model kid's garden that was fun, interactive, educational, and worked within the theme park environment. "What we envisioned was an interactive journey of discovery focused on children, plants, gardens and gardening," says Norm Lownds, curator of the 4-H Children's Garden at Michigan State University and chair of the AHS National Youth Garden Symposium Advisory Panel.

For more information about the 2000 symposium, visit [www.ahs.org](http://www.ahs.org).

## Gardening Schools

THIS SPRING, AHS will again be co-sponsoring the Gardening Schools hosted by *Southern Living* magazine. Launched last year, the Gardening School program brought

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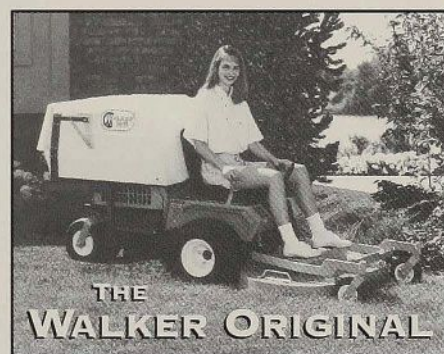
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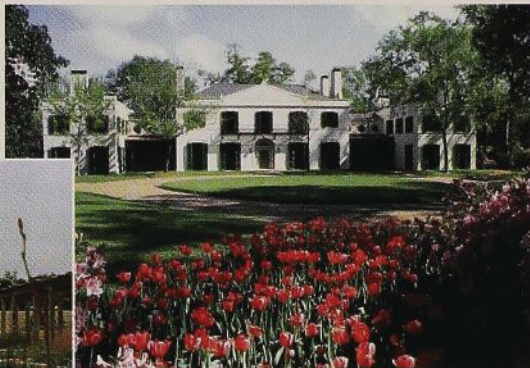
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- Catherine H. Sweeney Award*  
Dorothy Fuqua, Atlanta, Georgia
- Commercial Award (Individual)*  
Pierre Bennerup, President/CEO  
Sunny Border Nursery,  
Kensington, Connecticut
- Commercial Award (Institution)*  
Monrovia Nursery, Azusa, California
- Frances Jones Poetker Award*  
Jim Johnson, College Station, Texas
- Horticultural Communication Award*  
Ken Lowe, President/CEO HGTV,  
Knoxville, Tennessee
- Horticultural Therapy Award*  
Diane Relf, People-Plant Council,  
Blacksburg, Virginia
- Horticultural Writing Award*  
Michael Pollan,  
Cornwall Bridge, Connecticut
- Landscape Design Award*  
Geoffrey L. Rausch,  
Pittsburgh, Pennsylvania
- Liberty Hyde Bailey Award*  
Francis H. Cabot, Garden  
Conservancy, Cold Spring, New York
- Luther Burbank Award*  
Richard Craig, The Pennsylvania  
State University, University Park
- Meritorious Service Award*  
Josephine Shanks, Houston, Texas
- Professional Award*  
Larry M. Schokman, The Kampong  
of the National Tropical Botanical  
Garden, Coconut Grove, Florida
- Teaching Award*  
Michael Dirr, University of Georgia,  
Athens, Georgia
- Urban Beautification Award*  
Honorable and Mrs. Robert Lanier,  
Houston, Texas
- H. Marc Cathey Award*  
Inaugural award recipient to be  
announced

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Look for the complete program and registration brochure in the January 2000 issue of the *Directory of Member Benefits*, or register online at [www.ahs.org](http://www.ahs.org).

## ☆ AHS CONFERENCE HIGHLIGHTS ☆

*AHS member price: \$425 (includes activities for March 16–18; March 15 optional tour an additional \$145)*

### WEDNESDAY, MARCH 15

#### OPTIONAL Tour of Austin

- ★ Lady Bird Johnson Wildflower Center
- ★ Private Gardens in Austin

(This trip will be approximately 3 hours by bus each way from Houston. Onboard lectures, movies and refreshments will be provided.) Separate fee is \$145.

#### Itinerary:

Continental Breakfast at the Omni

Houston (7:00 a.m. to 7:45 a.m.)

Bus departs from the Omni at 8:00 a.m.

Lunch at the Lady Bird Johnson Wildflower Center in Austin

Bus will return to the Omni at 7:30 pm

### THURSDAY, MARCH 16

#### Lecture

Diane Relf, Professor of Horticulture at Virginia Polytechnic Institute and State University, will speak about the psychology and social value of plants and the role of horticulture in human health and well-being. Dr. Relf is the recipient of the AHS Horticultural Therapy Award.

#### Lecture

H. Marc Cathey, President Emeritus of AHS, will lead a panel discussion on the AHS “Smart Garden” concept. Learn how “Smart Gardening” will turn consumers into stewards of the earth in the next millennium.

#### Afternoon Tours in Houston

- ★ Rienzi
- ★ Bayou Bend
- ★ Private Gardens in River Oaks

### FRIDAY, MARCH 17

#### Lecture

Michael Dirr, Professor of Horticulture at the University of Georgia and award-winning author, will discuss his Plant Introduction Program that will feature the latest and greatest in plants. Dr. Dirr is the recipient of the AHS Teaching Award.

#### Lecture

Bill Welch, Professor of Horticulture at Texas A&M University, and Bill Adams, Harris County Agricultural Extension Service at Texas A&M University, will showcase Southern gardens at their best.

#### Afternoon Tours in Houston

- ★ Mercer Botanical Garden

- ★ Downtown Houston Public Gardens
- ★ Private Gardens in Museum District

### SATURDAY, MARCH 18

#### Lecture

Richard Craig, Professor of Plant Breeding and J. Franklin Styer Professor of Horticultural Botany at the Pennsylvania State University, will present Penn State’s research on pest resistance in ornamental plants and the new world of genetics. Dr. Craig is the recipient of the AHS Luther Burbank Award.

#### Afternoon Tours

10:30 a.m. to 4:00 p.m.

Box Lunch on Bus

- ★ Peckerwood Garden
- ★ Yucca Do Nurseries
- ★ Private Gardens

Evening Formal Reception and Closing Banquet

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the expertise of *Southern Living's* horticulturists to thousands of gardeners who attended hour-long programs at major botanical gardens and other prominent locations in the South and Southeast.

The first Garden School of 2000 will be held March 2 at the Atlanta Botanical Garden. Call (404) 876-5859 ext. 548 to register for this school or to learn more about it. A complete schedule of Garden Schools will be published in the March/April issue of *The American Gardener*.

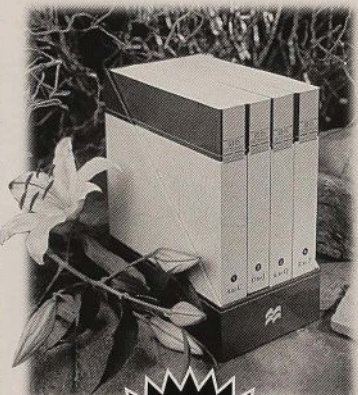
## Houston Speakers Set

DURING "Celebrating the American Gardener," AHS's annual meeting to be held March 16 through 18 in Houston, Texas, a panel of renowned horticultural experts will share their first-hand knowledge on a variety of gardening topics. Leading a session on Southern gardening will be Bill Welch, professor of horticulture and extension landscape horticulturist at Texas A & M University. "We'll look at the trends in color," says Welch, "and the return to heirloom plants, as well as period landscape design concepts that have come around to us again."

Richard Craig, professor of plant breeding and J. Franklin Styer Professor of Horticultural Botany at Pennsylvania State University in College Station and the 2000 recipient of AHS's Luther Burbank Award for plant breeding will recount Penn State's groundbreaking research on pest resistance in plants. According to Craig, "It's a good story—as much about the people involved—dozens over the years—as about the history and outcome of the research program."

Two other winners of 2000 AHS awards will also be speaking. Teaching Award recipient Michael Dirr, professor of horticulture at the University of Georgia, Athens, and author of *Manual of Woody Landscape Plants* will discuss his Georgia Plant Introduction Program. Horticultural Therapy Award winner Diane Relf, coordinator of the People-Plant Council and professor of horticulture at Virginia Polytechnic Institute and State University in Blacksburg will discuss the psychological and social value of plants and the role of horticulture in human health.

For more information on the annual meeting, see pages 10 and 11. A registration form can be found in the *Directory of Member Benefits*, or by visiting [www.ahs.org](http://www.ahs.org).



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# Millennium Focus

## Cyber-Gardening

BY ELLEN HARTRANFT

**O**n a recent visit to my local nursery I was considering the purchase of a beautiful blue spruce, *Picea pungens* 'Bacheri'. Unfamiliar with that cultivar, and not wanting to take any chances, I went home and searched my references for a description and growth requirements. I came up empty-handed. Never one to give up, I abandoned my armchair for my computer workstation and looked to cyberspace for the answer.

### Cyberspace Jungle

My Web search on the word "gardening" yielded 111,030 matches using the search engine HotBot. Astounding numbers rolled in as I checked other search engines: Yahoo! found 27 categories and 835 sites, Infoseek yielded 176,017, and Alta Vista was the big winner with 1,240,320 Web pages found! A search on "Blue Spruce" narrowed it down to 6,249 hits; adding the cultivar still supplied 788 possible sources of information.

A survey of what's available for gardeners on the Internet reveals the boom in computer technology has not only had an influence on the way gardeners find information and relate to other gardeners, but that gardeners have had a direct influence on the growth of gardening Web sites and what they offer.

### Information Overload

Since the World Wide Web came into common use in the early '90s, information available to gardeners has mushroomed. Resources run the gamut from searchable databases and plant encyclopedias to gardening forums covering any topic you can imagine. Information on plant selection, culture, pests, and diseases can be obtained from plant societies and associations, botanical gardens, universities, government, and commercial sites. All of this information and plants and gardening supplies—did I mention online shopping?—is available 24 hours a day!

Locating the specific information you need, however, can be a challenge. "The Web is an incredible resource for gardeners, but the information is not easily found," says Marge Talt, shade garden editor for the Web site, Suite 101. "It's scattered over hundreds of sites. Some will have one bit, and some will have another. There are sites designed for novices at both the Web and gardening and others geared for those with more experience in one or both."

Universities and cooperative Extension Services have phenomenally expanded their capacities to disseminate gardening and plant information using computer technology. "In the old days you called your Ex-

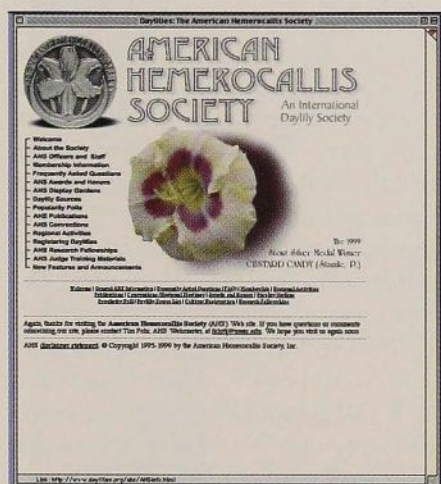
tension agent or Master Gardener, and you got the fact sheet they had on hand or whatever knowledge they had in their brain. The Web is infinitely more comprehensive," says Jim VanKirk, facilitator for Integrated Pest Management Activities in the cooperative Extension's Northeast Region.

Botanical gardens and arboreta are also dispensing gardening information as they promote their facilities. Visitors to the Chicago Botanic Garden Web site can register for courses, sign up for programs and memberships, or view information on a variety of topics, including an interactive component that allows gardeners to select recommended plants to meet their needs.

When trying to find information on a specific topic, Talt suggests checking out the link lists of general sites such as those offered by the garden editors of Suite 101 or About.com. "Part of our task is to search the Web so our readers don't have to," says Talt. Another suggestion Talt offers to new Web gardeners is to subscribe to a few e-mail lists.

### Processing Information

Online information is processed differently than print information, says Doug Jimereson, editor of the online magazine *Garden Escape*. "Articles on the Internet have what we call spider web features. In an article on tomatoes, for instance, there may be an introduction, followed by a list of topics. Readers are able to choose only the topics that interest them. We also don't have to reinvent the wheel with every article," he laughs. "I can't tell you how many times I described how to plant a tomato in my 20 years as a print journalist. Now if a reader needs to know how to plant a tomato, it's a link they click on. More advanced readers can select from other topics."



**Web sites can be found to cater to almost any horticultural taste and specialty.**



It's too early to predict what long-range effect increased Internet usage will have on print media, but Jimerson reports that *Garden Escape* has proven so popular that a print version is now produced as well. Conversely, Milaeger's Gardens, a long-established mail-order nursery, no longer prints a catalog because Internet sales through Garden.com have been so successful.

## Online Communication

In many cases, the medium that is generally perceived as cold and impersonal actually serves to bring people with common interests together through e-mail.

Many Web sites offer free newsletter subscriptions, online discussion groups, and gardening forums. GardenWeb has forums covering 90 different plants, regions, and topics. These forums give gardeners a chance to communicate with people who speak the same language. "For instance," says Tim Fehr, webmaster for the American Hemerocallis Society, "a daylily 'fanatic' can read a sentence like, 'The Candy series arose from the colchicine conversion of the diploid Siloam Virginia Henson (Henry) by Pat Stamile to a tetraploid,' and not need a translator. Yet, often they can't even discuss this with other family members without getting that glazed-over look." In addition, notes Fehr, "Some great friendships have been formed and renewed over the Web and the American Hemerocallis Society meetings now serve as gathering places to meet those folks who we've been reading posts from for the past two to three years."

Eileen Caetano-Isola, director of public relations at Garden.com, Inc., a commercial site that offers gardening information as well as plants and gardening supplies, describes a similar situation there. "Recently, 85 members of an online discussion group met in New Jersey for a weekend of garden tours and fun."

## Gardeners' Influence on Technology

Fast and easy communication through e-mail allows gardeners direct access to decision-makers in many organizations. Client feedback has resulted in changes in the content and format of both Internet and CD-ROM technology. User requests

## AHS WEB SITE

If you haven't already visited the American Horticultural Society's Web site at [www.ahs.org](http://www.ahs.org), we hope you will do so in the near future. The site, launched in 1998, is divided between an open area that anyone can view and a members-only section that contains additional resources exclusively for our members. Visitors to the site can learn about the Society and its activities, find out about national gardening events, and read articles published in *The American Gardener*.

As the AHS Web site continues to develop, members and other visitors will have access to even more gardening and horticultural resources. Plans for the future of the Web site include:

- Interactive utilities that will help gardeners select and find plants that fit their garden, or research the plants they already have.
- Virtual tours of the Society's historic headquarters, River Farm, and links to botanical gardens throughout North America and around the world.
- Multidisciplinary garden-based science classes will be available online for school use.

■ Important events such as the Society's Annual Meeting, national Youth Gardening Symposium, and Great American Gardener lecture series will be accessible through virtual conferencing. Online gardening classes and seminars and question-and-answer forums with notable gardeners and horticulturists will be offered.

- A "Hall of Fame" will highlight major accomplishments in American gardening.

Remember, AHS members must use a password to gain access to the members-only section of the Web site. The password for 2000 is listed on page 34 of the *Directory of Member Benefits*, which members received with this magazine. If you're not already a member, you can join online.



have prompted changes off-line as well.

Jolene K. Adams, webmaster for the American Rose Society, says that in direct response to e-mail requests, "Our national magazine, *The American Rose*, has increased coverage of novice advice articles; our headquarters has installed a hotline to answer questions; and our consulting rosarians are now online to give advice and make personal contacts through e-mail."

The Web also affords users the opportunity to voice their ideas and concerns about software products. "We're always enhancing our Web site based on customer feedback and the latest technology," says Craig Davidson of Sierra Home, a company that offers product support for its software, Land Designer 3D. "For in-

stance, customers recommended that we alter the way you can search our plant database of over 4,000 plants to include search terms like 'deer resistant' or 'attracts hummingbirds.' So we did!"

PlantAmerica.com, producers of CD-ROMs by noted horticulturists Michael Dirr and Allan Armitage, initially targeted nursery industry users with its software and Web site. Responding to consumer feedback, the company now offers resources for students, educators, and home gardeners with its Educated Gardener series. "Some valuable additions to our site include the Horticulture yellow pages, the

*continued on page 17*



## FROM REGIONAL RESOURCE TO GLOBAL NETWORK

The Internet links the gardeners of the world in a way that has never been possible before. I have "met" people from all over the world and exchanged correspondence as well as seeds and plants with people from all over the United States. I can read thoughts and advice from some of the leading experts in their respective horticultural fields on various e-mail lists. In most cases, if I have a specific question—no matter how esoteric—I can receive a reply from someone who knows the answer from personal experience in a matter of minutes or hours. If I need to identify a plant, I can put an image on the Web, post the URL and have that plant identified just as quickly.

Probably the best way to find out what gardening is like in different regions is to subscribe to some of the various e-mail gardening lists, whose members come from all over the United States, Canada, and other countries. Here, many garden problems and interests are shared and one learns a lot about what it's like to garden in various places. Any topic will get points of view specific to the particular gardener posting. I find it most interesting, for instance, that those in Zones 4 and 5 insist that hostas need sun, whereas, except for a few cultivars, they will burn in full sun where I garden in Zone 7. You learn quickly that different locations mean plants will behave differently.

All gardeners enjoy sharing with others of like mind, and the Internet provides this without our having to give up time in the garden.

I don't think we will ever want to relinquish our print magazines or paper seed and plant catalogs—it is very hard to read a computer screen in the bath tub—but I do believe that, as more and more people become connected to the Internet, more and more gardeners will turn to the Web for immediate information, if not for the companionship of other gardeners.

*Marge Talt, Shade Garden Editor, Suite 101*

# Visit your local garden center after dark.

Finally there is a gathering spot on the web created for gardeners by gardeners. Etera, a company that has been growing plants for over 20 years, has partnered with garden centers across the country to bring you access to gardening products and expertise like you've never seen before—24 hours a day, 7 days a week.

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*10:01 p.m. With only a week left until his anniversary, Andy browsed through [etera.com](http://etera.com) and was dazzled by hundreds of gift options for his favorite gardener. He finally settled on a beautiful bronze sundial.*

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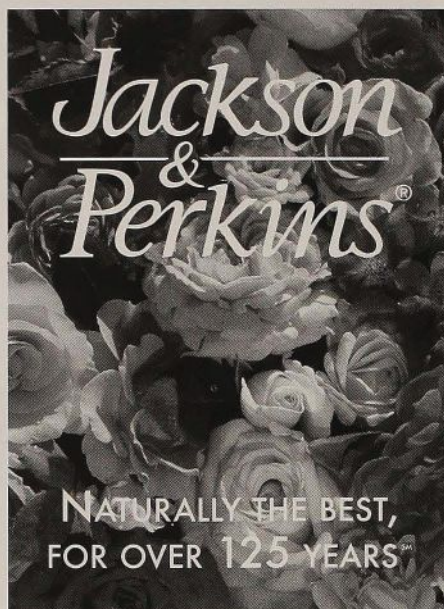


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## PLOWING THROUGH THE WEB

To assist you in finding your way through the Web jungle, we have gathered a listing of gardening Web sites. Most of these are general sites that serve as links to more specific information. For more Web sites and e-mail lists, visit the AHS Web site this month (click on *The American Gardener*).

### Hortnet:

[webserver.hortnet.com/default.html](http://webserver.hortnet.com/default.html)

■ A library of information for growers and horticultural professionals of horticultural links, databases, mailing lists, and industry newsletters.

### Gardening on Suite 101:

[suite101.com](http://suite101.com)

■ Each of the more than 50 gardening topics features a regularly updated column and discussion forum, plus reviews of the best Web sites in that topic area.

### GardenNet: [gardennet.com](http://gardennet.com)

■ One of the oldest—has a massive list of links.

### GardenWeb: [www.gardenweb.com](http://www.gardenweb.com)

■ Hosts many of the most active gardening forums on the Web—many specific topic sections.

### Miller Horticultural Library's Directory of Horticultural Web Sites:

[depts.washington.edu/hortiliblinks/links.html](http://depts.washington.edu/hortiliblinks/links.html)

### Ohio State University Plant Facts:

[plantfacts.ohio\\_state.edu](http://plantfacts.ohio_state.edu)

■ Over 20,000 pages of fact sheets on plant related topics from 46 universities and government organizations across the U.S. and Canada.

### Sustainable Urban Landscape Information Series:

[www.sustland.umn.edu/index.html](http://www.sustland.umn.edu/index.html)

■ Information about sustainable landscape for the public and to the horticulture/landscape industry with links to related sites.

### University of Maryland's HGIC's Plant Diagnostic Web Site: [www.agnr.umd.edu/users/hgic/diagn/home.html](http://www.agnr.umd.edu/users/hgic/diagn/home.html)

■ Online and mail-order publications, bi-weekly tips, Chesapeake Bay information; also developing a Plant Diagnostic Web site.



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continued from page 14

Nursery Network, Garden Auctions, and links to botanical garden and arboreta sites," says Donna Moramarco, director of education for PlantAmerica.

### Trends: Education and Sharing Resources

Another development expected to become standard on the Internet is the availability of continuing education, distance education programs, and online courses for gardeners. The University of Minnesota's online Master Gardener training course is now available as a credit course through the university. The class includes course modules, quizzes and tests, and discussion groups with other class members and the instructor.

In addition, The National Gardening Association recently offered a basic botany course online and plans to offer two beginning gardening courses—"Vegetables and Annual Flowers" and "Perennials"—early this year.

Organizations are finding increasing value in working together to create standards, share resources and knowledge, and prevent the duplication of effort. Some examples include:

- The PLANTS Database [[plants.usda.gov](http://plants.usda.gov)] is a single source of standardized information about plants. PLANTS reduces costs by minimizing duplication and making information exchange possible across agencies and disciplines.

- AgNIC (Agriculture Network Information Center) [[www.agnic.org](http://www.agnic.org)] was established by an alliance of the National Agricultural Library, land-grant universities, and other organizations committed to facilitating public access to agricultural databases and related information.

- The National Integrated Pest Management Network Web site [[www.reeusda.gov/nipmn](http://www.reeusda.gov/nipmn)] provides links to regional IPM programs, whose members promote reduced pesticide use, enhanced environmental stewardship, and sustainable systems.

- The Plant Conservation Alliance (PCA) [[www.nps.gov/plants](http://www.nps.gov/plants)] consists of 10 federal agencies and 150 cooperating organizations that strive to promote public awareness about native plant conservation. Its site contains information on native plants, invasive plant fact sheets, native plant coloring series for children, and much more.

# etera.com



**7:47 p.m.** Clare e-mailed a garden expert to ask which plants would thrive in the soggy section of her yard. In response, she received a customized list of plants tailored to her region and special circumstances.

**8:21 p.m.** After a long afternoon in the vegetable patch, Eleanor was delighted to find an e-mail from her daughter in Alaska saying that she'd just finished posting her own web page on [etera.com](http://etera.com).



**11:59 p.m.** With one click, Jim purchased an entire garden perfectly designed for that corner of the patio in full sun. His wife will think he spent hours planning it. What she doesn't know won't hurt her, right?

**2:28 a.m.** When talking about *Achillea*, Theodore said, "Uh-KILL-ee-uh," while Madeleine said "Ak-ill-EE-uh." With one quick trip to [etera.com](http://etera.com), they checked the pronunciation and settled the bet — he bought her a new pair of yellow gardening clogs.

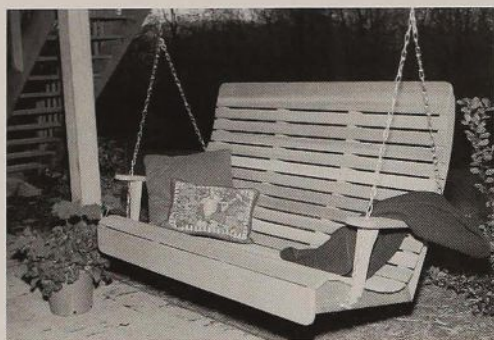


**6:44 a.m.** Jennifer entered Etera's free Garden Giveaway and spent the rest of the day dreaming of the garden parties she could host from year to year in the midst of all the gorgeous colors and foliage.



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■ The Virtual Garden Network [[www.virtualgarden.com](http://www.virtualgarden.com)] is an advertising partnership that brings together exciting, informative, and entertaining gardening Web sites.

### What Lies Ahead?

For the near future, CD ROM technology still allows faster access to high quality photographs and greater ease of navigation, but the Web offers an almost infinite range of topics and the ability to continuously update and revise information.

For example, a new CD-ROM titled, "Solving Garden Problems: A University of California Interactive Guide" was developed by UC-Davis in cooperation with Washington State University and Oregon State University. Designed to assist Master Gardeners, retail nursery clerks, and others who answer garden pest management questions, it features nearly 5,000 photographs of over 600 pests of more than 120 plants. "We prepared this very interactive product on a CD rather than on our Web site because available software allowed you to do more interactive programming easily, and also because many Master Gardener programs had slow connections to the Web, and it takes too long for them to pull up photographs," says Mary Lou Flint, director of IPM education and publications.

In contrast, The New Ornamentals Society (NOS), which provides updated information on new plants, accomplishes its mission better on the Web, says director Larry Hatch. "The New Ornamentals database provides accurate and current cul-



## National Children & Youth Garden Symposium

Orlando, Florida  June 8-10, 2000

The American Horticultural Society's 8th National Youth Garden Symposium is being held in Orlando, Florida, June 8-10, 2000.

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Co-sponsored by Epcot International Flower & Garden Festival, AABGA, and NuLife



The focus of this year's symposium is on **design**: the important elements of a children's garden as well as the process from initial conception to end result. There will be **activities** included in the three-day symposium for the entire family. A new garden, co-sponsored by the American Horticultural Society, will be installed at Epcot that will feature all that's great about a child's natural environment—as a place to both **play** and **learn**. Based on a terrific suggestion from one of last year's attendees, we will offer a **curricula swap!** What a great way to exchange program ideas. And last but not least, we will offer continuing **education credits** for attendees. Brochures available January 10.

Visit our Web site at [www.ahs.org/events](http://www.ahs.org/events) to register online or get up-to-date information, or call (800) 777-7931 to have a registration brochure mailed to you.



tivar information as well as immediate sources for new and rare plants," he says. "With hundreds of new ornamental cultivars introduced each year it is impossible for any book or CD-ROM to keep up. Our site is updated weekly."

Mark R. Wasserman, director of operations at PlantAmerica, predicts that "99.9 percent of our future work will be Web-based." In the very near future, PlantAmerica will unveil new technology that will allow advanced image mapping of photographs. PlantAmerica's new software will provide an ID code that will electronically tag an image and seamlessly provide a link to PlantAmerica's database. The link will automatically upload information on that plant and perform an Internet search if necessary, without leaving the original site. By sharing this technology first with other professional Web sites and, ultimately, with home gardeners, PlantAmerica hopes to improve the quality of information on the Web and to develop a meaningful tool for those who use plants in commerce or as a serious avocation.

Karen Jennings, senior vice president of Park Seeds and Wayside Gardens, predicts that before long “gardeners will visit a site and have their own personalized place, where they see only selections that will grow not just in their zone, but in their garden; where they are reminded that the *Buddleia* they bought two years ago needs to be pruned down to 12 inches this month; and where they have their garden and house design entered, with the ability to see how it would look at different seasons if they plant ‘X’ plants in different locations.”

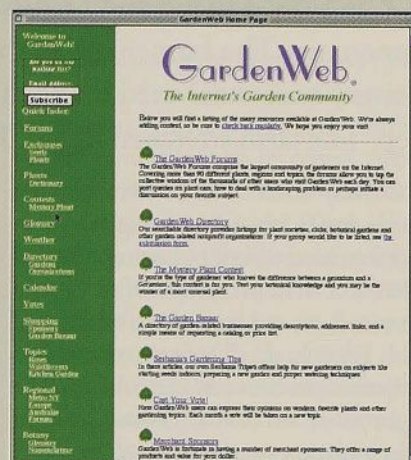
In my quest for information about *Picea pungens* ‘Bacheri’, I learned its pronunciation, origin, history, growth habit, cultural requirements, potential problems, sources for purchase, and much more. I’ve decided to look for something less prone to bagworms and cytospora canker. And I’m thinking that it’s time to invest in a laptop computer so I can curl up in my armchair for many future trips through cyberspace.

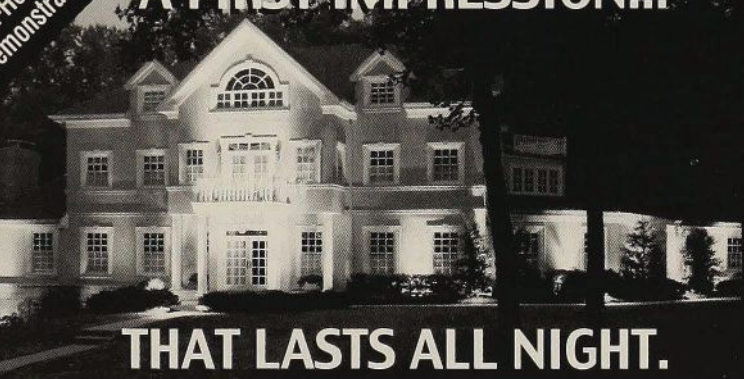
*Ellen Hartranft is a horticulturist and faculty Extension assistant for the University of Maryland Home and Garden Information Center Web site.*

## EVALUATING THE QUALITY OF A WEB SITE

As Larry Hatch, director of the New Ornamentals Society says, “Web research is no different from old-fashioned library research. Evaluate sites by the experience and reputation of the developer as you would a book. Look for depth of content and the use of citations, data charts, or links to back up statements.” Here are a few specific suggestions for evaluating the quality of information you find on the Internet.

- Is there prominent information on the home page or organization behind the Web site, such as an "About Us" link?
- Double check with a non-profit source before making a purchase recommendation as a commercial site.
- Look for research-based information and standards of publication. Most university publications are peer reviewed to ensure quality.
- Look for signs that the Web site is updated often. Quality sites include information on when the site was "last updated."
- Don't assume that every thing you find on the Web is correct, even on "Official" sites. Typos or rushed editing can result in incorrect information.
- Do some double-checking. Sometimes it's a good idea to look something up elsewhere in order to confirm that a site is providing good information.
- Check the publication date on university fact sheets or government documents. Although cultural information and pest biology remain accurate, some may recommend pesticides or products that are no longer available.






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# Offshoots

## Dirty Business

by Mona L. Schwind

ON COMPLETING A WINTER-SPRING semester in Ireland in 1974, a friend and I rented a small cottage on an Irish farm in Connemara. The farmer-owner's ancestors, which included Twining relatives, once cultivated tea in India, but now he raised cattle and sheep. The farm stretched from Cleggan Bay to headlands high above

the Galway coast. The two months we were renting in late spring to high summer seemed an ideal time for planting a cottage garden, so I went in search of dirt.

It was then, as I learned the nuances of British English, that I became educated in the distinction between *dirt* and *soil*. We bought *petrol*, *motored* to Galway, avoided *lorries*, sometimes ended in *cul-de-sacs*, and, on a single occasion, our car *left the road*. Given such variations in vocabulary, perhaps it is not surprising I assumed English *soil* had simply suffered its translation to what in some parts of America is called *dirt*.

Less than a yard from our cottage passed a lane that led to the estate's main avenue and also divided our abode from a large, rambling graystone house where an Anglo-Irish couple lived. The retired couple kept fine and extensive gardens—classic country and kitchen gardens complete with cold frames, root cellars, drying racks, pantry, and freezer. When winter kept them indoors, there was a well-stocked library of classic and modern titles in language and literature, philosophy, history, politics, and arts. In short, they were master gardeners, we were Yank amateurs.

For suitable flora, we made forays to garden *centres*. I cleared rubble and weeds from the cottage front for two plots of some 20-by-2-feet each. From abandoned stone walls, I fetched flat stones for raised beds. I followed tractors and lanes about the farm for moveable soil, some of it visibly enriched by passing herds. When planting time became imminent, I sought advice on where to purchase some "good dirt" to finish the beds. "Dirt?" my Anglo-Irish mentor repeated. "No, I don't think you require dirt. I think it's *soil* you need."

There followed a kindly technical and etymological account of the differences between soil and dirt. Linguistically, it was a matter of etymology; sociologically, a matter of class; and scientifically, soil and dirt were, well, fields apart.

The word "dirt" has been around since at least the 13th century. It existed in Middle English and probably came from Old Norse *drit*, and some would say it was akin to Old English's *dritan*. Both words meant "excrement" or "a filthy substance."

"Dirt" was sometimes applied to contemptible persons or worthless things, and within the last two centuries it has also come to mean corruption or scandalous gossip. Twentieth-century American contributions of *dirt farmer* (1920), *dirt poor* (1937), *dirt-bag* (1967) and *dirt bike* (1970) demonstrate the range of these connotations. Admittedly, dirt has also been occasionally used to refer to loose or packed soil or sand.

The genesis of soil, however, antedates both *drit* and *dirt* in both evolutionary and fundamentalist worldviews. The Romans, who ruled Britain for some 300 years, had both a word—*solum*—and a good deal of law about soil, ground, or earth. High Romanized society possessed territory of superior or inferior soil quality, while lesser ranks owned land of good or bad soil—*dirt*. After the Norman Conquest of England in 1066, there came the influence of French culture. The old French word for soil—*suel*—eventually became the modern French *sol*, reinforcing the basic distinction between

ground/land and waste products. There's but a short leap from *agri*-culture to culture.

After having my language thus cleansed by my mentor's discourse, I discovered that—at least then—one did not *purchase* a bag of soil at a store. Soil was *made* the natural way—by composting. Composting, of course, was done on a grand scale by nature herself in the great Irish bogs and, on a lesser scale, by farmers and gardeners. Past and later visits to the Aran Islands and Inishbofin afforded examples of painstaking soil gathering and composition. However, in that summer of 1974, it was our neighbors' compost pile that provided the top soil for my first Irish garden.



A quarter century later, while visiting a mega-garden center, a vivid stream of memories beginning from that bright, soft morning when I first realized soil's nobility and dirt's baseness returns to me: There in the lane stood our two neighbors, at once kindly and reserved, but, by reason of our landlord's proper introduction, authorized to elaborate on niceties between soil and dirt. There was our cottage and its array of columbines, cosmos, daisies, daylilies, and sweet peas. There was the same scene several years running, the garden improved and, on my final viewing five years ago, the garden in decline.

Now, in the midst of all the gardenalia in the mega-garden center, a "Gifts From the Garden" display features Demeter's own garden fragrances. Celery, tomato, and dirt! For *sale*! The classical references are lost on the dirtying—or is it *soiling*?—of that necessary distinction.

Mona L. Schwind is a free-lance writer living in Grand Rapids, Michigan.



# Gardeners Information Service

I've noticed that the 'Marguerite' and 'Blackie' cultivars of sweet potato vines are readily available in the trade. Are the swollen underground roots of these cultivars edible like a "normal" sweet potato? Can you propagate the sweet potato from these roots?

—C.H., BOUNTIFUL, UTAH

Unlike their agricultural counterparts, *Ipomoea batatas* 'Marguerite' and 'Blackie' are bred for ornamental properties rather than edible roots. 'Marguerite' is grown for its broad, heart-shaped, chartreuse foliage on trailing vines, and 'Blackie' is becoming a favorite in the garden for its dark purple, deeply lobed foliage that makes a great companion for plants with brightly colored flowers or foliage.

According to Janet Bohac at the USDA's Vegetable Laboratory in Charleston, South Carolina, 'Marguerite' seldom produces a "usable" edible root and 'Blackie' almost never does. If, by chance, such a root is produced, there is no reason it could not be eaten.

Bohac adds that while it is possible to propagate these varieties from slips produced by their roots, propagation from cuttings is much easier.

Do you have any literature on Japanese yews? We have some planted around our home near Milwaukee and can't seem to keep them alive. Six were planted, two already dead, two more in the process of dying and the last two (most recently planted) doing so-so.

—D.M., WAUKESHA, WISCONSIN

The most common problem associated with growing Japanese yew (*Taxus cuspi-*

*data*) is its intolerance of poorly drained soils. In fact, anything less than excellent drainage can result in an unthrifty plant or even death.

Typical symptoms of poor soil conditions on a Japanese yew begin with plants yellowing from their tips. If the condition is severe, the entire plant becomes chlorotic or yellow, wilts, and eventually dies.

If you suspect from the above description that poorly drained soil is your problem, move the two surviving plants to a site with better soil conditions. Brent McCown, professor of horticulture at the University of Wisconsin, suggests replanting in an 8-to-12-inch-high raised bed filled with a mixture of silt loam soil and organic matter such as peat or compost. Mulch in summer to moderate moisture stress.

Another solution is to replant with shrubs that tolerate poorly drained soils better than yews. "For conifers that can be used like yew," says McCown, "probably the best choice for wet areas is American arborvitae (*T. occidentalis*).

Other shrubs that tolerate poorly drained soil include: chokeberry (*Aronia* spp.), summersweet (*Clethra alnifolia*), inkberry (*Ilex glabra*), or red-osier dogwood (*Cornus sericea*). All are hardy in your region, but only inkberry is evergreen.

I recently purchased a plant labeled *Alsophila australis*, but it doesn't look much at all like the pictures of this plant in my American Horticultural Society reference book. It looks much more like *Cyathea dealbata* or *Dicksonia antarctica*, but not exactly like either of those, either. Can you recommend a good reference book on tree ferns? I would

like to learn more about them, as well as see if I can determine the species I have.

—A.D., HOUSTON, TEXAS

Some plants of the *Alsophila* and *Cyathea* genera—both in Cyatheaceae, the tree fern family—are listed as one genus by some authorities and vice-versa by others. According to the *American Horticultural Society's A-Z Encyclopedia of Garden Plants*, *Alsophila australis*, commonly known as rough tree fern, is a synonym for *Cyathea australis*. Plants labeled as *C. cooperi* are also considered synonymous with *C. australis*.

To further confuse matters, some plants in the *Cyathea* genus are sometimes also listed in the *Sphaeropteris* and *Nephelea* genera.

Tree fern is the name commonly used to refer to members of Cyatheaceae that have an erect, stout rhizome that forms a trunk, or caudex, with a crown of leaves at its apex. While this growth is also developed in plant families such as Blechnaceae, it is only in Cyatheaceae that the plants reach significant size and ecological importance.

We are not aware of any books devoted solely to tree ferns, but the following general publications might prove helpful:

*Ferns to Know and Grow* by F. Gordon Foster. Timber Press, Portland, Oregon, 1993.

*Ferns for American Gardens* by John T. Mickel. Macmillan Publishing Company, New York, 1996.

*Encyclopaedia of Ferns* by David L. Jones. Timber Press, Portland, Oregon, 1992.

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



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# Natural Connections

## Plants That Turn Up the Heat

article and photograph by Kathryn Lund Johnson

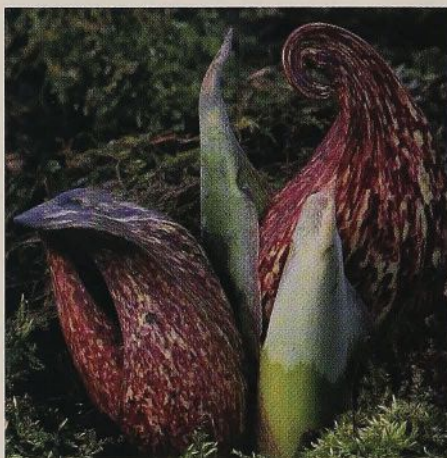
THE BOTANICAL WORLD holds a complex and diverse wealth of information waiting to be discovered. Many curious idiosyncratic “behaviors” of plants are not thoroughly understood. Though they may appear random or bizarre, these phenomena generally share a basic and primitive objective: survival in the extremely competitive environment of nature. To that end, plants have evolved elaborate and varied techniques to increase the likelihood of their perpetuation.

In 1972, Roger Seymour, an entomologist at the University of Adelaide, Australia, became intrigued by what he suspected was the ability of cut-leaf philodendron (*Philodendron selloum*), a member of the arum family (Araceae), to adjust its temperature in response to changes in environmental temperatures. While exposing cut-leaf philodendrons to widely fluctuating temperatures, he monitored the plants’ rates of oxygen consumption, an accurate indicator of heat generation. His research showed the plants maintained a temperature between 95 and 107 degrees Fahrenheit despite drastic swings in their environmental temperatures.

Two years later, Roger Knutson, a researcher at Luther College, in Decorah, Iowa, carried out similar research on skunk cabbage (*Symplocarpus foetidus*), another member of the arum family. He discovered that for a two-week period in February and March, skunk cabbage maintains a temperature of between 59 and 72 degrees, enough to melt any surrounding snow.

Building on Knutson’s findings and his own earlier work, Seymour and colleague Paul Schultze-Motel discovered that the flower of a third plant, sacred lotus (*Nelumbo nucifera*)—a member of the lotus family (Nelumbonaceae)—maintained a temperature of 89.6 degrees for two to four days during its summer flowering period.

While all plants are thermogenic, or capable of producing heat, these three plants were found to be thermoregulatory—producing heat for the very purpose of heat



Heat produced in the red-streaked spadix of skunk cabbage intensifies its putrid odor.

production, and not as a by-product of other metabolic activity. Researchers believe thermoregulation facilitates certain plants’ ability to reproduce, specifically by attracting pollinators at a critical time in the flowering cycle. Skunk cabbage dramatically demonstrates this hypothesis.

For about two weeks in February and March, fuel supplied by the skunk cabbage’s roots produces respiration in the spadix, or flower head. The spathe, which surrounds the spadix, acts as an insulator for the maintenance of a temperature range of 59 to 72 degrees. The insulation provided by the spathe also intensifies the fetid odor of the plant, an aroma that lures carrion beetles and other early pollinators to the flower. In their search for the source of what to us

smells like rotting meat, the insects wander around the spadix and, in the process, are dusted with pollen, which they then carry to another skunk cabbage plant.

Thermoregulatory plants such as skunk cabbage, cut-leaf philodendron, and sacred lotus have two critical factors in common. First, they produce large flowers with surface-to-volume ratios that allow for the heat retention necessary to increase the flower temperatures. Second, the female flower parts of individual plants mature—and must be pollinated—before the male parts produce pollen, an adaptation known as protogyny. Protogynous plants thus stack the odds in favor of cross-pollination, which increases the genetic variability within a population and enhances opportunities for adaptation to environmental changes.

Heat production, which draws the pollinators to the plants, occurs at the same time that the female parts are the most receptive to pollination. Heat enhances the range of odors—fetid to sweet—emitted by the plants and provides an appealing environment for select pollinators.

The adaptation of thermoregulation demonstrates once again the significance of the interconnection and interdependence that exists in the natural world. Each link in the chain of life is of equal importance in ensuring survival of the whole.

Kathryn Lund Johnson is a free-lance writer and photographer living in Gun Lake, Michigan.





# *Unassuming Native* Asarums

The subtle beauty of our hardy gingers is catching on among discerning shade gardeners, who value their intricately patterned foliage and bashful flowers.

**BY REKHA MORRIS**



*Asarum canadense* offers a wealth of charm on the forest floor.



# I FIRST NOTICED the clusters of triangular leaves with reddish edges while walking in the woods the winter we moved to the Piedmont of South Carolina 10 years ago.

The unfamiliar foliage formed a patch of greenery that lasted all winter, offering respite in an otherwise dry and withered landscape. In spring, new leaves emerged, further tweaking my curiosity about these plants. They turned out to be *Asarum arifolium*, also known as wild ginger, heartleaf, and little brown jugs. These popular names respectively refer to the aroma of ginger emitted by the bruised rhizomes, the cordate—heart-shaped—leaves, and the juglike shape of the inflorescence that hides beneath the foliage in spring.

My initial introduction to this native woodland dweller soon grew to more than a mild passion. I began to dig up isolated clumps on my property and group them along paths where they would be more readily admired. Since then my collection of native asarums has multiplied and spread, forming mottled green patches that provide year-round interest in our woodland garden.

Asarums are usually less than a foot tall, spreading slowly by rhizomes to produce a clump from one to two feet across. The glossy heart- or kidney-shaped leaves grow from rhizomes and, depending on the species, may be deciduous or evergreen; they are frequently mottled with silver or gray. Their noninvasive, low-growing habit and requirement for shade suits asarums well for use in a mixed woodland garden.

Hiding under the foliage or buried beneath the litter on the woodland floor, the solitary, petalless flowers frequently go unobserved. Less than an inch long, they consist of a calyx with three erect or flaring lobes. The calyx tube is cylindrical, ovoid, or flask-shaped.

Asarums are not related to the tropical plant that produces culinary ginger—*Zingiber officinale*. Instead, they belong to the birthwort, or Dutchman's-pipe, family (Aristolochiaceae), and comprise some 100 species native to the warm temperate zones of the north-

ern hemisphere, from North America to East Asia. While variations in flower and foliage forms of asarums have enchanted the Japanese for hundreds of years, they have been the source of continuous debate among taxonomists, resulting in numerous designations. At one time or another, asarums have been classified as *Hexastylis*, *Heterotropa*, *Asi-asarum*, *Japonasarum*, and *Geotaenium*. North American evergreen species are still often listed as *Hexastylis*.

Taxonomists examining both native and non-native species have encountered vast variations in the number and position of the styles and stamens. Japanese and Chinese taxonomists have divided asarum into several genera on the basis of these distinctions. In recent decades, however, there has been a growing international consensus to treat *Asarum* as a single genus comprising several subgenera, thus both acknowledging the immense complexity of this group of plants and maintaining an overall ease and simplicity in presenting information on the genus as a whole.

## MEDICINE AND MAGIC

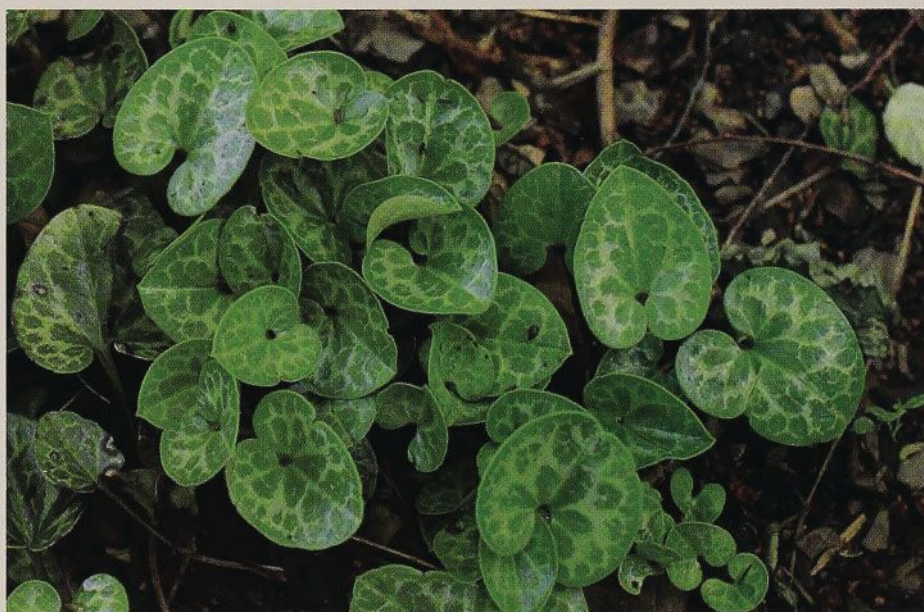
DESPITE THEIR UNPRETENTIOUS HABIT, asarums boast a formidable medical and magical history, encompassing several cultures and continents.

In *De Materia Medica*, Dioscorides, a Greek physician, ascribes European snake-root (*A. europaeum*) healing properties that extend from ailments of the mind and head to those of the eyes, ears, stomach, and back. It was also recommended as a treatment for respiratory problems and fever. Seventeenth-century herbalist Nicholas Culpeper suggested its use as a powerful emetic. The extensive medical and magical properties of Asian asarums are reflected in their widespread use by Korean shamans and Chinese medicine men.

Native Americans also found numerous applications for wild gingers, including their use as a stimulant; a wound dressing; a remedy for menstrual pain, heart pain, and indigestion; and a treatment for worms. Certain tribes brewed a tea from roots or leaves for contraception. Many used the ground rhizome to flavor food. American settlers included asarums in their arsenal of medicines for relieving stomach gas, stimulating the appetite, and reducing fever.

## SPECIES FROM COAST TO COAST

SO FAR 15 SPECIES of *Asarum* have been identified as native to North America, though more will likely be found as in-



*Asarum shuttleworthii* has variegated evergreen foliage and a neat spreading habit.



terest in growing them spreads. Ten species are native to the Southeast, one to the Northeast and Midwest, and four to the Northwest.

#### SOUTHEASTERN SPECIES

All 10 *Asarum* species indigenous to the Southeast are evergreen, and most are hardy from Zones 5 or 6 to 8. *A. contratum* and *A. rhombiformis*, native to the southeastern Blue Ridge Mountains and southwestern North Carolina respectively, are difficult to obtain commercially. *A. lewisii*, native to the coastal plain of South Carolina, has only recently become more available. The remaining seven species have been offered by specialty nurseries and at botanical garden plant sales for the last several years.

*A. arifolium*, now sub-divided into three varieties (*A. arifolium* var. *arifolium*, *A. arifolium* var. *callifolium*, and *A. arifolium* var. *ruthii*) has the widest distribution—from Louisiana to Virginia—and is commonly encountered in the Piedmont. Its large, arrow-shaped leaves vary from dark green with prominent pewter variegation to bright green with only the faintest suggestion of lighter tones. Around April, the calyx tubes appear dark green, aging to purple-black or dark brown, hence their common name, little brown jugs. These purple-black or brown jug-shaped calyces create a diminutive sculptural cluster beneath the large foliage.

Another southeastern species, *A. heterophyllum*, is native to coniferous and deciduous forests of the southern Appalachians. A few years ago, I participated with the South Carolina Native Plants Society in rescuing native plants from a large tract of land slated for clear cutting. Among the extraordinary wealth of woodland plants on the property were scattered colonies of *A. heterophyllum*. While I rescued as many genera as possible, I returned several times specifically to collect *A. heterophyllum*. Carrying as much as I could in a couple of buckets and several plastic grocery bags, I salvaged a total of some 40 plants. Although this rescue lasted into May and June—well past the optimum time for transplanting—the plants established easily. I watered and fretted over them through the hot dry days of July and August, watched over them with



growing relief and joy that winter, and have delighted in their presence in our woodland garden ever since.

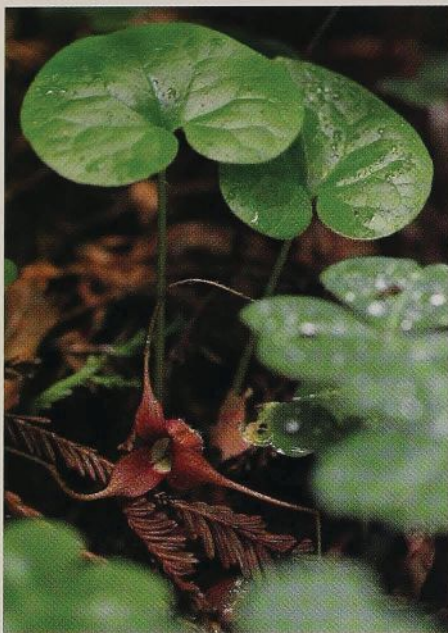
*A. heterophyllum* displays variability in both its calyces and foliage. The calyx tube may be open and flared, with three rounded triangular lobes, or not flared. The dark maroon interior is marked with concentric white rings. Albino-flowered forms of *A. heterophyllum*, although rare, have been recorded. The dark green heart-shaped foliage, sometimes with slightly undulating edges, is patterned by a silvery green network of arcs and loops

**The variegated foliage of *Asarum virginicum* can be so variable that it is easy to mistake individual plants for separate species.**

similar to the articulation seen in some forms of *Cyclamen coum*.

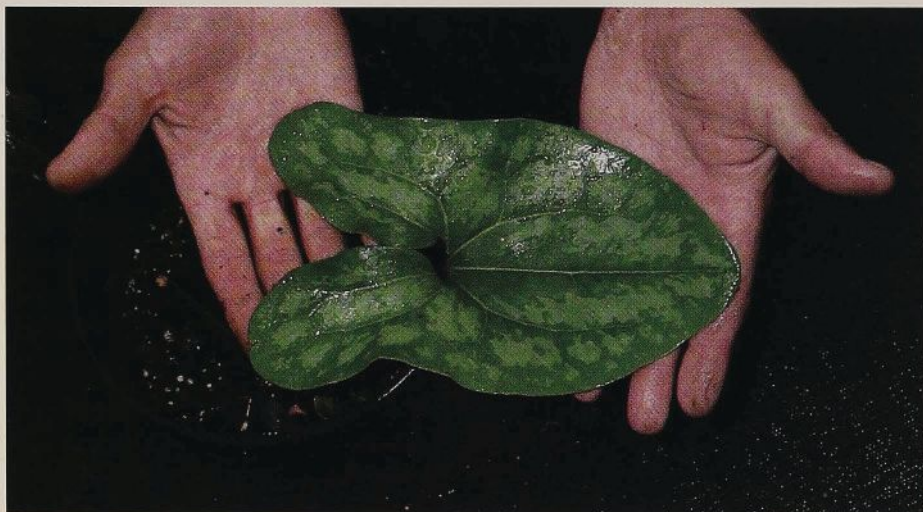
A similar light silvery-green foliage pattern is quite pronounced in *A. shuttleworthii*, now subdivided into two varieties, *A. shuttleworthii* var. *shuttleworthii* and *A. shuttleworthii* var. *harperi*. The latter is most readily available as the cultivar 'Call-away'. *A. shuttleworthii* var. *shuttleworthii*, which has larger and slightly more pointed





A native of the Northwest, *Asarum caudatum* produces unusual brownish-purple sepals that terminate in whiplike tails.

leaves, can form large colonies in its native habitat that stretches from the western Carolinas and eastern Tennessee to northern Georgia and Alabama. The flower of *A. shuttleworthii* has the largest outward-flaring calyx among our native species and a mottled maroon-and-white interior. The spreading habit and prominently variegated foliage of *A. shuttleworthii* var. *harperi* 'Callaway' make it well suited for a shady rock garden. It spreads slowly to form a compact mat about six inches high. Another cultivar, 'Eco Medallion'—developed by Don Jacobs of Eco-Gardens—is compact and has silvery patterning on its leaves.



The large, glossy, variegated leaves of *Asarum arifolium* range from light to dark green.

*A. naniflorum*, as its name suggests, has the tiniest flowers of the American asarums. It has a fairly restricted distribution in deciduous forests of the Piedmont in both the Carolinas. Its small glossy leaves are rounder than those of *A. shuttleworthii* var. *shuttleworthii* and are patterned with shades of pale moss green. Leaves of the selection 'Eco Decor' are delicately marked with silver.

*A. speciosum* has an even more restricted distribution than *A. naniflorum*; so far it has been found only in central Alabama. While the foliage of *A. naniflorum* has immediate appeal due to its dainty size and delicate variegation, *A. speciosum*'s bold gold and claret inflorescences can only be described as sensational.

The natural ranges of *A. minor* and *A. virginicum* are further north than the species listed above. *A. minor* is native to central North Carolina and Virginia and *A. virginicum* is found from North Carolina to Virginia and West Virginia. The foliage of *A. virginicum* is so variable that those unfamiliar with it might mistake individual plants for separate species. Some leaves are glossy green with lighter markings much like *A. shuttleworthii*, while others are vibrantly splashed with pewter and silver, accented by a crisply defined network of fine veins.

#### NORTHEAST / MIDWEST

The single species indigenous to the Northeast and Midwest, *A. canadense*, is frequently encountered in the nursery trade. Tolerant of a variety of soil types and

hardy from Zones 3 to 8, it grows rapidly in the shade and is an effective ground cover even though it is deciduous. Its pubescent, gray-green, kidney-shaped leaves are an obvious attraction, but obscured beneath the foliage are hidden treasures: gold and wine-red calyx tubes with sharply elongated lobes that resemble those of a tri-cornered hat. These appear in early spring, when asariphiles can be observed prostrating themselves before their clumps to fully savor the singular whimsical forms and colors of asarum inflorescence.

#### FROM THE WEST

Of the four species of asarum indigenous to the Northwest, *A. lemmonii* and *A. wagneri* are not generally available com-

## Sources

**Asiatica.** P.O. Box 270, Lewisberry, PA 17339. (717) 938-8677.  
[www.asiatica-pa.com](http://www.asiatica-pa.com). Catalog \$4.

**Eco-Gardens.** P.O. Box 1227, Decatur, GA 30031. (404) 294-6468.  
[www.ecogardens.com](http://www.ecogardens.com). Catalog \$2.

**Heronswood Nursery, Ltd.** 7530 N.E. 288th Street, Kingston, WA 98346-9502. (360) 297-4172.  
[www.heronswood.com](http://www.heronswood.com). Catalog \$5.

**The Primrose Path.** R.D. 2, Box 110, Scottdale, PA 15683.  
(724) 887-6756. [www.theprimrosepath.com](http://www.theprimrosepath.com). Catalog \$2.

**Plant Delights Nursery.** 9241 Sauls Road, Raleigh, NC 27603.  
(919) 772-4794.  
[www.plantdel.com](http://www.plantdel.com). Catalog 10 stamps or a box of chocolates.

**Shady Oaks Nursery.** 112 10th Avenue, S.E., Waseca, MN 56093.  
(507) 835-5033. Catalog \$4.

**Siskiyou Rare Plant Nursery.** 2825 Cummings Road, Medford, OR 97501. (541) 772-6846. Catalog \$3.



mercially. *A. caudatum* is easier to obtain; its native range is from the woodlands of British Columbia to California, and it is hardy from Zones 5 to 8. Its dark evergreen, or at least semi-evergreen, foliage displays more uniformity than many of the previously mentioned species. Solitary brownish-purple flowers with unusual backward projecting sepals appear in spring beneath the leaves.

The evergreen foliage of *A. hartwegii*, commonly known as Sierra wild ginger, is marked in varying patterns of silvery white and pewter gray. The leaves emit a citruslike fragrance when bruised. This native of Oregon and California bears brownish-red triangular flowers in May or June.

## GROWING CONCERNS

WHILE I HAVE HAD DIFFICULTY with the survival of asarums native to the western United States beyond a year or two—they do not tolerate the heat and humidity of our summers—natives of the eastern region naturalize readily. All require moist shade in order to thrive. While most will tolerate morning sun, planting them where they are subjected to continuous afternoon sun will assure their demise. Plant the rhizomes just beneath the surface of loose acidic soil in a moist, well-drained area to encourage the development of the long, snakelike roots. Mulching with partly rotted oak leaves conserves moisture in the summer and moderates the soil temperature in winter.

To better observe and appreciate the curious flowers, asarums can be grown in containers in mild climates. Pot the rhizomes in humus-rich soil and keep them evenly moist. Place the containers in dappled to dense shade where they will be protected from strong winds.

In my Zone 7 garden in the Piedmont, fresh new asarum foliage appears irregularly from March or April to May, growing larger and more sumptuous each passing day. The green and glossy leaves bring a refreshing luster to the shade garden that is especially valued on my ambles through the woods during the long, hot summer days.

*Rekha Morris is an art historian, gardener, and garden writer living in Pendleton, South Carolina.*

# HARDY GINGERS FROM ASIA

## Barry Yinger's Top 10 Asian Garden Asarums

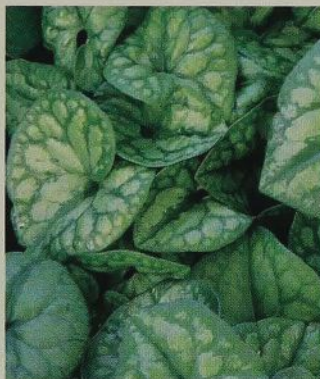
Asian asarums are quite adaptable in American gardens, craving the same moist, shady conditions as their American counterparts. Through his nursery, Asiatica, plant hunter Barry Yinger has helped introduce many Asian asarums to American gardeners. Here are his 10 favorites:

*A. asperum*: a clump-forming selection from Japan commonly grown in temple gardens in Kyoto, this species has three-inch, evergreen leaves and it produces "Dutchman's pipe" flowers in spring (USDA Zones 6–9, AHS Zones 9–6).

*A. kumageanum*: Native to Japan, this shiny evergreen selection forms a robust clump. Leaves vary from solid to strikingly patterned (Zones 7–9, 9–7).



*Asarum kumageanum*



*Asarum maculatum*



*Asarum maximum*

*A. maculatum*: this Korean species bears evergreen leaves marked with pewter and silver; spring flowers appear beneath the foliage (Zones 4–8, 8–1).

*A. maximum*: this clump-forming Chinese species is known as the panda in Japan because its two-inch-wide velvety black flowers sport a contrasting pure white eye. Its elongated evergreen leaves are faintly patterned (Zones 7–9, 9–6).

*A. megacalyx*: this species from northern Japan forms a beautiful ground cover in loose, humusy soil. Its dark evergreen leaves may be solid or patterned. Large, black, bell-shaped flowers appear in fall (Zones 5–8, 8–4).

*A. nipponicum*: this evergreen species from central Japan produces leathery green or gray-green leaves that may be marbled or streaked, and small brown winter flowers (Zones 5–9, 9–5).

*A. rigescens*: a clumping evergreen species from the mountains of southern Honshu, Japan, its leathery leaves are thick and glossy with deeply impressed veins (Zones 6–9, 9–6).

*A. sakwanum*: the green or gray-green leaves of this clump-forming species from Japan display variable patterns; it flowers in spring (Zones 7–9, 9–7).

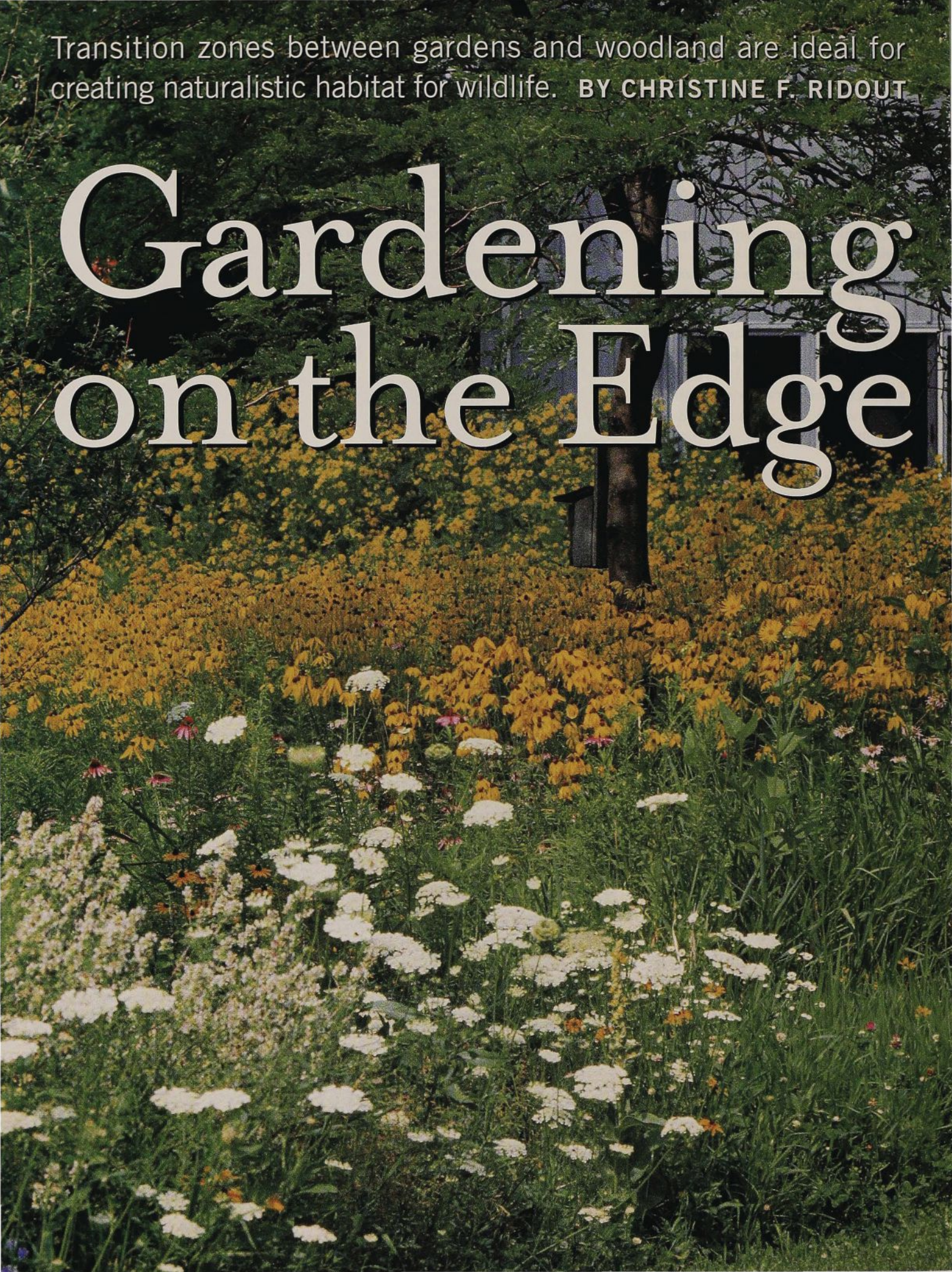
*A. splendens*: from China comes this evergreen species whose leaves display patterns in shades of green; the large flowers are dark purple with white throats (Zones 7–9, 9–7).

*A. takaoi*: an extremely variable Japanese species with small, glossy, oval leaves that may be all green or display a fascinating array of patterns. It is a vigorous grower with a semi-running habit; an excellent ground cover (Zones 5–9, 9–5).



Transition zones between gardens and woodland are ideal for creating naturalistic habitat for wildlife. BY CHRISTINE F. RIDOUT

# Gardening on the Edge







SAVON HOLT

**C**lose your eyes and envision it: a picturesque vista of green with nary a weed in sight. Tidy ornamental shrubs and trees are dotted strategically around the landscape, while herbaceous perennials and annuals bloom obediently in beds that have been edged with geometrical precision. Everything is manicured to perfection. It's your yard, your pride and joy. Sure you spend most weekends working on it and have missed quite a few family outings as a result. The sprinkler system cost an arm and a leg and you've spent a fortune at the garden center on fertilizers, weed killers, and insecticides. And water? Well, we won't talk about that. But, hey, a yard this beautiful doesn't come easily.

Now try to imagine what this environment might look like to a songbird, toad, or butterfly. To them it would appear as a barren green carpet almost devoid of insects and fruits. Despite the lush appearance of the plants, there's no place for a cool drink, no puddles or pools to bathe in. There's little shelter, no place to hide from predators or raise their young.

The example above is an exaggeration, of course. Gardens—and gardeners—don't often exist on either extreme of the continuum between formal and natural. By accident or design, most gardens include less formal areas that offer habitat for at least some wildlife. But as our suburbs extend farther and farther into the countryside, the need to preserve wild areas for songbirds and other wildlife becomes more and more important. One way for people and wildlife to coexist in a suburban landscape is to dedicate a specific area of the garden for naturalizing, sometimes called wildscaping.

## EDGE HABITATS

ONE OF THE BIGGEST MISCONCEPTIONS about naturalistic habitats or gardens is that you must abandon formal landscaping schemes and non-native plants in order to have them. In reality it's possible to have a blend of formal and naturalistic environments even within a small property. One effective way to incorporate a naturalistic area into a small garden is by using areas where two contrasting landscape environments meet. Ecologists call these places edge habitats. These include transition zones between lawns and woodland or between lawns and water features such as ponds or bog gardens. And of course edge habitats are wonderful components of larger gardens, where there's plenty of space to divide between natural areas, formal areas, and recreational areas.

"Edge habitats are enriched by the plant life of both ecosystems," says wildlife biologist Budd Titlow. "Typically they feature more animals than either of the abutting plant communities." Edge habitats enhance species diversity by providing shelter, nesting areas, and reliable food sources for wildlife. A series of edge habitats on contiguous properties can provide migratory corridors—or greenbelts—that wildlife

**Manicured lawn transitions to a wildflower meadow and then to woodland in this garden near Milwaukee, Wisconsin.**

need to survive in otherwise inhospitable urban and suburban areas.

In suburbia, edge habitats sometimes occur naturally



where new developments border on woodland. In more urban areas, edge habitats may have to be created unless your garden serendipitously adjoins a park or vacant wooded lot.

Compared with formal landscaping features, edge habitats are less demanding and costly over the long run, requiring little or no water, synthetic pesticides, or fertilizers once established. The variety of colors, heights, types of vegetation, and wildlife provides diversity not found in typical suburban homes landscaped in lawn and foundation plantings.

## CREATING AN EDGE HABITAT

FOR BEST RESULTS, edge habitats should be designed using mostly regionally native plants. These will be better adapted to your climate and soil, and, if chosen correctly, will also be the plants native wildlife have historically used for food and nesting materials. But there's no reason not to integrate a few well-adapted non-natives for seasonal color, visual interest, or simply because you enjoy them.

According to Vivian Wagner, supervisor of nature education for the Cincinnati Park System, wildlife has four basic needs: food, shelter, water, and a place to raise young. Carefully thought-out edge habitats provide these basics in an aesthetically pleasing arrangement. Wagner says that edge habitats typically move from short to tall: flowers and grasses where lawn merges to the edge, then small shrubs to medium sized trees and shrubs, and finally taller conifers and deciduous trees. The plants chosen for the habitat should vary depending on local climate, cultural conditions, and native wildlife.

Trees and shrubs offer food, shelter, and nesting areas for birds and other wildlife. In cold climates, dense evergreens shelter birds from severe winds and snow, and, in spring, create excellent nesting areas and offer camouflage. Smaller, berry-bearing trees and shrubs such as dogwoods, mountain ashes, and viburnums also supply food, as do larger, nut-bearing trees such as oaks, and hickories.

Closer to the lawn, the seed heads of herbaceous plants such as coneflowers, thistles, sunflowers, and black-eyed-Susans attract butterflies and songbirds. Nectar flowers such as columbines, trumpet creeper, coneflowers, and milkweeds lure hummingbirds and butterflies. Birds and small mammals also love low brambles and thickets for hiding, nesting, and feeding. Hawthorn, pyracantha, and raspberry are common thicket shrubs.

*This feature-length article is the debut of a regular department called "Habitat Gardening," that will appear in each subsequent issue of the magazine.*



**In this New England garden, a naturalistic meadow of native and non-native plants such as goldenrod (*Solidago* spp.), gayfeather (*Liatris* spp.), and Queen Anne's-lace (*Daucus carota*) culminates in a grove of birch trees.**

Water, a must for all living creatures, is often in short supply during winter freezes and summer droughts. Where there is no natural water, homeowners can supply shallow basins—no more than an inch deep—where birds and other animals can drink and bathe. Butterflies will sip water from saucers of damp sand in sunny locations. In winter, birdbaths can be warmed or the ice broken each morning and filled with fresh water.

## ASSESSING YOUR PROPERTY

THE FIRST STEP in establishing an edge habitat is to assess your property. Look for areas that could be converted to wildlife habitat and identify plants that already provide wildlife with shelter or food sources. Consider your family's needs for space. Do your children like to play in a large area of lawn? What activities are most important to you and your family? Where do people sit in your yard? Defining your needs helps determine the amount of space for wildlife that will be appropriate for you.

Next, assess the wildlife and their habitats in your area. Consult wildlife specialists or books describing the preferred habitats of different species. What would you most like to attract? Hummingbirds? Butterflies? Reptiles and amphibians?





**Edge habitat gardens don't have to look "wild." In this woodland garden in Richmond, Virginia, herbaceous perennials and bulbous plants blend seamlessly with azaleas, rhododendrons, dogwoods, and other shrubs and trees.**

Knowing what types of wildlife you want to attract will help you in plant selection. From your reading or discussions with local natural resource managers, compile a list of the plants that provide habitat and food for desirable wildlife.

Finally, make sure to discuss your plans with your neighbors. Invite them to join you in creating habitats for wildlife. Cooperation among neighbors can create adjoining edge habitats large enough to establish the migratory corridors for wildlife that are essential to maintaining species diversity in suburban landscapes.

But be sensitive to the fact that not everyone shares the same ideals of what is attractive or environmentally friendly. Some people may be alarmed by the thought of wildlife "invading" their yards. It's important to remember, however, that having a naturalistic area in your garden is *not* going to attract any animals that aren't already living in your immediate area. It's a myth that naturally landscaped gardens are a haven for vermin or attract unwanted larger mammals. If deer or coyotes are in the area, they are likely to pay you a visit whether you have a formally landscaped yard or a naturalistic garden—although if you have a naturalistic area, they *may* spend more time in your garden because there is cover and food for them.

If neighbors are strongly opposed to your plans, find ways to reassure them or to make compromises that will address their concerns—natural resource managers at local parks or botanical gardens may be able to provide helpful handouts. Check to see if your county or city has "weed" ordinances (see *The American Gardener*, May/June 1998) that might be invoked to prevent you from carrying out your plans.

Thanks in large part to the National Wildlife Federation's "Backyard Wildlife Habitat Program," landscaping for wildlife is becoming a widespread phenomenon. The program, founded in 1973, encourages people to landscape yards, schools, businesses, parks, and even apartment balconies so they are hospitable to wildlife. The Federation provides information on how to get started (see "Resources," page 34).

## TEXAS GREENBELT

LAST NOVEMBER, Cathy Nordstrom's yard in Austin, Texas, was certified as the 25,000th "Backyard Wildlife Habitat" garden in the United States. Nordstrom was honored at the Lady Bird Johnson Wildflower Center in Austin.

Nordstrom's home is situated on a cul de sac in a 13-year-old development with a large piece of common land open to all. When Nordstrom moved in, the yards were a sea of lawns, many of them fenced, cutting them off from the community's common space. Nordstrom says the area was "sterile" and "unsightly," and the community rarely used the common land.

To her relief, the neighbors got together, took down many of the fences, and now enjoy a contiguous greenbelt consisting of the common area and neighbors' yards that are open to everyone. They hope this open space will eventually become a migratory greenbelt for wildlife between the Balcones Canyonlands—thousands of acres set aside by the city of Austin in conjunction with the federal government—and another large conservation area in Austin.

Landscaping in Nordstrom's yard includes Texas mountain laurel (*Sophora secundiflora*), Yaupon holly (*Ilex vomitoria*), and possumhaw holly (*I. decidua*). Nordstrom also uses native grasses extensively to provide cover, nesting materials, and food. Her favorites are bamboo mulhy (*Muhlenbergia dumosa*), a grass that grows to five feet and blooms in spring; Gulf muhly (*M. capillaris*), three feet tall with deep pink blossoms in late fall; and seep muhly (*M. reverchonii*), a three- to four-foot grass with hundreds of deep green spires and spiky tan flowers.

Gravel paths and strategically placed benches and chairs allow visitors to view the plantings in Nordstrom's garden; it beckons both people and wildlife.





**Above:** This old apple orchard offers a perfect environment for wildlife. Surrounding woodland offers cover and shelter for animals, which can venture out into the meadow to feed. Mowed paths offer visitors access throughout the habitat. **Below:** Cathy Nordstrom transformed the traditional foundation plantings around her Austin, Texas, home, top, into a vibrant wildlife habitat, bottom, certified by the National Wildlife Federation as the 25,000th “Backyard Wildlife Habitat” garden in the United States.

## NET GAIN IN NEW ENGLAND

THE FAMILIAR “PING” OF TENNIS BALLS had faded years ago. The fence surrounding the court was torn down, the net gone, the court’s surface ripped up. All that was left was rubble along the edge of a piece of forested conservation land in Southborough, Massachusetts.

But homeowner and avid gardener Debby Titlow could imagine birds and butterflies feeding and sheltering in chokeberry, coneflower, and Joe-pye weed. She envisioned paths weaving through the garden and benches beckoning visitors to sit, watch, and listen. She even saw crevices and crannies where worms, insects, and snakes could hide, and dense thickets where birds could escape predators. Instead of tennis balls, she heard the percussion of red-bellied woodpeckers, the hoot of barred owls, and the call of mourning doves.



The result of her vision—on property owned by the Sudbury Valley Trustees—is the Turenne Bird Garden, developed on conservation land abutting Titlow’s yard. The garden is a transitional area, a classic multi-layered edge habitat of native New England plants that require little care and reflect the regional landscape. They also provide habitat for wildlife in all seasons. Seventy-five bird species and 20 mammals have been guests at the garden, including species that had not been seen in the area in a long time.

Recognizing water as a magnet for wildlife, Karin McQuillan established a small pond on a hillside meadow of her suburban Boston property. The pond is surrounded by meadow on three sides and forest on the fourth—a classic transitional habitat attractive to wildlife of meadow and forest alike. McQuillan ringed the pond with a blend of native and non-native plants selected for their attraction to wildlife, hardiness, and visual appeal. Her

PHOTOS ON THESE TWO PAGES BY BUDDO TITLOW, EXCEPT FOR BOTTOM TWO LEFT COURTESY OF CATHY NORDSTROM, ILLUSTRATION BY ALASTAIR BOLTON



# Plants attractive to wildlife

## NORTHEAST

**AMERICAN ELDERBERRY**  
(*Sambucus canadensis*)  
**BITTERSWEET**  
(*Celastris scandens*)  
**BOX HUCKLEBERRY**  
(*Gaylussacia brachycera*)  
**BUTTERFLY BUSH**  
(*Buddleia davidii*)  
**DOGWOOD** (*Cornus* spp.)  
**EASTERN HEMLOCK**  
(*Tsuga canadensis*)  
**MOUNTAIN ASH**  
(*Sorbus americana*)  
**NORTHERN BAYBERRY**  
(*Myrica pennsylvanica*)  
**PARTRIDGEBERRY**  
(*Mitchella repens*)  
**SERVICEBERRY**  
(*Amelanchier* spp.)  
**SUMAC** (*Rhus* spp.)  
**SWEET PEPPERBUSH**  
(*Clethra alnifolia*)  
**VIBURNUM**  
(*Viburnum* spp.)  
**WHITE OAK** (*Quercus alba*)  
**WHITE PINE**  
(*Pinus strobus*)  
**WINTERBERRY**  
(*Ilex verticillata*)

## SOUTHEAST

**BLANKETFLOWER**  
(*Gaillardia pulchella*)  
**BUTTERFLY BUSH**  
(*Buddleia davidii*)  
**BUTTERFLYWEED**  
(*Asclepias tuberosa*)  
**DOGWOOD** (*Cornus* spp.)  
**FIRE PINK** (*Silene virginica*)  
**HICKORY** (*Carya* spp.)  
**HOLLY** (*Ilex* spp.)  
**LIVE OAK**  
(*Quercus virginiana*)  
**PECAN** (*Carya illinoensis*)  
**PURPLE MUHLY GRASS**  
(*Muhlenbergia capillaris*)  
**SOUTHERN MAGNOLIA**  
(*Magnolia grandiflora*)  
**SOUTHERN RED CEDAR**  
(*Juniperus silicicola*)  
**SOUR GUM**  
(*Nyssa sylvatica*)  
**SUNFLOWER**  
(*Helianthus* spp.)  
**VIBURNUM** (*Viburnum* spp.)  
**VIRGINIA CREEPER**  
(*Parthenocissus quinquefolia*)  
**WAX MYRTLE**  
(*Myrica cerifera*)

## MIDWEST

**BUFFALO GRASS**  
(*Buchloe dactyloides*)  
**BURR OAK**  
(*Quercus macrocarpa*)  
**BUTTERFLYWEED**  
(*Asclepias tuberosa*)  
**CONEFLOWER** (*Echinacea* spp.)  
**CRABAPPLE** (*Malus* spp.)  
**HACKBERRY**  
(*Celtis occidentalis*)  
**HAWTHORNS**  
(*Crataegus* spp.)  
**HAZELNUT**  
(*Corylus americana*)  
**LITTLE BLUESTEM**  
(*Schizachyrium scoparium*)  
**PRAIRIE ROSE**  
(*Rosa arkansana*)  
**ROUGH-LEAVED DOGWOOD**  
(*Cornus drummondii*)  
**SERVICEBERRY**  
(*Amelanchier* spp.)  
**SUNFLOWER**  
(*Helianthus* spp.)  
**VIBURNUM**  
(*Viburnum* spp.)  
**WILD GRAPE** (*Vitis* spp.)

## WEST (MOUNTAINS AND DESERTS)

**ARIZONA MADRONE**  
(*Arbutus arizonica*)  
**BLUE ELDERBERRY**  
(*Sambucus caerulea*)  
**CANYON GRAPE**  
(*Vitis arizonica*)  
**COLORADO BLUE SPRUCE**  
(*Picea pungens*)  
**COLUMBINE**  
(*Aquilegia* spp.)  
**COYOTE WILLOW**  
(*Salix exigua*)  
**GAMBEL OAK**  
(*Quercus gambelii*)  
**MANZANITA**  
(*Arctostaphylos* spp.)  
**PONDEROSA PINE**  
(*Pinus ponderosa*)  
**PRICKLY PEAR**  
(*Opuntia* spp.)  
**RED VALERIAN**  
(*Centranthus ruber*)  
**SUNFLOWER**  
(*Helianthus* spp.)  
**VERBENA** (*Verbena* spp.)  
**QUAILBUSH**  
(*Atriplex lentiformis*)  
**WILD STRAWBERRY**  
(*Fragaria* spp.)

## PACIFIC NORTHWEST

**COAST LIVE OAK**  
(*Quercus agrifolia*)  
**DOUGLAS FIR**  
(*Pseudotsuga menziesii*)  
**ELDERBERRY**  
(*Sambucus* spp.)  
**HUCKLEBERRY**  
(*Vaccinium* spp.)  
**MOUNTAIN ASH**  
(*Sorbus americana*)  
**MOUNTAIN DOGWOOD**  
(*Cornus nuttallii*)  
**OREGON GRAPE HOLLY**  
(*Mahonia aquifolium*)  
**PACIFIC MADRONE**  
(*Arbutus menziesii*)  
**PACIFIC WAX MYRTLE**  
(*Myrica californica*)  
**SALAL**  
(*Gaultheria shallon*)  
**SUNFLOWER**  
(*Helianthus* spp.)  
**WESTERN REDBUD**  
(*Cercis occidentalis*)  
**WESTERN RED CEDAR**  
(*Thuja plicata*)  
**WILD GRAPE**  
(*Vitis californica*)  
**YARROW** (*Achillea* spp.)

## Edge habitat stages

BOX TURTLE



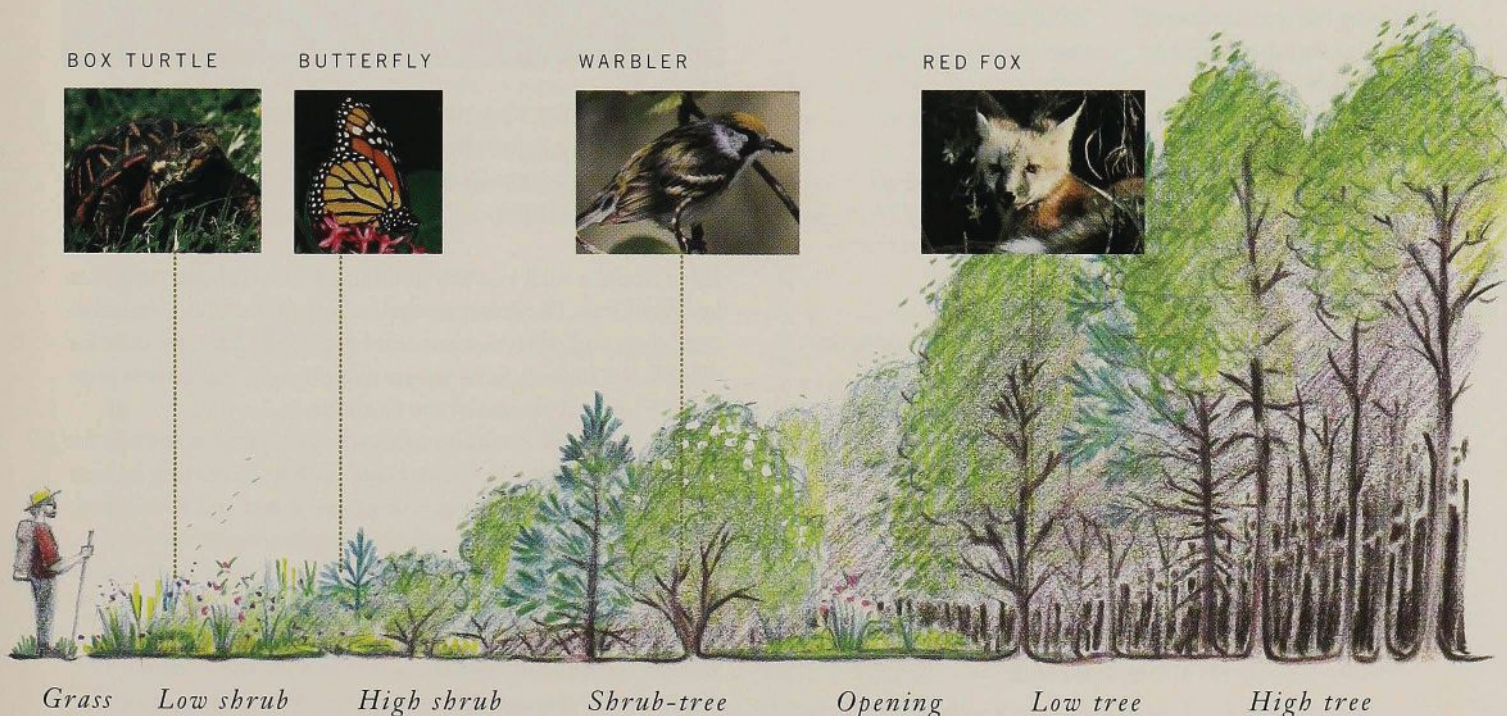
BUTTERFLY



WARBLER



RED FOX



Grass

Low shrub

High shrub

Shrub-tree

Opening

Low tree

High tree



## Resources

The National Wildlife Federation's "**Backyard Wildlife Habitat**" Program. To learn about the program, contact The National Wildlife Federation, Backyard Wildlife Habitat Program, 8925 Leesburg Pike, Vienna, VA 22184-0001; (703) 790-4434; [www.nwf.org/habitats](http://www.nwf.org/habitats).

**The Backyard Naturalist** by Craig Tufts, Washington, D.C. National Wildlife Federation, 1993. (Comes with "The Backyard Wildlife Habitat" packet.)

**Butterfly Gardens** by Brooklyn Botanic Garden, New York, 1995.

**For the Birds** by Anne Halpin, Henry Holt, New York, 1996.

**Gardening for Wildlife** by Craig Tufts and Peter Loewer, Rodale Press, Emmaus, Pennsylvania, 1995.

**Going Native: Biodiversity in Our Own Backyards** by Janet Marinelli, ed., Brooklyn Botanic Garden, New York, 1994.

**Living With Wildlife** by California Center for Wildlife Staff, Sierra Club Books, San Francisco, California, 1994.

**Landscaping With Nature** by Jeff Cox, Rodale Press, Emmaus, Pennsylvania, 1991.

**The Natural Habitat Garden** by Ken Druse, Clarkson Potter, New York, 1994.

**Noah's Garden** by Sara Stein, Houghton Mifflin, New York, 1993.

**Stalking the Wild Amaranth: Gardening in the Age of Extinction** by Janet Marinelli, Henry Holt and Company, New York, 1998.

**Wildlife in the Garden** by Gene Logsdon, Indiana University Press, Bloomington, Indiana, 1999.

**The Wildlife Sanctuary Garden** by Carol Buchanan, Ten Speed Press, Berkeley, California, 1999.

## Sources

**Benner's Gardens, Inc.**, 6974 Upper York Road, New Hope, PA 18938. (800) 753-4660. [www.bennersgardens.com](http://www.bennersgardens.com). (Mesh deer fencing)

**Gardener's Supply Company**, 128 Intervale Road, Burlington, VT 05401. (800) 863-1700. [www.gardenerssupplycompany.com](http://www.gardenerssupplycompany.com). (Deer repellents)

**Gardens Alive!** 5100 Schenley Place, 776 Rudolph Way, Lawrenceburg, IN 47025. (812) 537-8650. email: [gardener@gardensalive.com](mailto:gardener@gardensalive.com). (Deer repellents)

**Peaceful Valley Farm Supply**, P.O. Box 2209, Grass Valley, CA 95945. (530) 272-4679. [www.groworganic.com/](http://www.groworganic.com/) (Deer repellents, deer fencing)

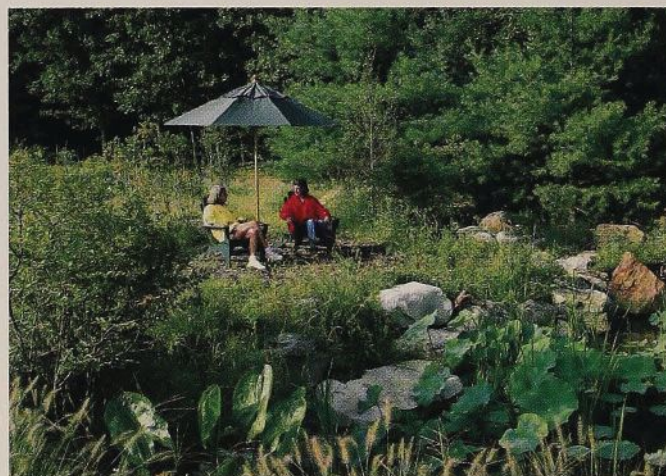
choices included winterberry, red-twig dogwood, black-eyed Susans, and St. John's wort.

In the pond itself, native bulrushes, cattails, pickerel weed, water lilies, and lotuses thrive. McQuillan constructed an island of stones and plants for turtles and other creatures to bask on, and graduated the depth of the pond so that water is easily accessible to birds in the shallows. Since the pond was established, dragonflies, frogs, turtles, great blue herons, raccoons, skunks, opossums, and ground hogs have sought it out. A variety of songbirds, including an indigo bunting, bluebirds, and flickers, visit. And, the most wondrous of all visitors has been seen: an American bald eagle.

As did Nordstrom, McQuillan created areas for people to sit quietly and enjoy the wildlife and landscape; she also keeps paths mowed through meadow areas so that they are accessible to walkers.

## ANYONE CAN DO IT

THE SUCCESS OF THE NATIONAL WILDLIFE FEDERATION'S Backyard Wildlife Habitat Program has shown that gardens designed to attract wildlife can be created in any size yard in any region of the country. Edge habitat gardens reduce our reliance on valu-



Karin McQuillan and the author relax near the pond McQuillan created on her suburban Boston property. Surrounded by meadow on three sides and woodland on the fourth, the pond is a haven for a variety of wildlife.

able resources such as water and our use of synthetic pesticides and fertilizers. They increase the diversity of the plants found in our urban and suburban areas and provide habitat not only for wildlife but for beneficial insects that can help reduce pest populations in formal areas of our gardens.

"Our children are the best reasons for improving the way we manage our landscape," says Budd Titlow. "Creating habitat edges provides wildlife with their basic needs and with greenbelts for moving through urban and suburban environments. Then we can rest assured that future generations will experience the thrill of life on the edge."

*Christine Ridout is a free-lance writer and director of Boston West Center for Writing and Photography in Whelan, Massachusetts.*



# MAINTAINING CONTROL

## How to handle unwanted wildlife and invasive plants

Landscaping to attract wildlife requires “a fundamental change in owner attitude,” says wildlife biologist Budd Titlow. The wildlife we invite to share our space may not always “behave.” They may eat favorite plants, crush vegetation, leave droppings, and make nests in inconvenient places. “These are living, wild creatures with their own priorities and agendas—not animated lawn ornaments,” emphasizes Vivian Wagner, supervisor of Nature Education for the Cincinnati Park System. “They may prevent you from having the picture-perfect yard of modern suburbia, but if you can tolerate occasional inconveniences, the yard of your dreams can be filled with the sights and sounds of birds, butterflies, mammals, and other living creatures.”



Coyotes are infiltrating suburban gardens from the Rocky Mountains to New England.

Most gardeners enjoy seeing wildlife in the garden, but there's a big difference between watching songbirds cracking dogwood berries on the tree outside the kitchen window and having deer eat all the foliage off the brand new \$100 *Magnolia macrophylla*. What do you do when you attract wildlife you *don't* want?

Deer repellents and black mesh netting may help deter the occasional visitor or keep them away from prized ornamentals or vegetables, but if deer are endemic in your neighborhood—and you don't want them in your garden—you are faced with the possibility of having to consider fencing to keep them out (see resources, page 34).

Possums, raccoons, and foxes are similarly difficult to deter or remove without resorting to radical

measures. Unless these animals really become troublesome—a regional rabies outbreak is one instance where action might have to be taken—it seems better to live and let live. Keeping a tight lid on your garbage and compost bins will deter rodents and scavengers that make a living feeding on trash.

Domestic animals may help deter some unwanted critters, but they can also scare away the wildlife you want to attract. Given the opportunity, dogs and cats may follow their natural inclinations and provide you with some of the grisly scenes normally reserved for nature specials on television. If you have an outdoor cat, place a bell on its collar to reduce the number of little feathery and furry love offerings left on your doorstep.

**TICKS** While not usually a problem in urban or suburban areas, ticks must be taken into consideration if you create a naturalistic habitat on a rural property. Tall grass, brush, and low-growing shrubs are ideal tick habitat. Keep a fairly wide swathe of lawn or low-cut meadow as a buffer zone between your living area and the naturalistic section of the garden. You may also want to maintain some mowed paths through the naturalistic area if you enjoy walking through it from time to time. Use tick repellents and take other appropriate precautions when you do venture into the uncultivated zones.

**WEEDS** Edge habitats can also become the perfect breeding ground for invasive non-native species that will eventually outcompete native vegetation in your naturalistic area and may even become a problem in the rest of your garden. Make sure you can identify all the plants growing in your edge habitat and keep your eye out for “mystery” plants. If you see something you don't recognize, try to identify it using a taxonomic key or plant guide. If you are unable to identify the plant, take a sample—including stem, leaves, and flowers, if possible—to a local botanical garden or cooperative Extension agent.

Being vigilant is the best defense against invasive weeds because many are difficult to eradicate once established. Bush honeysuckles (*Lonicera* spp.), often spread by birds, can be removed quite easily when they are small, but are time-consuming to dig up after a couple of seasons of growth. Ivy (*Hedera* spp.) is also much easier to remove before it has a chance to put down extensive roots. Patrol your natural area with a grubbing hoe once or twice a year and remove unwanted plants. Tough customers such as wisteria will require repeated manual removal or use of an herbicide. A low impact way to use herbicides is to prune the weed just above ground level, then paint the freshly cut stem with a glyphosate herbicide.

—CHRISTINE F. RIDOUT



# A PLANT SH

For the design-impaired, here's how to combine spikes, blobs, pools, and mists effectively in the garden. **BY RAND B. LEE**

## I am not very good at designing a garden in my head.

I have to get in there and dig up this thing and switch it with that, put in some more of these and rip out half of those, then stand back and observe the results. This kind of experimentation may be fine if you are dealing with petunias and marigolds, but if one of the plants you are juggling is a *Rosa alba* 'Semiplena' as big as a Volkswagen, it all gets a bit tiring, not to mention expensive and hard on the plants.

Plant shapes give me particular trouble. I am always putting things next to each other, then deciding they look awful together. A few years ago I joined my friend, garden writer Nancy McDonald—who does not share my visualization handicap—in coming up with a system of horticultural geometry that reduces all possible plant shapes to four basic groups—spikes, blobs, pools, and mists—and suggests ways of combining the shapes for maximum visual pleasure. A few plants that didn't readily fit into any of the shape categories we grouped under the headings “messes,” “surprises,” and “dandelions”—these special cases are discussed together after the descriptions of plant shapes.

While these plant shapes can be assigned to plants from annuals to large shrubs and trees, this article focuses principally on annuals, biennials, herbaceous perennials, and small shrubs most likely to be found in mixed borders.

**SPIKES** Spike plants stand more or less upright, although a few less rigid characters may have to be staked. In general they are at least three times taller than they are wide, with the bulk of branches, flowers, and foliage clustered either at their bases or at their tops. If they do branch, they do so in a uniform or slightly tapered column running most of the way up the central stem. They draw the eye upward, enhancing the third dimension of a garden and creating

**Blending plants with different shapes and textures creates a harmonious look in this border garden in Mattituck, New York, designed by Environmentals, Conni Cross Landscape Design.**

*Perovskia  
atriplicifolia*

*Coreopsis  
'Moonbeam'*



JERRY PAVIA



# APE PRIMER

*Cimicifuga*  
*racemosa*

*Hemerocallis* sp.

*Coreopsis*  
'Moonbeam'

*Perovskia*  
*atriplicifolia*

*Hydrangea macrophylla*  
'Blue Wave'







## S P I K E S

**Above left:** Spiky plants such as black cohosh (*Cimicifuga racemosa*) create vertical interest above a homogenous wall of white panicled phlox. **Above right:** In this airy border, spiky snapdragons (*Antirrhinum majus* 'Pink Rocket') are paired with contrasting horizontal drifts of curry plant (*Helichrysum italicum*) and white and pink yarrows.

a framework through their linearity. Grouped together they also add a sense of formality and order to a garden.

Some genera—alliums, delphiniums, foxgloves (*Digitalis* spp.), and liatris come to mind immediately—are particularly prone to spikiness. *Allium* 'Purple Sensation', for instance, has big straplike basal leaves, stout three-to four-foot stalks, and globular clusters of purplish blossoms that flower in May. Another good spiky allium is *A. azureum*, which stands 18 to 30 inches tall and bears exquisite true blue spheres in June atop its thin tough stalks.

Snapdragons (*Antirrhinum majus*)—which, like so many of our garden “annuals,” are actually quick-blooming perennials in USDA Zones 8 to 11—are classic spike plants. Stay away from the yappy little superdwarfs, though; for decent spikiness you want the three-foot-tall Rocket series, of which 'Rocket Red' is my favorite.

And speaking of red, you can't get much redder—or spikier—than the six-foot columns of standing cypress (*Ipomopsis rubra*), a biennial native to the Southwest. It is cold hardy in Zones 6-9, heat tolerant to a fault, and is a hummingbird magnet. And I look forward every year to the two-foot, pale yellow wands of my African straw foxglove (*Digitalis lutea*), which likes the alkaline soil in my Santa Fe garden and is cold hardy to Zone 3.

Spiky plants are generally sun-lovers, but a few thrive in part to full shade. The bugbanes or cohoshes (*Cimicifuga* spp.) fall into this category. Black cohosh (*C. racemosa*) is an excellent choice for moist, partly shaded sites. Native to eastern North America, this species also fares well in the Midwest and Pacific Northwest, but is not very heat tolerant. Autumn snakeroot (*C. simplex*) and its trendy cultivars such as 'Brunette' are

also spectacular spiky plants for a shaded border. All bugbanes may need staking if grown in heavy shade.

Of course there are also spiky shrubs and small trees. Within five years, *Thuja occidentalis* 'Emerald' makes a five- to six-foot-tall column of deeply textured dark green. And in a desert garden, spiky cacti such as *Pachycereus* species provide vertical contrast to lower growing cacti and succulents.



## B L O B S

**The mound-shaped form of *Spiraea* 'Goldflame' provides solidity to the surrounding airy purple catmint (*Nepeta* sp.) and pool of reddish-orange wallflowers (*Erysimum* sp.) below it in this Seattle, Washington, garden.**



**BLOBS** The best blob plants form dense, heavy-looking, fat-bottomed, rounded bushes or clumps. They lend a reassuring substance to the border that spike plants cannot and their curving lines counterbalance the formality of spike plants. One little-known annual blob plant is mounding peppergrass (*Lepidium medium*) native to the American Southwest. It grows a foot tall and twice as wide, covering itself with white blossoms from summer to early autumn. It makes a good heat- and drought-tolerant ground-covering replacement for sweet alyssum (*Lobularia maritima*), and will readily reseed in dry areas of Zones 3-9.

*Aster novi-belgii* 'Snow Cushion' is another great white-flowered blob plant, perennial in Zones 4-9. It may grow a foot tall by 18 inches wide, and is a mass of gold-centered white daisies in late summer and fall. Another good blob plant is *Coreopsis* 'Moonbeam'. Mounds of lacy green foliage are topped in summer by starlike yellow flowers on this tough perennial, which is hardy in Zone 3 to 8 and heat tolerant in Zone 9 to 2.

Now I am not a real fan of hydrangea—though I love the blue lacecaps—but you don't get much blobbier than the 'Annabelle' cultivar of *Hydrangea arborescens*, which is native to eastern North America. It makes a roundish bush three to five feet tall and wide, but the most blobby thing about it is its huge, nearly spherical white flower-heads that form in late spring to early summer, then grow and grow and grow until they are monsters nearly a foot across.

The most treasured blobs are those small shrubs and trees that don't have to be pruned constantly to keep their rounded, compact shapes. One plant is the diminutive cultivar of Norway spruce (*Picea abies* 'Little Gem'). A very slow-growing sport of bird's-nest spruce (*P. abies* 'Nidiformis'), this conifer makes a dense green cushion ultimately attaining the dizzying dimensions of one to three feet wide and a foot tall. It is cold hardy to Zone 3 or 4, but doesn't fare well in hot, humid climates.

Some of the new spiraea cultivars are also excellent blob plants for mixed borders. *Spiraea japonica* (sometimes listed as *S. xbumalda*) cultivars 'Goldmound'



## POOLS

In this courtyard garden in Delmar, California, a blend of pooling plants—dainty white flowers of sweet alyssum (*Lobularia maritima*) and silvery gray foliage of licorice plant (*Helichrysum petiolare*)—create splendid borders around paving stones.

and 'Limemound' offer golden and chartreuse spring foliage, respectively, on mounds two feet tall and three feet wide. Daphne spirea (*S. japonica* 'Alpina') produces such a dainty mound shape—eight inches to a foot high and two to three feet in diameter—that it is often used in rock gardens. These spireas are cold hardy to at least Zone 5, but the leaves may burn if they are exposed to full sun in warmer climates.

**POOLS** Pooling plants hug the ground, spreading liquidly and evenly in homogeneous blankets. They soften harsh geometries and serve as a horizontal canvas upon which more dramatic plants can be framed.

Annual sweet alyssum (*Lobularia maritima*) is a common horizontal pool plant, as is sky blue *Phlox subulata* 'Blue Hills' and many of the perennial thymes. I particularly like caraway thyme (*Thymus*



*herba-barona*), which only grows about four inches tall. It has dark, shiny green, edible leaves that are truly caraway-scented, pretty rose-purple flowers, and spreads rapidly. *Dianthus* 'La Bourboule'—usually misspelled 'La Bourbrille' in catalogs—grows three inches tall, forming scented sheets of pale pink to white, fringed, five-petaled blossoms in spring. The minute, spiky, gray-green foliage is attractive all season and is hardy on well-drained, sunny sites from Zones 5 to 8.

Another pooling plant, the four-inch-tall mat-forming stonecrop (*Sedum spurium* 'Fuldaglut'), has amazing reddish-orange leaves and rose-red flowers in late summer and autumn; it is hardy from Zones 3 to 8 and, like most stonecrops, is quite drought tolerant. *Solenopsis fluvialis* (also listed as *Laurentia fluvialis*), an Australian native in the bellflower family, creeps along at an inch tall, forming a mat of cream-edged green leaves that are eventually topped by its pale blue starlike flowers. This little known plant is cold hardy from Zones 5 to 9.

**MISTS** Mist plants froth the air, blurring lines and softening spaces in much the same way pooling plants do, but adding a third dimension of

height. Their leaves or flowers diffuse the light, allowing glimpses of the shapes of other plants set behind them. If a mist plant is small enough, it can act as a frame for plants with more rigid shapes; larger mist plants create airy space where the eye can rest in otherwise busy borders.

Baby's breath (*Gypsophila* spp.) is the archetypal mist plant, but do not overlook the misting effect of a colony of the tall, drought-tolerant annual cosmos. *Cosmos bipinnatus* 'Sensation Mix' is still among the best, creating a froth of big pink to white daisies floating all season long atop banks of fine-cut green leaves. The arching blue flax (*Linum perenne* 'Sapphire') and our native prairie flax (*Linum perenne* subsp. *lewisii*, formerly listed as *L. lewisii*) are also lovely mist plants. Drought-tolerant and hardy from Zones 5 to 9, the flaxes form swaying colonies of delicate, narrow-leaved stems, topped each morning with five-petaled, onionskin-thin, sky-blue blossoms.

A number of grasses make ideal mist plants, including some wonderful native southwestern species. Silver beardgrass (*Andropogon saccharoides*) is a drought-tolerant, three-foot-tall, warm season bunch grass whose bright green leaves

eventually turn orange. In late summer, its fluffy white seedheads shimmer in the sun. It is hardy to Zone 4. Bush muhly (*Muhlenbergia dumosa*) is a shrublike warm season grass, forming three-foot tall clumps topped with long, airy, blowing, pinkish-purple seed-heads. Threadgrass (*Stipa tenuissima*), another xeric perennial bunch grass adapted to cool weather, grows quickly to 30 inches tall, with flowing silvery seedheads and bright yellow-green foliage.

In moister climates, meadow rues (*Thalictrum* spp.) are wonderful mist plants for borders or the edge of woodlands. European and Asian natives such as tall meadow rue (*T. aquilegifolium*) and *T. rochebruneanum*, and their cultivars are among the best choices. Dense clusters of bluish, fernlike basal leaves are counterbalanced perfectly by the airy clouds of tiny blossoms—in all hues from white to purple, depending on variety—that emerge in slightly dangling terminal panicles in early to midsummer.

## SURPRISES, MESSSES, AND DANDELIONS

WHILE MANY PLANTS can easily be assigned to one of the four shapes described above, some are not as easy to categorize. Many plants start off as one shape and end up another. Coral bells (*Heuchera* spp.), for instance, are lovely little blob plants for much of the year, but in late spring to early summer they hoist airy wands of blossoms that transform them into mist plants. Hostas, too, start out as blobs before adorning themselves with spikes in summer.

My definition of a "surprise" is a plant with such striking size, color, shape, fragrance, or rarity that it brings a visitor up short. Size and color surprises are the most common in gardens since, unlike rare plant surprises, they do not depend on the horticultural sophistication of your visitors for their shock value. "Blue" roses fall into this category; so do 'Russian Mammoth' sunflowers. All topiaries are surprises—usually unwelcome ones from my perspective.

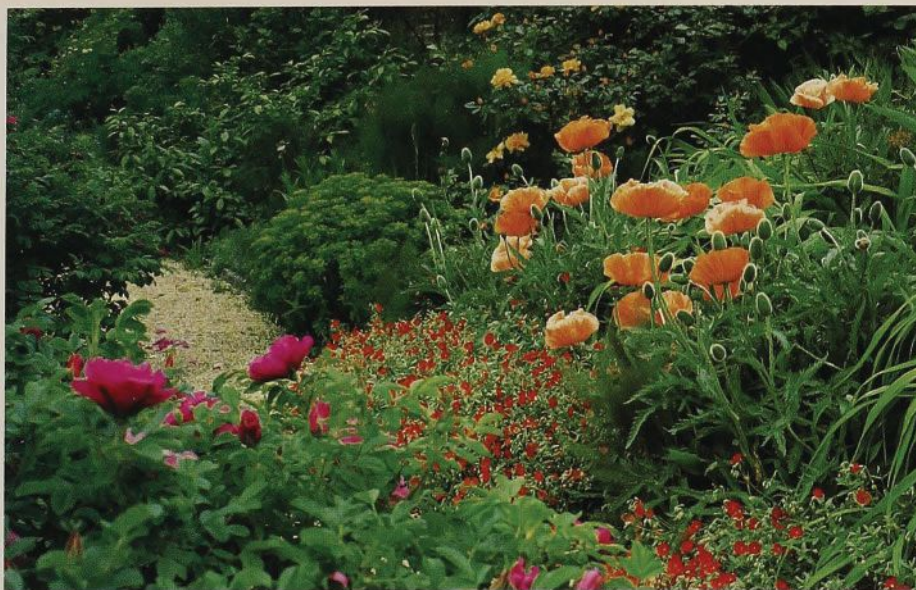
A "mess" is a plant that refuses to assume any one shape for long. It flops on things around it, sticks you in the eye whenever you walk by, stains the hood of your champagne-colored car with its



### MISTS

Fountains of Mexican feather grass (*Nasella tenuissima*, formerly *Stipa tenuissima*) add an airy, mistlike texture to a border, as seen in this planting with statuesque spikes of *Verbena bonariensis*, mounds of pink miniature roses, and the striking vase-shaped habit of New Zealand flax (*Phormium* sp.).





## M E S S E S

Some plants, while striking, are difficult to integrate into a garden design because they don't hold their shape through the entire growing season or tend to disappear entirely, leaving a gap in the planting. Good examples of such "mess" plants are Oriental poppies such as this *Papaver* 'Helen Elizabeth', which is making a brilliant show here with *Rosa rugosa*, foreground, and the rock rose (*Helianthemum*) 'Henfield Brilliant'.

dropped fruits, or leaves huge gaps in the border when it dies back. Herbaceous perennials such as oriental poppies, bleeding heart (*Dicentra spectabilis*), and nicotianas fall into this category, as do woody or semi-woody plants such as roses, lilacs, and buddleias.

I came up with the generic term "dandelion" to describe those little unobtrusive-looking plants that find their way into our yards whether we wish them to or not. There they settle in and charm us despite ourselves, so that we cannot bear to dig them all up, even though they violate our perfect garden plan. I picked dandelions to represent this group because I've become fond of these resilient vagrants, which have so far resisted the best efforts of the petrochemical industry to eradicate them. "Dandelions" tend to be unique to individual gardens and gardeners, but some common examples include clover, purslane, and violets.

Because they tend to overpower or draw attention away from the things around them, plants that are surprises, messes, and dandelions should be employed in the garden as sparingly as windsock geese. Therefore they are not included in the following discussion of

how to combine plant shapes pleasingly.

## COMBINING PLANT SHAPES

THE TWO BASIC PRINCIPLES of shape-combining are: Repetition, Not Compe-

Combining mist plants and spikes can create an ethereal look. Here Russian sage (*Perovskia atriplicifolia*) provides a backdrop for white-flowered *Gaura lindheimeri* 'Whirling Butterflies', pink spikes of knotweed (*Persicaria* sp.), and yellow black-eyed Susans (*Rudbeckia* sp.).



tition and Contrast Pleases, Monotony Freezes. These adages may on the face of it appear to contradict one another, but in fact both are necessary to the geometrically balanced garden.

## REPETITION, NOT COMPETITION

No matter how charming it may sound, a garden in which no two plants are shaped alike is usually a nightmare of visual overstimulation. The eye instinctively looks for similarities, and it tires easily when it can find few. As long as their shapes are harmonious, repeating plant shapes here and there around a garden, even if you are using plants of different sizes, textures, and bloom times, can make the difference between a garden that looks like a community and one that looks like a specimen collection.

## CONTRAST PLEASES, MONOTONY FREEZES

On the other hand, a garden in which all or most of the plants are shaped alike can be boring. What is wanted is a balance between repeated plant shapes and contrasting plant shapes, so that the eye can find both reassurance through sameness and refreshment through novelty.

The spike is the most useful plant



shape because it harmonizes with all the other three types, as long as the various plants' mature heights and widths are taken into consideration when intermingling them. So spiky Brussels sprouts, for example, would look good in the vegetable garden among blobby heading lettuces and flowering kale; white foxgloves are striking rising from a spreading pool of bronze, pink, and gold bugleweed

(*Ajuga reptans* 'Multicolor'); and a circle of the tall-necked white Darwin tulip 'Maureen' would look even more pristine with the surprise of a weeping purple beech in the center of them.

Blob plants harmonize beautifully with spike plants, as when one-and-a-half to two-foot silver mounds of *Artemisia ludoviciana* 'Valerie Finnis' are partnered with the tall spikes of the biennial mullein (*Verbascum bombyciferum*), or when the white-edged, blue-green mounds of *Hosta* 'Patriot' are backed by clumps of the three-foot-tall white foxglove (*Digitalis purpurea* 'Alba').

As long as they are not allowed to grow too diffuse in outline, blob plants also blend well with pool and mist plants: I love white bouquet tansy (*Tanacetum niveum*) lapped by a wide swathe of sweet alyssum (*Lobularia maritima*), or the squat dwarf fescue *Festuca glauca* 'Elijah's Blue' interplanted with airy blue flax. Pool plants are difficult to partner with mist plants, however, unless you cover a wall with a vertical pool—such as Boston ivy (*Parthenocissus tricuspidata*)—and plant your misters, like *Thalictrum aquilegifolium*, at its base.

If you have the room, the best way to use pooling plants effectively is to figure out which specimen plants you want to frame them with, then plant a pool twice as wide as your specimen plants will be tall at maturity. That means a spiky plant of *Veronica* 'Icicle', which grows around 20 inches tall in bloom, would look best encircled by a pool of creeping white fairy's thimble (*Campanula cochlearifolia* 'Alba') at least 40 inches in diameter.

Having read all this, you needn't feel a bit guilty if you decide to make your entire garden a happy jungle of mists and messes, or a blazing phantasmagoria of surprises. But in the midst of all that excitement, clear out a circle for a bench and surround the bench with a wide pool of all the same thing. You will find yourself drawn to that patch of restfulness over and over, as the lark is drawn to the vast blue sky.

*President of the North American Cottage Gardening Society, Rand B. Lee and his dog, Moon Pie, tend perfectly arranged spikes, blobs, pools, and mists in their Santa Fe, New Mexico garden.*

## More Choices

### Spike Plants

*Acanthus spinosus* (spiny bear's breeches), USDA Zones 6–9, AHS Zones 9–5.

*Aconitum* 'Bressingham Spire' (monkshood), 3–8, 8–3.

*Campanula thyrsoides* (yellow-spike bellflower), 5–8, 8–5.

*Eremurus xisabellinus* 'Shelford Hybrids' (foxtail lily), 6–9, 9–4.

*Iris pallida* 'Variegata', 5–9, 9–5.

*Veronicastrum virginicum* f. *album* (white culver's root, syn. *Veronica virginica*), 4–8, 8–3.

### Blob Plants

*Armeria maritima* 'Compacta' (compact sea pink), 3–9, 9–1.

*Campanula medium* 'Premium Pink' (dwarf Canterbury bells), 5–8, 8–5.

*Dianthus* 'Tiny Rubies', 5–8, 8–5.

*Mirabilis multiflora* (desert four o'clocks), 10–11, 12–1.

*Santolina* 'Saso Dwarf', 6–9, 9–6.

*Scutellaria resinosa* (prairie skullcap), 5–8, 8–5.

### Pooling Plants

*Geranium dalmaticum*, 5–7, 7–5.

*Origanum vulgare* 'Humile' (creeping oregano), 5–9, 9–5.

*Phlox stolonifera* 'Blue Ridge' (creeping phlox), 4–8, 8–1.

*Stachys byzantina* 'Silver Carpet' (lamb's ear), 4–8, 8–1.

*Thymus lanuginosus* (woolly thyme), 5–9, 9–4.

*Zauschneria californica* 'Mattole Select', 8–11, 12–8.

### Mist Plants

*Adiantum aleuticum* (Western maidenhair fern), 3–8, 8–1.

*Boltonia asteroides* 'Snow Bank', 4–8, 9–2.

*Crambe cordifolia* (giant kale), 6–9, 8–1.

*Fallugia paradoxa* (Apache plume), 6–8, 8–5.

*Limonium latifolium*, 4–11, 12–3.

## Sources

**Ambergate Gardens**, 8730 County Road 43, Chaska MN 55318-9358. (612) 443-2248. Catalog \$2.

**André Viette Farm & Nursery**, P.O. Box 1109, Fishersville VA 22939 (540) 943-2315. Catalog \$5.

**Canyon Creek Nursery**, 3527 Dry Creek Road, Oroville CA 95965. (530) 533-2166. Catalog \$2.

**Companion Plants**, 7247 North Coolville Ridge Road, Athens OH 45701 (740) 592-4643. Catalog \$3.

**High Country Gardens**, 2902 Rufina Street, Santa Fe NM 87505-2929. (800) 925-9387. [www.highcountrygardens.com](http://www.highcountrygardens.com). Catalog free.

**Milaeger's Gardens**, 4838 Douglas Avenue, Racine WI 53402-2498 (800) 669-9956; Catalog \$1.

**Plants of the Southwest**, Agua Fria, Rt. 6 Box 11-A, Santa Fe NM 87505. (800) 788-7333. Catalog \$3.50.

**Russell Graham Purveyor of Plants**, 4030 Eagle Crest Road N.W., Salem OR 97304. (503) 362-1135. Catalog \$2.





## A VISIT TO HOUSTON | PECKERWOOD GARDEN

This masterful Texas garden offers visitors a vision of how a garden can integrate plant conservation, artistic design, and a sense of place. **ARTICLE AND PHOTOGRAPHS BY ETHNE CLARKE**

**It is said that time never stands still in a garden.** But in many gardens the changes are so gradual as to be almost imperceptible. Not so with Peckerwood Garden in Hempstead, Texas, which has been a work in progress for nearly three decades under the creative direction of owner John Fairey.

Fairey's home and garden has gained international recognition over the years as a place of horticultural excellence. And just as public awareness of the garden has expanded, so has the place itself, with new planting areas appearing and original schemes constantly undergoing revision, the better to display the ever increasing collections of plants Fairey has brought in, mostly from Mexico and the American South and Southwest. Alterations have been executed in response to age and to force majeure: trees have matured to provide shaded canopies over previously sunny beds, and the tempestuous weather of the region—located some 60 miles west of Houston, Peckerwood is not far from the hurricane-prone Gulf Coast—has altered the garden layout and plantings. Peckerwood is never dull.

A soft-spoken native of South Carolina, Fairey moved to Texas some 30 years ago. He was drawn to the site he now calls home by the bright

**Peckerwood Garden** and **Yucca Do Nursery** are among the many tour stops available to those attending the American Horticultural Society's Annual Meeting in Houston March 16 to 18. For additional information about the meeting, turn to page 12, or visit the AHS Web site at [www.ahs.org](http://www.ahs.org).



stream running beneath the shady grove of oak, elm, and ash—an aspect that reminded him of the gardens at his childhood home. The abundance and variety of woodpeckers inspired the name he bestowed on the property.

Fairey trained as a painter, and his approach to garden-making is guided by his artistic background and interests. A visit during the mid-1980s to Ruth Bancroft's California garden also demonstrated to him the potential of plants as sculptural forms. Specifically, he was drawn

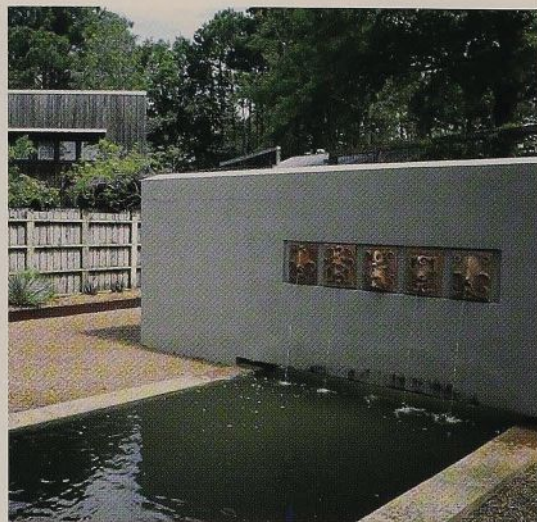
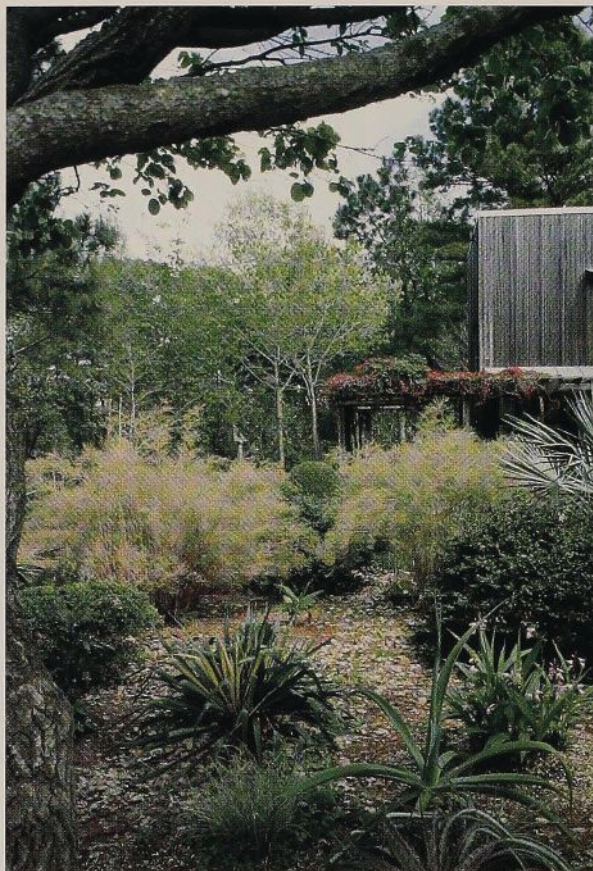
to succulents and cacti. He noted how the clearly defined shapes of these plants influenced their surroundings, creating volatile areas of positive and negative space.

The Bancroft visit also seeded the idea of a cooperative association with the Garden Conservancy, a national organization that helps preserve exceptional American gardens such as Bancroft's for posterity. Fairey is an educator by trade—he teaches design to first-year students in the architecture department at Texas A&M University—but personally he is committed to sharing his wealth of plant knowledge and design expertise with the public.

Naturally, he is also concerned about the future of his garden. With the assistance of the Garden Conservancy, Fairey established the Peckerwood Garden Foundation last year. Its multiple aims include preserving the garden for future generations, while continuing to expand its collections; establishing its reputation as an educational center; promoting ideals of conservation through native plant use; advancing the creative links between fine art and gardening; and extending the cultural links between North America and Mexico.

## ART IN THE GARDEN

AS FAIREY SEES IT, PECKERWOOD—and gardens like it—are much more than elaborate plant collections, they are works of art effectively displayed in their own galleries. And these galleries should showcase the work of other artists. Fairey's critically acclaimed collection of contemporary Mexican folk art, on permanent exhibit in the house at Peckerwood, is the cornerstone of the Garden Foundation's mission to foster and extend an awareness



**Left:** John Fairey's house at Peckerwood includes a cooling view of a dry garden planted with dasylires and nolina. **Above:** Among the works of art incorporated into Peckerwood's garden design is a mask fountain created by Texas artist Otis Huband. **Previous page:** Sculptural agaves, dasylires, and other succulents grace a second dry garden area.

of the rich diversity of Mexico's cultural community in North America. An open-air performance of traditional Mexican folk music by the Austin-based group Correo Aereo was held last year at Peckerwood. Also on display at Peckerwood are artworks by local Texas artists such as Lars Stanley, Otis Huband, and John Walker.

## PLANT COLLECTIONS

IT IS THE PLANT COLLECTIONS at Peckerwood, however, that receive the most attention. Nearly 19 acres are planted with over 3,000 individual plant species and cultivars, many discovered by Fairey in the course of more than 80 botanizing expeditions to the highlands of northern and south central Mexico.

On many of these expeditions, Fairey has been accompanied by Carl Schoenfeld, proprietor of Yucca Do Nursery, Inc., a retail mail-order nursery located on property adjoining Peckerwood. Established in 1987, Yucca Do was initially formed as a way to expand the availability of the plant treasures Fairey and Schoenfeld discovered in Mexico and the southwestern United States (see *American Horticulturist*, December 1993). Fairey and Schoenfeld's initial trips to Mexico were made with Lynn Lowrey, a highly respected Houston nurseryman who died in 1997. Lowrey's knowledge of plant communities and interest in regionally native plants had an important influence on Fairey.

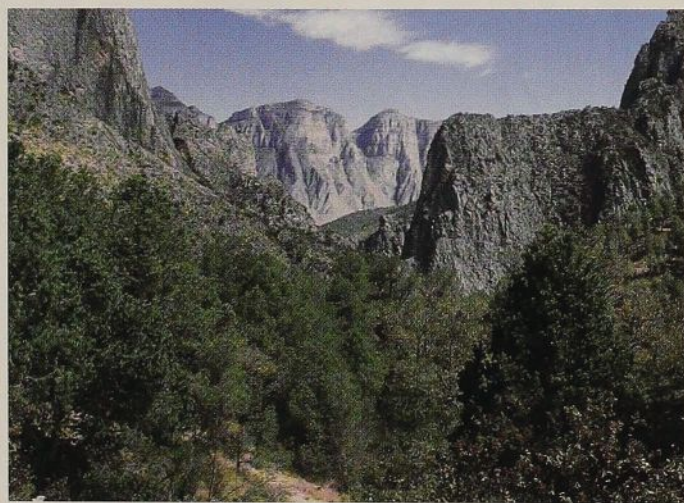
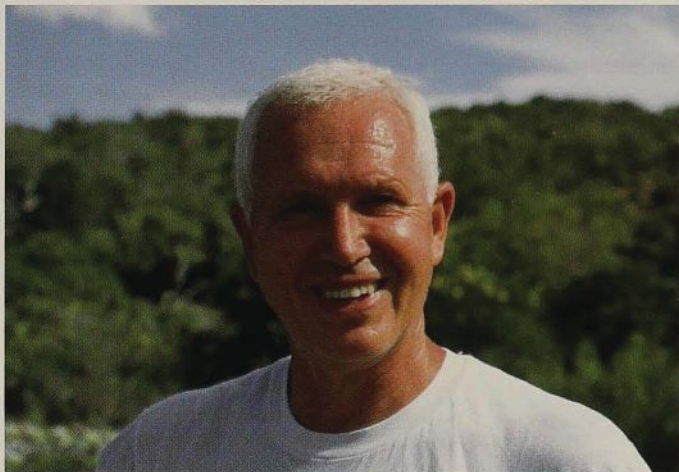
At Peckerwood, the plants are displayed not in family groups as they might be in a botanic garden, but in carefully planned beds and borders. Fairey regards Peckerwood as a place where visitors can see how to grow these plants successfully and learn



to appreciate the beauty of native plants in a landscape that is consistent with the South's difficult climate.

The Gulf Coast climate is one of extremes, with high heat and humidity in the summer, punctuated with sudden torrential downpours, and deathly deep freezes in winter—not to mention the occasional hailstorm. But the area does have its attractions for knowledgeable horticulturists such as Fairey and Schoenfeld. "We're on the edge of three geographic regions—the piney wood forest, the coastal plain, and post oak savanna," says Fairey. "This provides us with a wide variety of growing conditions, allowing us to test plants we have propagated from the wild or which we receive from growers in areas with similarly demanding conditions. These are the plants we refer to as 'counterparts,' and their discovery and introduction are central to the gardening efforts at Peckerwood."

Plants from Mexico and the American Southwest constitute the bulk of the plantings at Peckerwood. The majority of the Mexican flora is native to south central Mexico. Here, at elevations of 3,000 to 5,000 feet, growing conditions are similar to those found in the southern United States, with high humidity and daytime temperatures tempered by markedly cooler nights.



Peckerwood's creator John Fairey, top, has helped promote Mexican plants as a resource for American gardeners. Many of the plants he has introduced are native to the Sierra Madre, above, where growing conditions are similar to those in the American South and Southwest.

But conservation interests provide even more reason to focus on this region of Mexico. Its native flora, much of which is uncataloged or inadequately identified, is severely compromised, some of it even threatened with extinction. Fairey sees part of Peckerwood's role as a conservator of these threatened plants—through cultivation in the garden, propagation, and distribution to botanic gardens and research centers, as well as to the gardening public through Yucca Do Nursery.

## BOTANIZING IN MEXICO

LAST MARCH, I was lucky enough to accompany Fairey on a trip to Mexico, driving from Laredo to Saltillo, and then along precipitous mountain tracks to Monterrey. Paging through the expedition journal that accompanies Fairey on each trip, I noted that ours was numbered 79.5—the half identifying it as less than a full-blown botanizing trip. But only 30 minutes over the border, Fairey had already encouraged me to collect seed, assigning me a paper bag and labeling it appropriately.

My own journal of the trip moves from descriptions of the landscape to lists of the plants Fairey spotted as we drove along. Years of experience have given him an eagle's eye, and he can spot an unusual color or plant form at 50 mph on a rocky mountain road. Describing his first forays to Mexico, Fairey says, "Initially, we came looking for anything and everything among plants at 4,000 to 5,000 feet. Then we concentrated on salvias, but soon gave that up because few did any good with us in the heat and humidity of Peckerwood."

Rain lilies (*Zephyranthes* spp.) are another story, however. These variable bulbous perennials (profiled in the May/June 1999 issue of *The American Gardener*) may well be the one genus most readily identified with Peckerwood Garden. Fairey grows at least 52 different taxa, many of which he collected himself. The most notable is undoubtedly the selection 'Labuffarosa', named for the mountains in Tamaulipas in northeastern Mexico where he and Schoenfeld discovered it. "It has grasslike evergreen foliage and makes a perfect flowering groundcover for shade," says Fairey.

Another Peckerwood *Zephyranthes*, dubbed 'Queretero', has rich yellow blossoms that appear throughout summer. An equally notable rain lily is *Z. moctezuma*, which Fairey admires for its charming apricot flowers; it was originally found and named in the 1950s and then all but disappeared from U.S. gardens. On a 1996 expedition to Mexico, Fairey and Schoenfeld rediscovered a colony growing in the wild, but when they returned and looked for it on their next trip, it too had vanished. Thus, to their knowledge, the Peckerwood planting is the only one remaining.

The orchid tree (*Bauhinia* spp.), is another excellent plant for southern gardens. The two selections collected by Fairey and Schoenfeld are as yet unnamed and unreleased. One is a small spreading shrub that grows three to four feet tall, with cascading branches covered in lush, soft green foliage. Its flowers, large for the size of the shrub, are a rich peach color that fades to pink on the second day of opening. The other is a small tree, about 12 feet in height, with vibrant purple flowers set in deep glossy green foliage.



Spring-flowering styrax provides Peckerwood with some of its most memorable floral displays; the trees are graceful in habit and have delicate, pendant, white flowers. *Styrax plantafolia* var. *molis* and *S. palosa* both have fine large blooms and are Peckerwood introductions, as are *Clethra pringlei*, *C. pringlei* 'Whitewaters' and *Magnolia tamaulipia*. These trees are displayed in the woodland garden area nearest the house. Beneath their canopy grow countless bulbous plants, including *Lilium lancifolium*—the original bulbs came from Fairey's grandmother's garden in South Carolina—chocolate-leaved *Crinum procerum* var. *kaawaanum*, and red-tinted *C. procerum* var. *splendens*. There are also hardy achimenes collected from Mexico, and the delicate blue-flowered Mexican pine woods lily (*Alophia veracruzana*), given to Peckerwood by nurseman Thad Howard; like many Peckerwood plants, this rare woodland wildflower is propagated at Yucca Do from seed collected in the garden.

*Polianthes*, the deliciously fragrant tuberose, was a recent focus for a collecting trip. Species introduced to the garden from Mexico include *P. pringlei*, *P. platyphylla*, *P. geminiflora*, *P. 'Jalisco Giant Red'* and

*P. hawardii*; there are also many hybrid tuberose made by Luther Bundrant of San Antonio in the 1970s.

## THE GARDENS

THERE ARE TWO DRY GARDEN areas at Peckerwood. The largest is sited across the stream from the house. The other area is smaller and lies behind the house. From the air-conditioned comfort of his living room, Fairey can view the cool steely blues and soft dove grays of the succulents and cacti during the hottest days of summer. Fairey explains that the soft coloring and the gently undulating movement of the *dasylium* and *nolina* foliage have a visually cooling and soothing effect; given the hot Texas climate this is something to be exploited. *Dasylium* 'Blue Twister', named for the gyrating steel-blue leaves and *Nolina nelsonii* are among Fairey's favorites. He contrasts these with solidly shaped plants like *Agave macrocomis* 'Jaws',

named for its viciously large spines. It is just one of some three dozen agaves and one dozen yuccas offered by Yucca Do Nursery.

Visitors to Peckerwood often remark on the planting technique employed in the dry gardens, where each plant is positioned on a mound and heavily mulched with gravel. This "ant hill" technique—learned from Lynn Lowrey—provides excellent drainage in the heavy, moisture-retentive soil. The gravel mulch insulates the plant roots, protecting them from the extreme summer heat.

At the entrance to the stream-side dry garden there is a cobalt-blue wall and adjacent to the courtyard plantings there is a fountain. These features—which Fairey refers to as "garden events"—help unify the widely varied parts of the garden and provide landmarks for garden tours. This is significant because the garden has nearly tripled in size since Fairey first started.

Work in the garden continues with programs of expansion, such as a commemorative grove of Mexican oaks, and an herbaceous border for Texas plants that Fairey and Schoenfeld have created using species that will withstand a dry, sun-baked, exposed site. Here, among the heritage roses for which Texas is well known, are planted salvias such as 'Blue Chiquita' and 'San Carlos Festival', cupheas—including the crimson and purple "bat-faced" sort, and vivid canna lilies selected for their bright foliage and flowers. This garden also boasts native asters and eryngiums, including *E. venustum*, which Fairey recommends as "the best" for its hardiness, "all the way to Washington State." Despite his focus on regionally native species, Fairey's appreciation of a plant's finer qualities extends well beyond the borders of his own garden. 🌿



The pine wood garden reflects one of the three natural geographical regions surrounding Peckerwood. Fairey's cobalt-blue "garden event" is visible in the background.

## Sources

Not all the plants mentioned in the article are available in the retail trade, but the following mail-order nurseries carry some of the plants that have proven successful at Peckerwood and are likely to be adapted to gardens in USDA Zones 7 to 11 and AHS Zones 11 to 8:

**Plant Delights Nursery**, 9241 Sauls Road, Raleigh, NC 27603. (919) 772-4794. [www.plantdel.com](http://www.plantdel.com). Catalog 10 stamps or a box of chocolates.

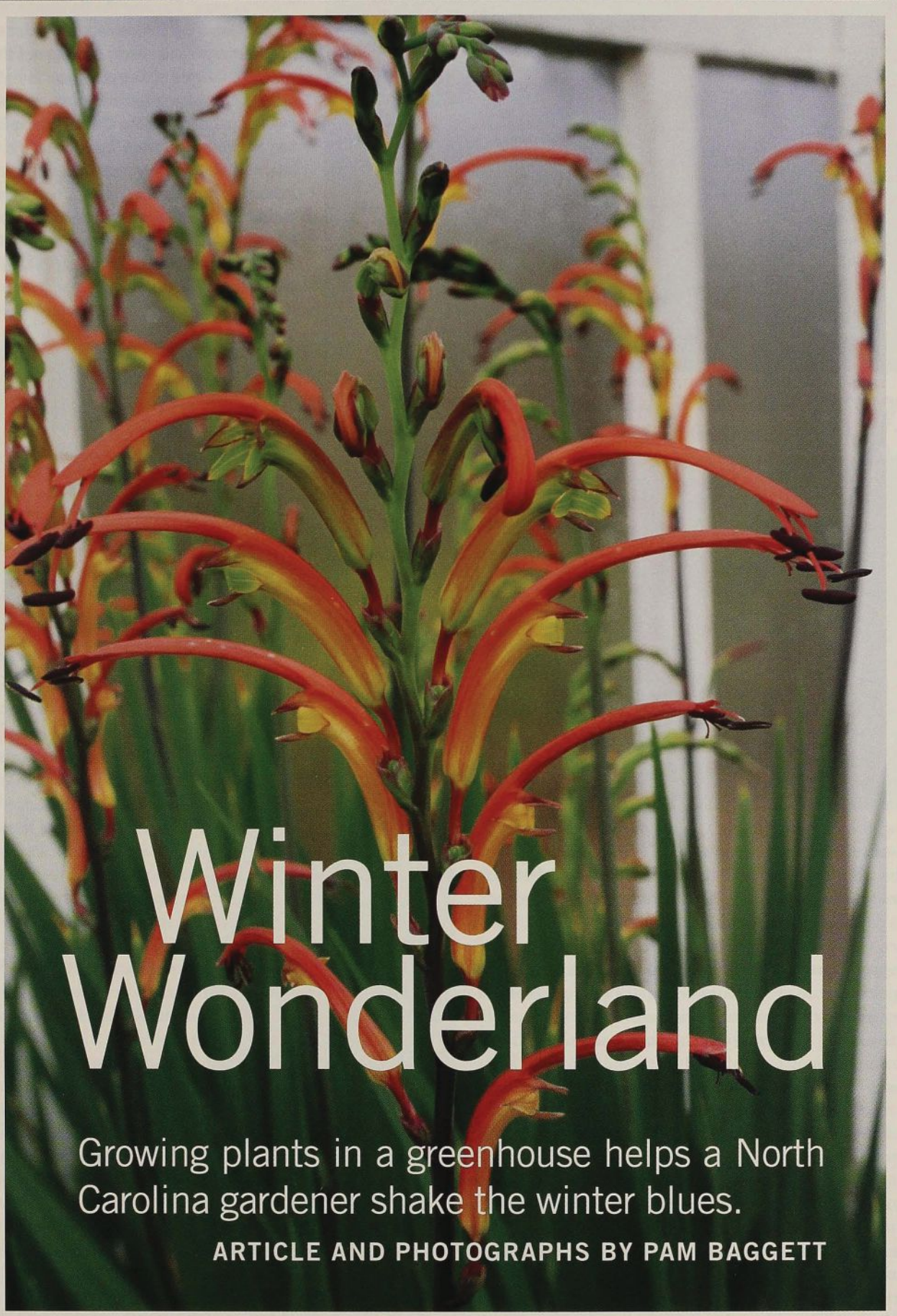
**Woodlanders, Inc.**, 1128 Colleton Avenue, Aiken, SC 29801. (803) 648-7522. Catalog \$2.

**Yucca Do Nursery**, Route 3, Box 104, Hempstead, TX 77445. (409) 826-4580. Catalog \$4.

Details for membership in the Peckerwood Garden Foundation, garden open days, and arranging group visits are available by writing, with a self-addressed stamped envelope enclosed, to Peckerwood Garden Foundation, Route 3, Box 103, Hempstead, TX 77445. (409) 774-9309; fax (409) 826-0522.

*A resident of Austin, Texas, Ethne Clarke is the author of many gardening books. Her most recent book is Autumn Gardens, published in 1999 by Soma Books, San Francisco.*





# Winter Wonderland

Growing plants in a greenhouse helps a North Carolina gardener shake the winter blues.

ARTICLE AND PHOTOGRAPHS BY PAM BAGGETT





Previous page: *Chasmanthe floribunda*, a South African flowering bulb, makes a spectacle of itself in the greenhouse in midwinter. Left: The spiky red flowers of *Salvia leucantha* and purple buttons of *Centratherum camporum* make colorful partners. Below: *Coleus* 'Violet Tricolor' and *Plectranthus fosteri* 'Marginatus' vie for attention. Below left: *Plectranthus madagascariensis* 'Marginatus', resembles *P. fosteri* 'Marginatus', above, but its foliage variegation has a more marbled appearance and it tends to have a more sprawling habit than the latter plant.

**W**INTER, BAH HUMBUG. While some gardeners become lyrical at the thought of leafless trees sketching their skeletal outlines against a crisp December sky and January's first crocus peeking up through an icy crust, I have to admit that I go through the winter months like Ebenezer Scrooge, scowling at every bleak gray day. I do understand the importance of dormancy in the life cycle of plants, and I actually think it's pretty when leaden clouds leave a delicate sheet of ice over everything in sight. For a day or two. Then I'm ready for warm bright days to sweep it all away, leaving me to revel in the smell of sun-warmed earth and the feel of sunlight striking my upturned face. So what's a gardener to do when it's 40 degrees and raining outside?

On days like that I head for the lean-to greenhouse that my partner, Chris, and I added to the side of our farmhouse a few years ago. Granted, it's not much warmer in here than out in the rain, but at least I'm not getting dripped on. Not much anyway, and while the world outside is the color of a hand-tinted, 80-year-old lithograph, the greenhouse is awash in hues subtle and brilliant.

Spires of vibrant red pineapple sage (*Salvia elegans*), catch my eye first, and I walk over to sniff a fruity leaf. I decide on a tour of fragrant plants and wander from bench to bench, rubbing patchouli leaves in my hair, petting the rosemary, and stuffing rose geranium leaves in my pants pockets—where I forget all about them until I forage later for car keys and come up “smelling like roses.” The sweet vanilla scent of heliotrope draws me closer to admire its yarrowlike clusters of royal purple blossoms. Though it's a shy bloomer during my hot southeastern summers, heliotrope comes into its own in the greenhouse during the cooler days of fall and early winter.



## PLANNING SUMMER IN WINTER

WITH A WIDE VARIETY OF PLANTS in close proximity, I begin noticing foliage contrasts. I carry a small pot of woolly-leaved *Artemisia* 'Powis Castle' over to hold against the glossy, elephantine foliage of *Colocasia* 'Black Magic' two benches away. The small, intricately cut, shining silver leaves of 'Powis Castle' draw into dramatic relief the 18-inch-long, coal-colored leaves of 'Black Magic'. Clearly these two should find a home together in the garden next spring, perhaps with the artemisia on a raised mound and the colocasia in a sunken spot to provide for their very different moisture requirements. Some of my best garden combinations are planned on gloomy days like these in the greenhouse, while the plants are still in their pots and I can experiment with arranging them.

The chartreuse foliage of low-growing ornamental sweet potato (*Ipomoea batatas* 'Margarita') bears a red-violet edging that needs a similarly colored counterpart to draw it into prominence. Last year in the greenhouse, I noticed the red-violet flowers of rose vervain (*Verbena canadensis*) were a perfect color echo and contrast for 'Margarita'. In spring I planted them together in the border.

During an especially frigid week last March, the warm pink and yellow blossoms of early Dutch honeysuckle (*Lonicera periclymenum* 'Belgica') opened soon after its arrival via mail order. The color of 'Belgica' harmonized perfectly with the exquisite butterfly-shaped blooms of *Rosa xodorata* 'Mutabilis' (some-



times listed as a cultivar of *R. chinensis*). The five petals of this rose evolve from creamy yellow to apricot and then to ever-deepening shades of pink as the flowers age. At the first suitable opportunity to move the plants outside, I trained the honeysuckle at the base of an eight-foot cedar post set behind the small but promising rose.

## A COLLECTION OF COLLECTIONS

I SWORE I WAS NOT going to be swept up in the current coleus (*Solenostemon* spp.) craze! But I received three coleuses as gifts, so I gave in to temptation and haven't looked back. The four dozen or so cultivars in my small but growing collection have flashy leaves of chartreuse, hot pink, fluorescent green, deepest purple-black, and all possible combinations thereof.

To top it all off, the leaves come with a beguiling variety of spots and speckles, ruffles and frills. Each time I visit the greenhouse I change my mind about which one is my favorite. Is it sultry 'Pineapple Prince', with metallic copper-and-olive leaves above, and deep wine-red beneath, all held on deep red stems? Or do I love tiny 'Tinkerbell' more, with its ruffled and crinkled, inch-long purple leaves edged in bright green?

I stop to admire 'Indo Five', a smoldering concoction with rounded leaves of deep rose-pink and purple deepening in the center to dark chocolate. Next to 'Indo Five' sits vibrant 'Violet Tricolor', with its central magenta flame ringed by dark burgundy and a scalloped edge of pale green. Just for fun I search for the laciest leaf of the bunch, or the most ostentatious one. When the plants threaten to outgrow their pots I cut miniature bouquets for the house.

In contrast to my initial reluctance to be swept up in coleus fervor, I had no qualms about embracing the genus *Plectranthus*. Like coleus, these tender perennials are tropical members of the mint family, but their foliage comes in a range of cool silvers, grays, whites, and greens. The search was on the moment I first saw striking, silvery *Plectranthus argentatus* sailing through a baking hot, dry summer without a hint of distress. In the greenhouse, its broad, silver-felted leaves collect water droplets that dangle like translucent jewels from the leaf edges. I've since discovered and added other awe-inspiring plectranthus to my collection.

My favorite plant in the entire greenhouse on many days is *P. madagascariensis* 'Marginatus' (also listed as 'Variegated Mintleaf'). This cultivar bears one-inch-wide, delicately scalloped and lightly scented leaves that emerge creamy yellow and gradually mature to a marbled mix of dark to lime-green edged in sparkling white. On a dreary winter day the clean, clear colors look the essence of spring. Newly rooted plants remain compact for several weeks, after which time they begin sending out

long purple-tinged stems that are perfect for trailing over the edges of terra-cotta containers.

*Plectranthus fosteri* 'Marginatus' is quite different in appearance and habit from the preceding plant, despite their frustratingly similar names. This plectranthus grows bolt upright, with felty, three-inch-wide, gray-green leaves edged broadly in white. It is similar in form to *P. fosteri* 'Green on Green', which bears chartreuse foliage centered with a pale green blotch.

All of the plectranthus I've tried are enthusiastic growers that are never troubled by pests, either in the greenhouse or in the garden. They bloom in the low light levels of winter and, although the flowers aren't very showy, in winter—when every blossom is precious—I do enjoy them.

## SOWING THE FUTURE

IF I TEMPORARILY SATE my thirst for flashy splashes of foliage color, I can always turn my attention to the flats of baby *Cyclamen coum* and *Cyclamen hederifolium* whiling away the winter



The spiky red blooms of *Salvia elegans*, above, offer a cheery contrast to the winter gray outside the greenhouse. Left: Paperwhite daffodil bulbs potted up in the greenhouse unfurl their blooms in an early salute to spring.



on heating mats. These little guys are as cute as mouse ears from the day they sprout in the fall. From each seedling a single leaf, sometimes variegated, sometimes green, expands to less than 1/2-inch-wide on its diminutive petiole. Ever so slowly they develop tiny tubers that in a year or two are large enough to set out in the garden, where they will grace the winter scene with their delicate-looking blossoms. I don't know if it was beginner's luck, but I found cyclamen surprisingly easy to germinate, given relatively fresh seed and a warm greenhouse.

Another bulb—technically a corm—I've grown from seed is *Chasmanthe floribunda*, a member of the iris family that is closely related to gladiolus. This clump-forming perennial still sticks to its South African time clock and insists on blooming beginning in late December or early January, which is midsummer in the southern hemisphere. Who could pos-





The orange-red blossoms of cigar flower (*Cuphea ignea*) have been known to lure hummingbirds into the author's greenhouse.

sibly have a gloomy day when the chasmanthe blooms? From gladioluslike swords of foliage rise 30-inch-tall spikes of narrow, tubular flowers. These long, inverted cornucopias display a gaudy combination of fiery orange and vivid lime green, with protruding stamens. Imagine a home decked for the holidays with chasmanthe instead of the standard poinsettias!

Another treasure in the greenhouse on dreary winter days is *Yucca filamentosa* "Golden Sword". I was mistaken in assuming yucca seeds would need a winter's stratification outdoors. Instead they sprouted within a few weeks of sowing in early autumn. Since I couldn't leave the seedlings outdoors to freeze to death, I squeezed the flat onto a bench in the greenhouse to ride out the winter. I plan to grow them on and look for interesting new patterns of variegation. 'Gold Sword' has variegated green-and-golden leaves, but I was unprepared for totally yellow babies. Surprise! Although I suspect they will outgrow it, I am holding onto a faint hope that one will prove healthy, vigorous, and solid gold.

## CRAZY FOR CUPHEAS

MY CUPHEA COLLECTION prospers in the contained warmth of the greenhouse, and their funny little flowers brighten many winter days for me. My favorite among these tender evergreen perennials and subshrubs—at least for the moment—is the one commonly known as cigar flower (*Cuphea ignea*, sometimes listed as *C. platycentra*). I've grown a gorgeous specimen in a terra-cotta pot for two years now, and at 14 inches wide and two feet tall it has attained

miniature shrub proportions. Its dainty green leaves have deep purple overtones, and it produces hundreds of tiny orange-red firecracker flowers tipped in purple and white. The fiery flowers sometimes lure a resident male ruby-throated hummingbird into the greenhouse on warmer days when I have the windows open. If I remain very still he will feed from the cuphea's tubular blossoms for several minutes before making a swift exit.

Although my local hummingbird seems satisfied with *C. ignea*, other members of this genus of plants native to Mexico and Central and South America compete for my attention in the greenhouse and in the garden. I like the standard purple-flowered Mexican heather (*C. hyssopifolia*)—sometimes called elfin herb—but I especially enjoy a little-known, white-flowered form of this species that has deep red stems. Try planting this hard-to-find selection in the garden next spring in combination with the bronze-to-burgundy foliage of *Euphorbia dulcis* 'Chameleon'—together they make a brilliant duo.

Another cuphea, *C. viscosissima*—which goes by common names such as blue waxweed, tarweed, and clammy cuphea—

produces gorgeous red-violet blooms that are shaped like the cute little faces of big-eared bats. It looks a bit messy indoors because the sticky stems—hence "tar-" and "clammy"—snag bits of sweater lint as I brush by, but I love it nonetheless. When the first flower of *C. llavea* 'Georgia Scarlet' opened in the greenhouse last year I laughed out loud. Imagine a tiny fluorescent purple face topped with electric orange-red lollipops!

By now you are either vowing to build your own greenhouse, or you live in the tropics where this sort of thing goes on all year. If you covet a greenhouse, don't worry that you don't have room or money for a worthwhile amount of greenhouse space. All of these treasures and perhaps 100 more fit into the 16-by-22-foot glass greenhouse attached to the side of our house. And as you will read in the attached article, Chris and I built it ourselves for a cost of less than \$600. On a gray winter day, that should get you dreaming.

*A resident of Cedar Grove, North Carolina, Pam Baggett is the owner of Singing Springs Nursery, a mail-order nursery specializing in new and unusual tender plants and hardy perennials, especially those with boldly colored foliage.*

## Sources

**Glasshouse Works**, P.O. Box 97, Church Street, Stewart, OH 45778-0097. (800) 837-2142. E-mail: plants@glasshouseworks.com. Catalog \$2.

**Heronswood Nursery, Ltd.**, 7530 N.E. 288th Street, Kingston, WA 98346-9502. (360) 297-4172. [www.heronswood.com](http://www.heronswood.com). Catalog \$5.

**Logees Greenhouses**, 141 North Street, Danielson, CT 06239-1939. (888) 330-8038. [www.logees.com](http://www.logees.com). Catalog \$3.

**Plant Delights Nursery**, 9241 Sauls Road, Raleigh, NC 27603. (919) 772-4794. [www.plantdel.com](http://www.plantdel.com). Catalog 10 stamps or a box of chocolates.

**Singing Springs Nursery**, 8802 Wilkerson Road, Cedar Grove, NC 27231-9324. (919) 732-9403. E-mail: nightair@mindspring.com. Catalog free.

**Yucca Do Nursery**, Route 3, Box 104, Hempstead, TX 77445. (409) 826-4580. E-mail: yuccado@nettxas.net. Catalog \$4.



# BUILDING A SIMPLE GREENHOUSE

Tips on how to construct a wintertime sanctuary for next to nothing

When you find yourself overwintering nearly 100 tender perennials in what was supposed to be a bathroom and starting 250 varieties of seed each spring under grow lights in the bedroom, you know it's time to build a greenhouse. My partner, Chris, and I knew we didn't want to spend thousands of dollars hiring someone else to do the job, so we tackled it ourselves. The results: a 16-by-22-foot lean-to style structure attached to the south side of our old wooden farmhouse (3). It was constructed largely from salvaged materials for a cost of around \$600. Because we live on a farm and are using the greenhouse for agricultural purposes, we didn't need a building permit, but be sure to check local regulations before building your own.

## RECYCLED MATERIALS

We had rescued several aged commercial greenhouses from demolition bulldozers a few years ago, so we had a good supply of 18-by-24-inch glass panes, redwood-and-glass side windows, and 12-foot-long redwood rafters. We spent several days scraping the windows and rafters free of their old caulk and paint, repainting the rafters, and scrubbing the glass panes to remove a heavy coat of whitewash.

The greenhouses we had dismantled had three-foot-high cement block walls as a foundation; we substituted pressure-treated plywood for the east and west "knee-walls" and used the old kitchen windows salvaged from a friend's remodeling job for the sunny south side. Three-by-eight-foot redwood-and-glass windows formed the next level; these are hinged so we can open them for much-needed ventilation on sunny days. Above these windows we used glass panes cut at an angle to accommodate the rising slope of the greenhouse roof.

The roof is made from redwood rafters and glass. We installed the panes shingle-style—from the bottom up to the top of the roof—so that rainwater doesn't catch at the overlap of every pane. If we hadn't had the ready-made redwood rafters, pressure-treated two-by-fours, with a groove cut along each side for in-setting the glass, would have served nearly as well. Every glass pane required a seal of caulk. A storm door installed on the west side of the greenhouse provides entrance as well as additional ventilation. The back wall of the house was protected with treated plywood (1), and every wood-

en component received at least two coats of bright white, oil-based paint.

## RODENT-PROOFING

We didn't want the tunneling rodents that steal our carrots and tulip bulbs in the garden to take up residence in the greenhouse, so we covered the floor and bottom six inches of the foundation walls in half-inch hardware cloth and stapled it tight to the walls (2). Then we hauled in pea gravel to form a six-inch layer over the entire floor. A mouse or two can still move in from an open door or window, but they can't come in droves from underground to feast on the seed flats.

## ADDING AMENITIES

We built benches of pressure-treated lumber and hardware cloth and Chris added a cross brace along the back wall that could hold additional shelving eight feet up in the air. That shelf space was put to use by January of the very first year, after several flats of hellebore seeds sprouted outdoors in a winter warm spell. Of

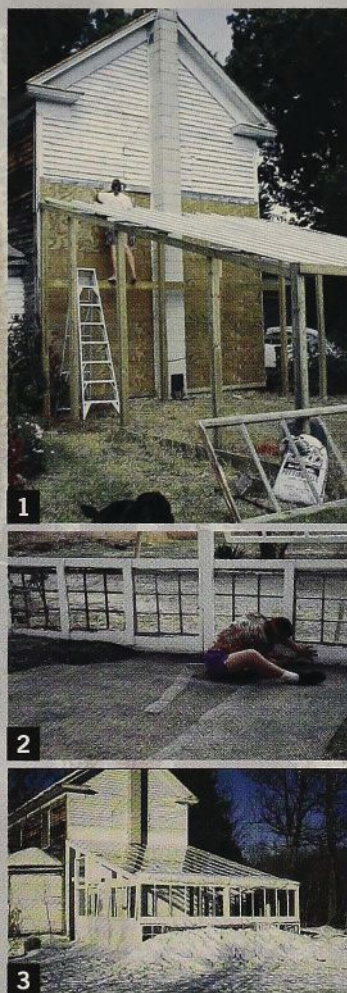
course I need a ladder to water and tend the plants at this height, but it has proven a great place to start off spring seedlings seeking extra heat for germination.

Being amateurs in the greenhouse-building business, we made a few silly mistakes, such as using spray-foam insulation to seal the gap between the back wall and top row of glass. It expanded, as it's supposed to, and created a dark brown blob along the top edge that no one can reach to paint.

But, all in all, we're very happy with the way our project turned out. If I'd realized how much fun winter could be with a greenhouse to garden in, I'd have built it 10 years earlier. A couple years ago I started up a mail-order nursery business, so I've added a 22-by-100-foot plastic tunnel house for overwintering even more tropical and subtropical treasures.

Now I'm thinking of turning the glasshouse into a winter garden, with in-ground beds for growing little Mediterranean bulbs that like a hot, dry summer's baking once they're dormant. With a few cozy chairs to sit in and soak up the sun's warmth, won't that be a grand place for a sun-starved gardener?

—PAM BAGGETT





# Book Reviews

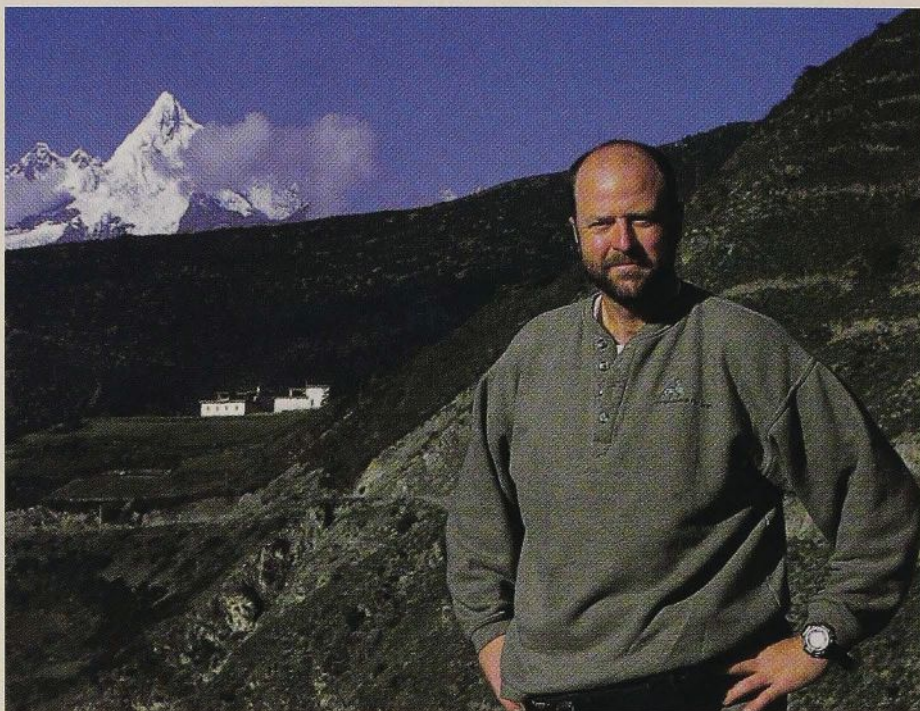
## The Explorer's Garden: Rare and Unusual Perennials

Daniel J. Hinkley. Timber Press, Portland, Oregon, 1999. 380 pages. 7<sup>3</sup>/<sub>4</sub>" × 10<sup>3</sup>/<sub>4</sub>". Publisher's price, hardcover: \$39.50. AHS price: \$28.

OH, THE PLACES you'll go and the plants you will meet! In this wonderful book on rare and unusual perennials Daniel Hinkley takes his readers on fascinating journeys of plant exploration and discovery. Beyond the finding of a plant—in the wild or as a cultivar—Hinkley shares what he has learned about the plants, how they grow in their native haunts, how they grow in cultivation, and what special qualities the plants possess to delight the eye and enrich the garden.

It is difficult to imagine a better qualified individual to write such a book. Hinkley grows a staggering 9,000 plants in his Kingston, Washington, garden on Puget Sound. His garden serves as a laboratory for growing and evaluating plants from around the world. When Hinkley is not traveling in search of yet more plants, he is likely to be writing, lecturing, or operating his Heronswood Nursery. It is from this crucible that a single-minded dedication to horticulture and learning admirably shows itself. What the reader of this book gets is quality first-hand information from someone who has observed the plants in the wild and grown them in the garden, all spiced with wit and insightful opinion.

Upon first picking up this book, even the most experienced gardeners are apt to find a plethora of perennials that are completely new to them. The subtitle of the book is not in the least misleading, for here is an assembly of truly special, rare, and unusual perennials. Hinkley has selected them for their ornamental qualities and garden merit—not simply because



Author and explorer Dan Hinkley takes a break from plant-hunting at the Chinese-Tibetan border. Photo by Frank Bell.

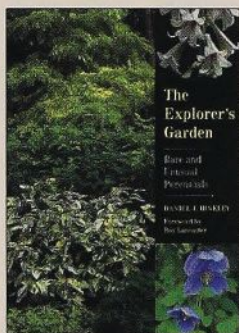
they are rare or obscure. The reader's introduction to these wonderful perennials is complemented by the photographs of Lynne Harrison, which are consistently spectacular. They tell the story in a way words alone could not. Who could fail to become enthralled—and covetous—by the photo of *Hacquetia epipactis* 'Thor', which has leaves and floral bracts with cream-colored variegation.

The hundreds of perennials described in the book's 28 chapters are grouped by family. Here is the titanic *Gunnera masafaurae*, with leaves 10 feet across, described along with its diminutive cousin *G. monoica*, which has leaves that might reach a half-inch across—in a good year. Such contrasts and comparisons are effective in describing the breadth and depth of a genus. In the chapter on *Cimicifuga*, the bugbanes or snakeroots, Hinkley describes both the North American and the Asian species in this small genus. This may be one of those cases where every one

of the 20 or so species is garden-worthy.

Plants with bold foliage abound. There is a wonderful introduction of the genus *Rogersia* and its cultivars, stunning perennials that are valued for their foliage as well as their flowers, which are reminiscent of the bottle-brush buckeye, a woody plant. Among the ornamental rhubarbs described is *Rheum acuminatum* from Nepal, a multi-season ornamental that bears textured leaves with purplish-red undersides on red petioles and stalks of three-foot-long rose-red flowers followed by red fruit. Another knockout plant is *Rheum* 'Ace of Hearts', with leaves that are green on top and rich burgundy beneath.

Other plants treated in depth are the hardy gingers (*Asarum* spp.), Jack-in-the-pulpits (*Arisaema* spp.), the sinfully underused masterworts (*Astrantia* spp.), geraniums, *Paris quadrifolia*, and the genus *Omphalodes*.





The number and varieties of all kinds of plants available to gardeners has increased immensely over the past 20 years or so, and American gardens are the better for it. This, in fact, is in no small part due to individuals such as Hinkley, who are smitten and committed collectors willing to go almost anywhere in search of new and better plants, and who are also willing to share their discoveries in books such as this one.

Is *The Explorer's Garden* one of the best books on perennials ever written? You bet it is.

—Carl Hahn

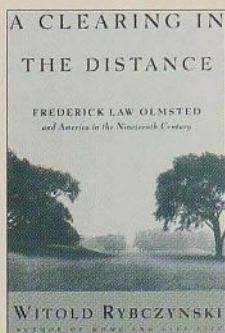
*Former chief of the Natural Resources Division of the Maryland-National Capital Park and Planning Commission, Carl Hahn has been involved in the introduction of hundreds of plants new to American horticulture.*

### A Clearing in the Distance

Witold Rybczynski. Scribner, New York, 1999. 422 pages. 6 1/2" x 9 1/2". Publisher's price, hardcover: \$28. AHS price: \$20.

AMERICANS OWE a great deal to Frederick Law Olmsted for his tireless efforts and remarkable vision in designing large tracts of land in inner cities and suburbs for the preservation of natural beauty. With his partner, Calvert Vaux, he planned Central and Prospect Parks in New York City and invented America's first parkway. He devised the country's first regional plan—for Staten Island—and was a proponent of national parks. But as Witold Rybczynski makes clear in his new biography of Olmsted, he was much more than a landscape architect.

Born in 1822, Olmsted was reared in comfortable circumstances; his indulgent father supported him until his mid-30's. He traveled in Europe and tried his hand at a variety of professions—surveyor, merchant seaman, farmer, journalist, and publisher. In later years he co-founded *The Nation* magazine, ran a gold mine in California, and served as chief executive officer of the United States Sanitation Commission, precursor of the Red Cross.



Rybczynski writes it was Olmsted's travels in England that "evidently awakened in him a desire to understand exactly how natural elements could be manipulated to create an effect of picturesqueness or sublimity."

Luck intervened for Olmsted when political connections and acquaintances secured him a position as superintendent of the Central Park project, in charge of the park's construction work-force. He teamed up with architect Calvert Vaux to develop a winning entry for the park's overall design. The firm Olmsted, Vaux & Company was on its way to becoming the country's first landscape architecture firm.

Rybczynski identifies Brooklyn's Prospect Park as one of Olmsted and Vaux's great masterpieces, "a transcendental vision of a unified, peaceful country, in which the meadows represent agriculture, the wooded terrain is the American wilderness, and the lakeside terrace and its more refined architecture, civilization." Other masterworks include Boston's Emerald Necklace, the design of the grounds at the United States Capitol in Washington, D.C., and a network of parks and public spaces in Buffalo, New York, to show "how the burgeoning American industrial city could be made livable."

I have a few minor quibbles with the book: At times Rybczynski interjects his own opinions about events in Olmsted's life, and he includes several fictional passages—set off in italics—in which he imagines what Olmsted must have been thinking or feeling. I found both devices distracting and unnecessary, particularly since the biographical sources are so extensive.

Still, *A Clearing in the Distance* is a very readable and excellent biography of a man to whom the country owes a great debt for the movement he started to preserve natural spaces for enjoyment of all Americans.

—Jane Berger

*Jane Berger is a partner in The Garden Design Group LLC of Alexandria, Virginia.*

### Treasured Perennials

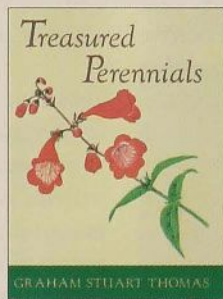
Graham Stuart Thomas. Sagapress, Inc., Sagaponack, New York, 1999. 180 pages, 182 color illustrations. 8" x 10 1/2". Publisher's price, hardcover: \$39.95. AHS price: \$28.

ONE CANNOT GO WRONG with a new book by English plantsman Graham Stuart Thomas. While he is already famous for his prolific and beautifully crafted garden writings on perennials, garden design, ground covers, trees, roses—especially shrub roses—and for his skills as a photographer and botanical illustrator, we can now also appreciate his love for poetry and music. Both are convincingly blended into a book that describes more than 200 special perennials.

Reading *Treasured Perennials* is like having a conversation with a botanical master. The reader feels as if he or she is visiting a venerable plantsman at his home and being treated to the best he has to offer: a tour of his garden, his watercolors, and his music. Plants are presented in alphabetical order, but there is no attempt to systematically describe the cultural details for each, such as sun/shade requirements, height, color and timing of bloom. Each chapter begins with a quote from the verse of English poet A. E. Housman, the subject of which is a plant in the category described in the chapter. From the beginning we think of plants in the context of poetry.

What makes these perennials treasured? Thomas wishes to draw attention to lesser-known species of well-known genera. He writes, "It strikes me as little short of extraordinary that so many plants should have been in cultivation in these islands for so many years—even hundreds of years—without ever becoming popular."

The most compelling quality that unites the perennial treasures, however, is that they look as good as possible for as long as possible in the garden. Thomas writes, "Today it is not enough to appraise the flowers, we have to look and study the whole plant if each garden is to be different from the next." In particular, Thomas stresses the importance of foliage: "While flowers come and go at short notice, the leaves are with us for months on end, therefore





their study is of paramount importance in planning a garden."

As to be expected, Thomas's book has a British perspective, and many of the plants he describes are not easily grown in many American gardens. For the convenience of American readers, the USDA hardiness zone map and USDA zone information for all plants are included.

The music to which Thomas has set poems of A. E. Housman is the most unusual aspect of this garden book. Thomas describes his early love of gardening as developing coincidentally with his love of the works of A. E. Housman and 16th- and 17th-century madrigals. These elements are in harmony in his life, as the elements of a treasured perennial are in harmony. He simply writes, "I think that music and gardening make good companions; they bring into use different senses and abilities and together make for happy days." And so they do. —Chela R. Kleiber

*Chela R. Kleiber is Director of Education at Tyler Arboretum in Media, Pennsylvania. She is co-author of Burpee Complete Gardener. She gardens in Philadelphia.*

## Gardeners' Books

AHS has teamed up with Amazon.com to offer our members better discounts on most titles, faster delivery, more inventory, and improved access to hard-to-find titles. The books listed here have not been critically evaluated; they have been chosen for description based on unusual subject matter or substantive content. To order, or for information about other gardening books, call Trish Gibson at (800) 777-7931 ext. 136 or visit our Web site at [www.ahs.org](http://www.ahs.org) and link to Amazon.com.

### Naturalistic Gardens

#### The Wildlife Sanctuary Garden

Carol Buchanan. Ten Speed Press, Berkeley, California, 1999. 209 pages. Publisher's price, paperback: \$11.95. AHS price: \$9.75.

TURN YOUR BACKYARD into a wildlife garden. This guide, complete with pho-

tographs and illustrations, defines a wildlife sanctuary garden and explains how to create one. The book focuses on care and maintenance of native plants. Included are sections on attracting animals and controlling pests.

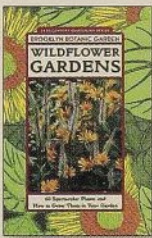
#### Wildlife in the Garden

Gene Logsdon. Indiana University Press, Indianapolis, Indiana, 1999. 275 pages. Publisher's price, paperback: \$14.95. AHS price: \$12.

THIS GUIDE shows how gardeners can live in harmony with deer, raccoons, rabbits, crows, and other creatures. The author presents his information in an imaginative way, using various characters to represent alternative points of view. Characters Smith, Brown, the Widow Lady, the Beekeeper, and the Farmer give advice for living with nature and offer information about some less appreciated garden visitors such as snakes, bats, owls, wasps, and leeches.

#### Wildflower Garden

C. Colston Burrell. Brooklyn Botanic Garden, Inc., Brooklyn, New York, 1999. 111 pages. Publisher's price, paperback: \$9.95. AHS price: \$8.



PART OF THE 21st-Century Gardening Series, *Wildflower Garden* reviews 60 spectacular plants and describes how to grow them in the garden. A portfolio of various wildflower gardens is presented,

including shade gardens, water and bog gardens, and meadow and prairie gardens. Many color photographs complement the text.

#### The Hummingbird Garden

Mathew Tekulsky. The Harvard Common Press, Boston, Massachusetts, 1999. 118 pages. Publisher's price, paperback: \$12.95. AHS price: \$12.95.

THE HUMMINGBIRD GARDEN explains how to create a garden to attract hummingbirds. By understanding the habits of hummingbirds, one can more easily determine the types of flowers and feeders

to use in the garden. This book includes complete information on hummingbird and plant species, bird and conservation organizations, mail-order sources, and an extensive bibliography.

#### The Butterfly Garden

Mathew Tekulsky. The Harvard Common Press, Boston, Massachusetts, 1999. 144 pages. Publisher's price, paperback: \$10.95. AHS price: \$10.95.



THIS BOOK IS A complete step-by-step guide to butterfly gardens. It addresses the life cycle, habitats, and behavior of butterflies as well as information on designing a butterfly garden in the country, suburbs, or city. One section reviews 50 common garden butterflies and the plants to which they are attracted. By understanding their habits and preferences, plants can be included that will entice a wide variety of brightly colored butterflies to any garden.

#### Easy Lawns

Stevie Daniels. Brooklyn Botanic Garden, Inc., Brooklyn, New York, 1999. 111 pages. Publisher's price, paperback: \$9.95. AHS price: \$8.

ONE OF BROOKLYN BOTANIC GARDEN'S 21st-Century Gardening Series, *Easy Lawns* suggests and discusses growing lawns of species adapted to your specific region, instead of the conventional turf grasses that require frequent mowing and supplemental applications of water, fertilizer, and pesticides. Many of the alternative lawns require little or no irrigation once they're established, nor do they need regular fertilizing or mowing. Photographs, diagrams, and detailed explanations make this an easy to read guide for lawn alternatives.

### Imaginative Gardens

#### Garden Whimsy

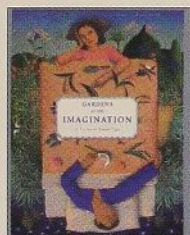
Tovah Martin and Richard W. Brown. New York, New York, 1999. 160 pages. Publisher's price, hardcover: \$30. AHS price: \$21.



THIS NEW BOOK by the authors of *Tasha Tudor's Garden* will amuse and inspire readers to add a whimsical touch to their own gardens. Numerous color photographs illustrate how some creative gardeners have used birdhouses, scarecrows, topiary animals, gates, and fences to lend interest and whimsy to their landscape. Other objects not commonly associated with gardens are woven into eccentric combinations.

## Gardens of the Imagination

Sophie Biriotti. Chronicle Books, San Francisco, California, 1999. 144 pages. Publisher's price, hardcover: \$24.95. AHS price; \$17.50.



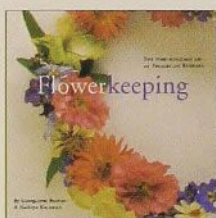
preciate literature as well as plants. Artist Peter Malone beautifully illustrates each

THIS COLLECTION of fiction and poetry by some of the world's most well known writers throughout the ages makes a great gift for gardeners who appreciate as well as plants. Artistically illustrates each

selection as readers are led on a journey through the gardens of Nathaniel Hawthorne, John Milton, Vladimir Nabokov, Zora Neale Hurston, Pablo Neruda, Italo Calvino, Lewis Carroll, Octavio Paz, and many others.

## Flowerkeeping

Georgianne Brennan and Kathryn Kleinman.  
Ten Speed Press, Berkeley, California. 144  
pages. Publisher's price, paperback: \$17.95.  
AHS price: \$14.50.

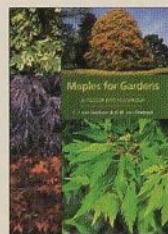


*Flowerkeeping* introduces the reader to the art of preserving and arranging flowers. The book begins with an overview of Victorian traditions; it proceeds to explain the many techniques that can be used for drying flowers—including the use of air, silver sand, and silica, as well as pressing, waxing, sugaring, and freezing. Each chapter highlights different flowers and the preservation techniques that

are best suited to them. Vivid color photographs illustrate how artfully preserved flowers can keep blooms “alive” all year long.

## Maples for Gardens

C.J. and D.M. van Gelderen. Timber Press, Inc., Portland, Oregon, 1999. 294 pages. Publisher's price, hardcover: \$49.95. AHS price: \$35.



MAPLE TREES occur naturally over most of the Northern Hemisphere and are among the most versatile garden trees. This color encyclopedia illustrates the broad species with photographs in 30 arboretums, gardens in several countries. They are well represented by cultivars and updated resource will help the great diversity of for inclusion in their

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# Regional Happenings

## NORTHEAST

**The Art and Craft of American Gardening. Lecture series.** Speakers are Kim E. Tripp and Tony Avent (FEB. 3), Rick Darke and Barbara O'Brien (MAR. 2). New York Botanical Garden, Bronx, New York. (718) 817-8700.

JAN. 21. **Building Landscapes.** Seminar. Arnold Arboretum of Harvard University, Jamaica Plain, Massachusetts. (617) 524-1718.

JAN. 22. **Old Field Glory: Natural Landscaping for the Rest of Us.** Lecture by Garry Plunkett. Rhode Island Wild Plant Society. Portsmouth, Rhode Island. (401) 783-5895.

JAN. 25. **Plant-O-Rama.** Trade show and conference. Brooklyn Botanic Garden, Brooklyn, New York. (718) 623-7252.

FEB. 17-20. **Connecticut Flower & Garden Show.** Connecticut Expo Center, Hartford, Connecticut. (860) 529-2123.

FEB. 17-20. **Seventh Annual Rhode Island Spring Flower & Garden Show.** Rhode Island Convention Center, Providence, Rhode Island. (800) 766-1670.

MAR. 3-5. **Garden Dreams.** Workshops. Mohonk Mountain House, Lake Mohonk, New Paltz, New York. (800) 772-6646.

MAR. 4. **Plant Lover's Saturday.** Choose from among 16 lectures. New York Botanical Garden, Bronx, New York. (718) 817-8747.

MAR. 4. **Garden Planning Symposium.** Old Sturbridge Village, Sturbridge, Massachusetts. (508) 247-3362.

## MID-ATLANTIC

JAN. 21-23. **2000 Virginia Flower & Garden Show.** Virginia Beach Pavilion, Virginia Beach, Virginia. (757) 853-0057.

JAN. 22-FEB. 27. **Flora 2000.** International Ex-

## AHS Events

Events sponsored or co-sponsored by AHS are indicated by this **AHS** symbol. An expanded and updated Regional Happenings listing can be viewed on the Society's Web site at [www.ahs.org](http://www.ahs.org).

hibition of the American Society of Botanical Artists. Longwood Gardens, Kennett Square, Pennsylvania. (800) 737-5500.

FEB. 17-20. **Maymont Flower & Garden Show.** Richmond Centre, Richmond, Virginia. (804) 358-7166.

FEB. 19. **Western Pennsylvania Gardening & Landscaping Symposium.** Pittsburgh Zoo, Pittsburgh, Pennsylvania. (412) 441-4442.

MAR. 5-12. **Philadelphia Flower Show.** Pennsylvania Convention Center, Philadelphia, Pennsylvania. (215) 988-8834.

MAR. 9-12. **40th Annual Washington Flower & Garden Show.** Washington Convention Center, Washington, D.C. (703) 823-7960.

## SOUTHEAST

JAN. 21-23. **Southern Gardening Symposium.** Callaway Gardens, Pine Mountain, Georgia. (706) 663-5161.

JAN. 26. **Wildflower Symposium.** State Botanical Garden of Georgia, University of Georgia, Athens, Georgia. (706) 542-1244.

FEB. 12. **Annual Spring Symposium.** Atlanta Botanical Garden and the Georgia Perennial Plant Association. Atlanta Botanical Garden, Atlanta, Georgia. (404) 876-5859.

FEB. 23-27. **Southeastern Flower Show.** Atlanta Expo Center, Atlanta, Georgia. (404) 888-5638.

**AHS.** FEB. 24-27. **Cloister Garden Series.** Part of the AHS Great American Gardener Lecture Series. Includes garden tours. The Cloister, Sea Island, Georgia. (800) 732-4752.

FEB. 25-27. **Flower Power 2000.** Palm Beach Tropical Flower & Garden Show. Flagler Drive, West Palm Beach, Florida. (561) 655-5522.

## Chicago's New Nature Museum

EVER WONDER HOW THE PRAIRIES APPEARED to Native Americans or to the pioneers who traveled across them during the 19th century? The Chicago Academy of Sciences' stunning new Peggy Notebaert Nature Museum, opened since October, now welcomes downtown visitors with an in-depth look at this vanished ecosystem.

Situated in Lincoln Park, the museum rises out of the ground in an area where maintenance vehicles were once parked. While excavating the site, construction workers made a startling discovery—an overgrown mound, assumed to be a landfill, turned out to be an ancient sand dune. The museum now nestles against the dune, which has been revegetated with native grasses and shrubs.

Faced with the challenge of landscaping the museum's six-acre site, landscape architect Carol Yetken chose to re-create five typical plant communities, linked by a network of trails: pond, woodland edge, prairie, deep-shaded woods, and a ravine with limestone outcroppings. Horticulturist Stephen Courtney views habitat restoration in Lincoln Park as a long-term project. "The area has been degraded over time, with exotics such as black locust and Norway maple taking over," he says. "We'll be removing these trees as they decline or die, replacing them with black walnut, hickory, and others."

Meanwhile, low profile grasses like little bluestem, prairie dropseed, sideoats grama, and junegrass have been planted on the grounds, and a spring wildflower garden will contain colorful natives, such as wild geranium, Solomon's seal, and columbine. The Peggy Notebaert Nature Museum is located at 2430 North Cannon Drive in Chicago, Illinois. For more information, call (773) 549-0606 or visit the Chicago Academy of Sciences Web site at [www.chias.org](http://www.chias.org).

Adapted with permission from an article by Claire Hagen Dole in the Fall 1999 issue of *Butterfly Gardeners' Quarterly*.



FEB. 25-28. **Southeastern Cactus & Succulent Conference.** Park Plaza Hotel, Miami, Florida. (305) 859-2495.

MAR. 7 & 8. **Davidson Horticultural Symposium.** Davidson College, Davidson, North Carolina. (704) 892-6281.

#### NORTH CENTRAL

JAN. 15-APR. 9. **Winter Flower Show.** Anna Scripps Whitcomb Conservatory, Belle Isle, Detroit, Michigan. (313) 852-4064.

JAN. 22. **Toward Harmony with Nature Conference.** Wild Ones Natural Landscapers. Park Plaza Hotel and Convention Center, Oshkosh, Wisconsin. (920) 730-3986.

JAN. 29-FEB. 14. **Frederik Meijer Gardens' Flower Fest.** Grand Rapids, Michigan. (616) 957-1580.

FEB. 5-13. **National City Cleveland Home & Garden Show.** International Exposition Center, Cleveland, Ohio. (800) 600-0307.

FEB. 10-13. **Omaha Lawn, Flower & Patio Show.** Omaha Civic Auditorium, Omaha, Nebraska. (402) 346-8003.

FEB. 26. **Natural Landscaping Seminar.** Sponsored by the Wildflower Preservation and Propagation Committee, McHenry County Defenders. McHenry County College, Crystal Lake, Illinois. (815) 338-0393.

MAR. 2-5. **Flowerfest's Landscape Flower and Garden Show.** Wings Stadium Annex, Kalamazoo, Michigan. (616) 381-3597.

MAR. 2-5. **Michigan Home and Garden Show.** Pontiac Silverdome, Pontiac, Michigan. (616) 530-1919.

#### SOUTH CENTRAL

**Dr. Cathey to Visit The Sooner State.** Central Oklahoma residents and visitors may hear upcoming lectures by H. Marc Cathey, AHS's president emeritus, who is scheduled to speak at three Oklahoma venues from February 10 to 12. Sponsored by the Oklahoma Horticultural Society (OHS), an AHS horticultural partner, all lectures are free and open to the public. For more information, visit the OHS Web site at <http://connections.oklahoman.net/okhorticulture>.

AHS. FEB. 10. **"The Professional Edge for Horticulture."** Oklahoma State University's Noble Research Center, Stillwater. (405) 744-5406.

AHS. FEB. 12. **"The SMARTGARDEN™."** Oklahoma County Cooperative Extension Building, Oklahoma City. (405) 945-3358.

AHS. FEB. 13. **"The Language of Plants."** Oklahoma City Zoo. (405) 330-9150.

## Sierra Madre's Treasure



On March 19 you can see California's famed Sierra Madre wisteria vine, billed as the world's largest blooming plant. The 106-year-old plant covers the grounds of two private residences and is open for public viewing one day each year during Sierra Madre's Wistaria Festival, when its more than one million lavender-colored blossoms are at their peak.

The vine has been a celebrated curiosity since 1918, when the first festival was held in its honor. Purchased in 1894 and brought home in a gallon can, the plant eventually enshrouded both its arbors and its owner's house, even causing the roof to collapse under its weight in 1931. The arbors were retained, however, a new house was built, and the wisteria was saved.

Admission to see the vine is free, but reservations are required; tickets are limited, so order early. Write to "Wistaria Tickets," Sierra Madre Chamber of Commerce, 49 S. Baldwin Ave., Suite K, Sierra Madre, CA 91024. State the number of tickets and the preferred hour for viewing between 9 a.m. and 4 p.m. Parking near the vine is restricted, but round-trip shuttle bus rides are available for \$5 a person. For more information, call (626) 306-1150.

Margaret T. Baird  
Communications Assistant

FEB. 11-13. **Fort Worth Home & Garden Show.** Fort Worth Convention Center, Fort Worth, Texas. (713) 529-1616.

FEB. 25-27. **Texas Home & Garden Show.** George R. Brown Convention Center, Houston, Texas. (713) 529-1616.

FEB. 25-27. **2000 Arkansas Flower and Garden Show.** Statehouse Convention Center, Little Rock, Arkansas. (800) 459-7469.

FEB. 26. **Spring Herb Gardening 101.** Seminar focusing on herbs that grow best in Texas. McAshan Herb Gardens at Festival Hill, Round Top, Texas. (409) 249-5283.

FEB. 26. **Realistic Gardening: Expert Ideas that Work.** Kansas City Gardening Symposium. Johnson County Community College, Overland Park, Kansas. (816) 697-2600.

MAR. 2-5. **Wichita Lawn, Flower and Garden Show.** Century II, Wichita, Kansas. (316) 721-8740.

MAR. 2-5. **Nashville Lawn & Garden Show and Southern Conference of the American Institute of Floral Designers.** Tennessee State Fairgrounds, Nashville, Tennessee. (615) 352-3863.

#### NORTHWEST

FEB. 2-6. **Northwest Flower and Garden Show.** Washington State Convention & Trade Center, Seattle, Washington. (800) 229-6311.

FEB. 23-27. **Portland Home and Garden Show.** Portland Expo Center. Portland, Oregon. (800) 343-6973.

#### SOUTHWEST

FEB. 1 & 2. **Horticulture Magazine Symposium: Landscape Design.** Denver Botanic Gardens, Denver, Colorado. (303) 370-8019.

FEB. 11-13. **Language of Flowers Flower Show.** Boyce Thompson Arboretum, Superior, Arizona. (520) 689-2811.

FEB. 23. **The Well-Tended Perennial Garden.** Lecture by Tracy DiSabato-Aust. Denver Botanic Gardens, Denver, Colorado. (303) 370-8020.

#### WEST

JAN. 22. **Deciduous Fruit Trees.** Lecture by Frank James of the Orange County Rare Fruit Growers Association. Fullerton Arboretum, Fullerton, California. (714) 278-3579.

FEB. 3-6. **Fascination of Orchids International Show and Sale.** South Coast Plaza west, Costa Mesa, California. (714) 964-3265.

FEB. 12 & 13. **Camellia Society Show.** San Diego Camellia Society. San Diego Wild Animal Park, San Diego, California. (760) 480-0100.

FEB. 12 & 13. **Camellia Show.** Huntington Botanical Gardens, San Marino, California. (626) 405-2141.

#### CANADA

JAN. 23. **Dream Garden 2000.** Symposium. Galt Horticultural Society. Grand Valley Golf Club, Cambridge, Ontario. (519) 448-1081.



# New Products

## 1. Fiskars Softouch® Swivel Grass Shears

These lightweight, ergonomic Softouch® Swivel Grass Shears are intended to reduce the strain of manual grass trimming around flower beds and trees. They're designed with a swivel head, which allows you to trim horizontally or along a vertical edge while maintaining a neutral wrist position for less fatigue. These shears feature the same handle styling that won a Tylenol/Arthritis Foundation Award for Fiskars' Softouch® Scissors. Suggested retail is \$19.99.

**Fiskars Lawn & Garden Customer Service**, 780 Carolina Street, Sauk City, WI 53583. (800) 500-4849. [www.fiskars.com](http://www.fiskars.com)

## 2. Schultz Aquatic Plant Soil

Made from a kiln-fired clay substance, Schultz Aquatic Plant Soil is a planting medium specific for garden ponds, container aquatic gardens, and hydroponics. Because it contains no peat moss or compost, which can break down in water, Aquatic Plant Soil won't cloud water or clog pumps and filters—and with a neutral pH, it's also safe for fish. It is formulated to hold aquatic plants firmly in place all season long. Suggested retail for a 10 lb. bag is \$6.97; \$12.99 for 25 lbs.

**Schultz Company**, P.O. Box 4406, St. Louis, MO 63044. (314) 298-2700. [www.schultz.com](http://www.schultz.com)

## 3. Bemis Plant Exchange™ In-Ground Planter System

Good news for time-pressed, knee-sore gardeners: Bemis's innovative Plant Exchange™ System is designed to make seasonal replanting faster and easier. The "system" consists of two plastic nesting pieces—an in-ground sleeve placed permanently in the soil, and a portable planter that can be popped in or out of the sleeve—making it a simple operation to bring tender plants indoors for the winter or "summer" house plants outdoors. The planters come in two colors: cocoa or olivewood. Six-piece kits (three sleeves and three planters) sell for \$29.99.

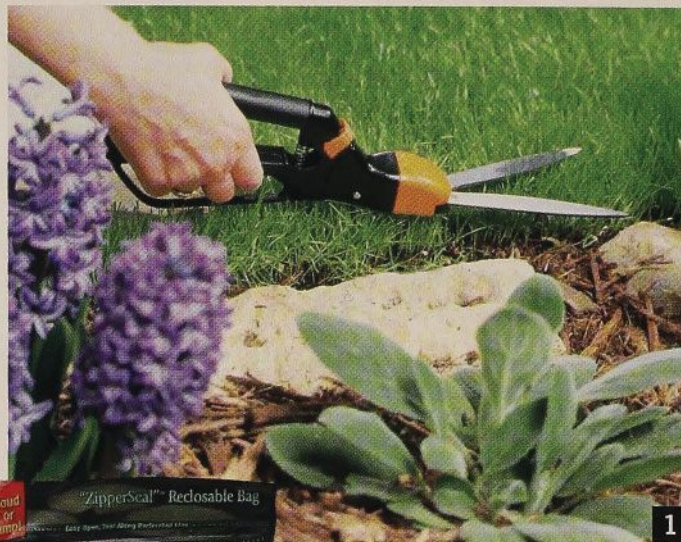
**Bemis Manufacturing Co.**, Sheboygan Falls, WI 53085. (800) 547-3888. [www.BemisMfg.com](http://www.BemisMfg.com)

## 4. Flower-tone™

Espoma, manufacturer of fertilizers made with natural ingredients, has added Flower-tone™ to their "Tone" line of premium plant foods. Formulated to provide steady, continuous feeding for annuals and perennials, Flower-tone™ is rich in phosphorus and potassium to encourage blooming and includes kelp meal for an added boost. Available in granular formulation, Flower-tone™ comes in 5 and 25 lb. bags for \$3.99 and \$11.59.

**Espoma**, 6 Espoma Road, Millville, NJ 08332. (800) 634-0603. [www.espoma.com](http://www.espoma.com)

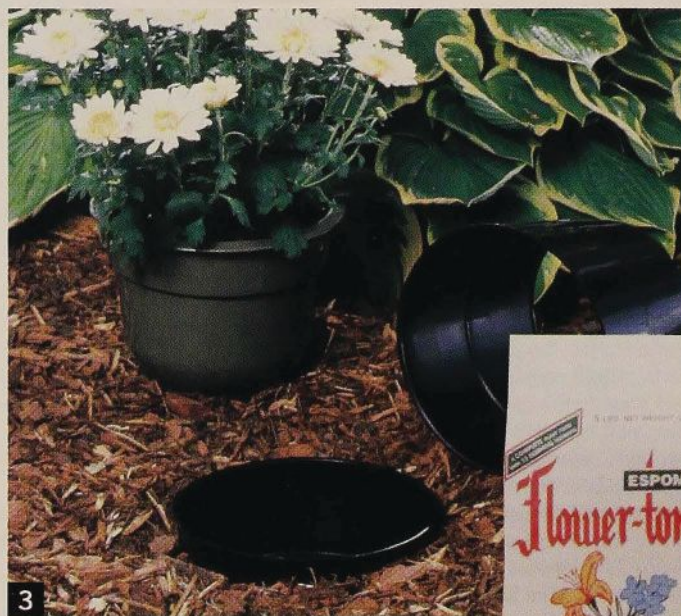
Products profiled in this section are chosen based on qualities such as innovative design, horticultural utility, and environmental responsibility; they have not been tested by the American Horticultural Society.



1



2



3



4





*Worldlife Preservation Foundation*<sup>TM</sup>  
announces the development of a new tropical garden oasis.

# Anuenue Gardens

Lovers of travel and gardens will soon have a new and exotic venue to visit the objects of their admiration. The Worldlife Preservation Foundation, a non-profit organization based in Hawai'i, is set to break ground on a 200 acre site on the picturesque eastern shore of the island of O'ahu. Anuenue Gardens will be the largest and most innovative private garden in the islands. As well as being a center for the propagation and preservation of many rare and exotic floral species, the gardens will also play host to WPF's exotic and rare animal programs, as well. More than 1,000 birds, reptiles, primates, and small mammals will live in spacious habitats scaped with vines, shrubs, trees, and flowers from their regions of origin.

These gardens of extraordinary beauty are being created as we look back at how we humans have managed the gifts of our world and what we should do differently as a new millennium dawns. As January 1-2001 approaches, we are deciding—in large numbers—that we must learn more about the needs of this living planet and teach each other how to nurture and care for our earth and all its diverse and incredibly beautiful inhabitants.

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Gardens are just such places.*

Anuenue (pronounced a-new-eh-new-eh) is the Hawaiian word for rainbow, where every color we can see is displayed in brilliance—if only we will learn to look closely and appreciate. Anuenue Gardens has been designed to be a center of education as well as preservation. It is our goal to reach out and connect nature lovers from one end of our world to the other.

Be sure to visit our website at [www.worldlife.com](http://www.worldlife.com)

## Become a Worldlife member **TODAY!** and receive:

- ✓ 1 yr. subscription to "Stepping Stones", WPF's bi-monthly newsletter,
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preservation  
designed to help  
learn about the  
the beauty and  
shared home-  
its and our long-  
vigor. Anuenue  
form of life are  
improve the  
and animal species.  
Helping these re-  
design and  
programs that  
evolutionary and spiritual

Furthering our  
the natural world works  
and  
projects are  
initiated.  
harvested from  
beauty of our  
while ensuring  
term health and  
in the belief that all  
sacred, WPF seeks to  
achieve of great  
captive and wild, by  
charge of their care.  
Implement management  
address the mental, physical,  
needs of many the forms of our world.

➡ Anuenue Gardens ⬅

is the first of several facilities to be designed and operated by WPF

A VIEW INTO ANUENUE GARDENS—A PLACE OF HORTICULTURAL, ZOOLOGICAL, AND SPIRITUAL BEAUTY



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# Pronunciations and Planting Zones

Most of the cultivated plants in this issue are listed here with their pronunciations and USDA Plant Hardiness and AHS Plant Heat Zones. If 0 is listed in place of USDA hardiness zones, it means that plant is a true annual—it completes its life cycle and dies in a year or less. Tropical plants that are hardy only in USDA Zone 11 are listed by minimum average temperature. To purchase an AHS Heat-Zone Map, call (800) 777-7931 ext. 136.

## A-C

**Allium azureum** AL-ee-um as-ZYUR-ee-um 4-10, 10-1  
**Andropogon saccharoides** an-dro-PO-gon sak-kuh-ROY-deez 2-7, 7-1  
**Antirrhinum majus** 'Pink Rocket' an-tirr-RYE-num MAY-juss 7-9, 9-1  
**Artemisia** 'Powis Castle' ar-teh-MIZ-ee-uh 5-11, 12-8  
**A. ludoviciana** 'Valerie Finnis' A. 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. canadense** A. kan-ah-DEN-see 3-8, 8-2  
**A. caudatum** A. kaw-DAY-tum 5-9, 8-1  
**A. europaeum** A. yew-RO-pee-um 4-8, 8-1  
**A. hartwegii** A. hart-WEG-ee-eye 5-9, 8-6  
**A. heterophyllum** A. het-ur-o-FIL-lum 6-9, 9-6  
**A. naniflorum** A. nan-ih-FLOR-um 6-9, 8-7  
**A. shuttleworthii** A. shut-uhl-WORTH-ee-eye 5-8, 8-4  
**A. shuttleworthii** var. **harperi** 'Callaway' A. s. var. HAR-per-eye 5-8, 8-4  
**A. speciosum** A. spee-see-O-sum 7-8, 8-7  
**A. virginicum** A. vir-JIN-ih-kum 5-8, 8-5  
**Aster novi-belgii** 'Snow Cushion' ASS-ter NO-vih-BEL-jee-eye 3-9, 9-1  
**Campanula cochlearifolia** 'Alba' kam-PAN-yew-luh kok-lee-air-ih-FO-lee-uh 5-7, 7-5  
**Chasmanthe floribunda** chas-MAN-thee flor-ih-BUN-duh 5-9, 9-5  
**Cimicifuga simplex** sim-ih-SIF-yew-guh sim-pleks 3-8, 12-1  
**C. racemosa** C. rass-eh-MO-suh 3-8, 12-1  
**Colocasia** 'Black Magic' kol-o-KAY-see-uh 9-11, 12-3

**Cuphea hyssopifolia** KOO-fee-uh hiss-sop-ih-FO-lee-uh 11, 12-10  
**C. ignea** C. IG-nee-uh 10-11, 12-1  
**C. llavea** C. LAH-vee-ah 10-11, 12-1  
**C. viscosissima** C. viss-ko-SISS-sih-muh 10-11, 12-1

## D-L

**Digitalis lutea** dih-jih-TAL-iss LEW-tee-uh 3-9, 9-1  
**D. purpurea** 'Alba' D. per-PER-ee-uh 5-9, 10-1  
**Eryngium venustum** e-RIN-jee-um veh-NUS-trum 5-8, 8-5  
**Euphorbia dulcis** 'Chameleon' yew-FOR-bee-uh DUL-siss 4-9, 9-4  
**Festuca glauca** 'Elijah's Blue' fes-TEW-kah GLAW-kuh 4-8, 8-1  
**Gaura lindheimeri** 'Whirling Butterflies' GAW-ruh lind-HY-mur-eye 6-9, 9-6  
**Helianthemum** 'Henfield Brilliant' hee-lee-AN-theh-mum 6-8, 8-6  
**Helichrysum petiolare** hel-ee-CRY-sum pet-ee-o-LAR-ee 9-11, 12-1  
**Hydrangea arborescens** 'Annabelle' high-DRAN-juh ar-bo-RES-enz 3-9, 9-1  
**H. macrophylla** 'Blue Wave' H. mak-ro-FIL-luh 6-9, 9-4  
**Ilex decidua** EYE-leks deh-SID-yew-uh 5-9, 9-5  
**I. vomitoria** I. vom-ih-TOR-ee-uh 7-11, 12-7  
**Ipomoea batatas** 'Margarita' ih-po-ME-uh buh-TAH-tus 11-12, 12-1

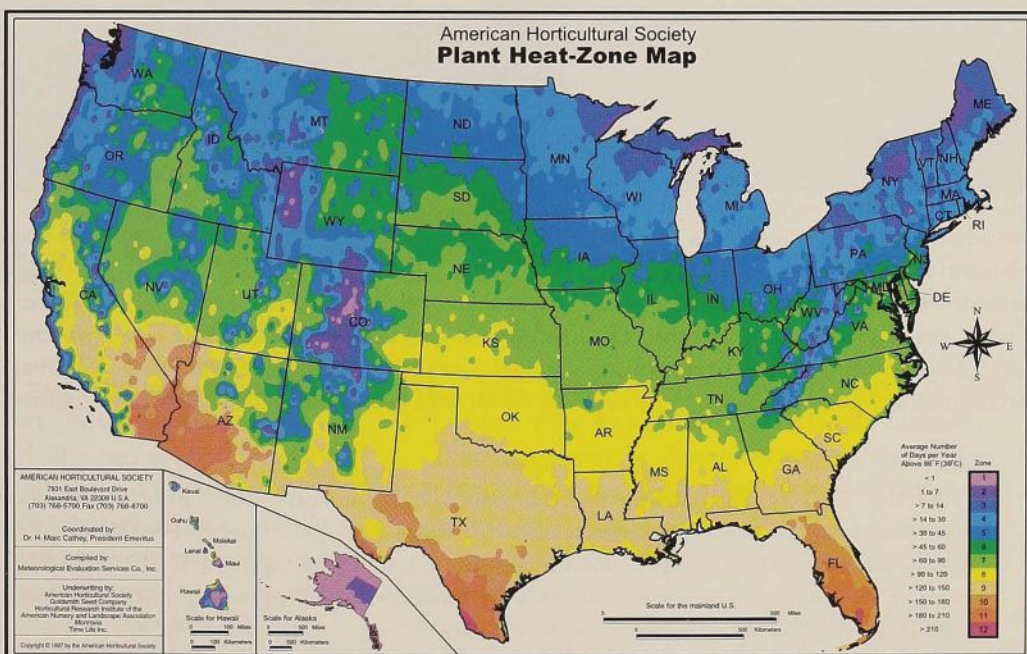
**Ipomopsis rubra** ih-po-MOP-sis ROO-bruh 6-9, 9-5  
**Lilium lancifolium** LIL-ee-um lan-si-FO-lee-um 2-7, 7-1  
**Linum perenne** 'Sapphire' LIE-num pur-EN-ee 7-9, 8-2  
**L. perenne** subsp. **lewisii** (L. lewisii) L. p. subsp. loo-ISS-ee-eye 5-8, 8-3  
**Lobularia maritima** lob-yew-LAIR-ee-uh muh-WRIT-ih-muh 11, 9-1

## M-P

**Muhlenbergia capillaries** mew-len-BUR-jee-uh kap-ih-LAIR-iss 11-12, 10-5  
**Muhlenbergia dumosa** M. doo-MO-suh 11-12, 10-5  
**Nolina nelsonii** no-LIE-nuh nel-SOWN-ee-eye 11, 12-10  
**Parthenocissus tricuspidata** par-then-o-SISS-us try-kuss-pih-DAY-tuh 3-8, 8-1  
**Perovskia atriplicifolia** peh-ROF-skee-uh at-rih-plih-sih-FO-lee-uh 5-9, 9-2  
**Phlox subulata** 'Blue Hills' FLOKS sub-yew-LAY-tuh 3-8, 8-1  
**Picea abies** 'Little Gem' PIE-see-uh AY-beez 2-8, 8-1  
**Plectranthus argentatus** plek-TRAN-thus ar-jen-TAY-tuss 11, 12-1  
**P. fosteri** 'Green on Green' P. FOS-tur-eye 11-12, 12-1  
**P. madagascariensis** 'Marginatus' P. mad-uh-gas-kar-ee-EN-siss 0, 12-1

## R-Z

**Rosa xodorata** 'Mutabilis' R. x o-doh-RAY-tuh 7-9, 9-4  
**Salvia elegans** SAL-vee-uh EL-ih-ganz 8-11, 12-1  
**S. leucantha** S. loo-KAN-thuh 9-11, 12-4  
**Sedum spurium** 'Fuldaglut' SEE-dum SPUR-ee-um 3-10, 8-3  
**Sophora secundiflora** so-FOR-uh seh-kun-dih-FLOR-uh 7-11, 12-7  
**Spiraea japonica** 'Goldmound' spy-REE-uh jah-PON-ih-kuh 4-9, 9-1  
**Tanacetum niveum** tan-uh-SEE-tum nih-VEE-um 8-9, 9-1  
**Thalictrum aquilegifolium** thal-IK-trum ah-kwi-lee-jih-FO-lee-um 5-9, 9-4  
**T. rochebruneum** T. rowsh-broo-nee-AY-num 5-9, 9-5  
**Thuja occidentalis** 'Emerald' THEW-yuh ahk-sih-den-TAL-iss 3-7, 7-1  
**Thymus herba-barona** TY-muss her-buh-bah-RO-nuh 6-9, 9-6  
**Verbascum bombyciferum** ver-BAS-kum bom-bih-SIF-ur-um 5-9, 7-2  
**Verbena bonariensis** ver-BEE-nuh bo-nair-ee-EN-siss 6-11, 12-1  
**V. canadensis** V. kan-uh-DEN-siss 4-7, 7-1  
**Veronica** 'Icicle' vur-ON-ih-kuh 3-8, 8-1  
**Yucca filamentosa** 'Golden Sword' YUK-uh fil-uh-men-TOH-suh 5-10, 10-5  
**Zephyranthes** 'Labuffarosa' zef-ih-RAN-theez 7-10, 11-8





# Notes from River Farm

## Angels in the Garden: River Farm's Interns

by Janet Walker

**I**F YOU COULD DRAW a picture of our intern program here at River Farm, it would make an appropriate icon for what AHS is all about: getting more people more closely in touch with plants. This is what we do for our interns when we introduce and add them to our ranks, and it's what they do for us when we put them to work. As in all healthy relationships, there is focus and mutual benefit.

In terms of the particular internships we offer—currently six—our program is and has been somewhat mercurial because available funding and the specific areas in which we need the support of an intern at a given time have changed from year to year. The result has been a program that is both flexible and adaptable—valuable attributes in an evolving organism—but the lack of predictable financial support has made planning more difficult. We rely on a small but generous group of AHS members who have recognized the value of our intern program and donated specifically to it over the years. Take my word for it, the returns on this kind of investment are astronomical.

What we start out with is raw material of the highest quality: people who seek these positions simply because they love what we do and want to play a part. It becomes incumbent on us, then, to make sure that they do get a healthy taste of what, exactly, we're about. For this reason, we are modifying the program so that no matter what tasks they may be as-



Horticultural interns Mohamad Chakaki, foreground, and Cindy Lohmann, background, clean up one of River Farm's perennial beds in preparation for winter.

signed as the core responsibilities of their own internships, each of our interns will also spend substantial hands-on time working on our historic grounds, as well as regular stints responding to inquiries received via the Gardeners Information Service. In this way, on top of whatever else they may do for us and learn from us, they are guaranteed experience in gardening, educational outreach, and customer service: the very things that AHS and the staff here at River Farm were put here to do.

This approach is purposely eclectic. We have, after all, made an investment in our interns, and we want to keep them on our side and in our field. There seems no better means to this end than furnishing them with a comprehensive sampler of what we have to offer. If it was worth choosing as our life's work, it's worth passing on.

If any of you know deserving men or women considering careers in horticulture, I hope you will let them know about the internships available here at River Farm. Internship forms can be found on the Society's Web site or obtained by calling or mailing a request.

---

*After 12 years at the U.S. National Arboretum in Washington, D.C., Janet Walker came to River Farm last fall as director of horticulture. She lives in Takoma Park, Maryland, with her husband and two sons.*

**INTERNS 2000:** The following internships are available at River Farm in 2000: **Seed Exchange**, November–May; **Propagation**, January–May; **Living Lab**, April–July; **Gardeners Information Service**, April–July; **Integrated Pest Management**, May–August; **Plant Records/Signage**, May–October. The deadline for applications is two months prior to the beginning of each internship. Apply online at AHS's Web site ([www.ahs.org](http://www.ahs.org)), or write or call: Janet Walker, Director of Horticulture, American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308, (703) 768-5700 x112. E-mail: [jwalker@ahs.org](mailto:jwalker@ahs.org)

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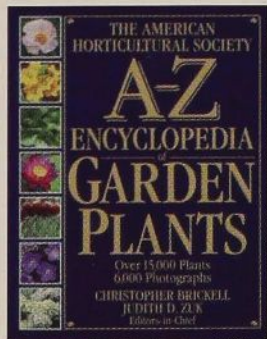
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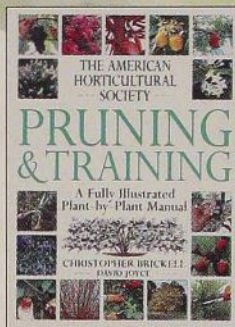
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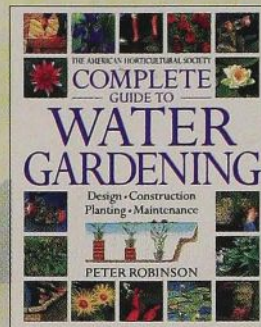


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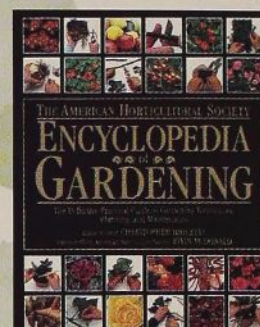


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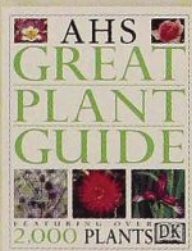
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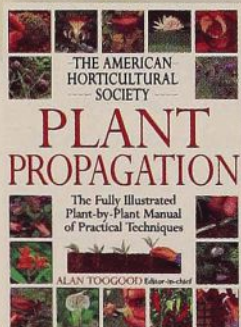
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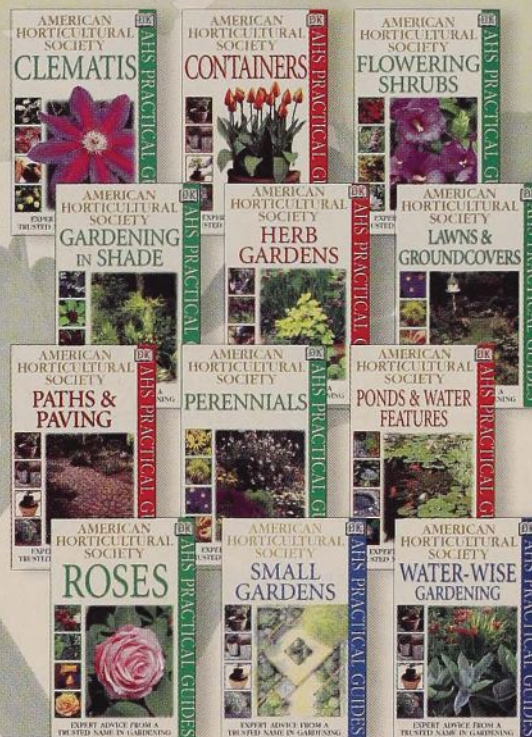


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