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November/December 2004

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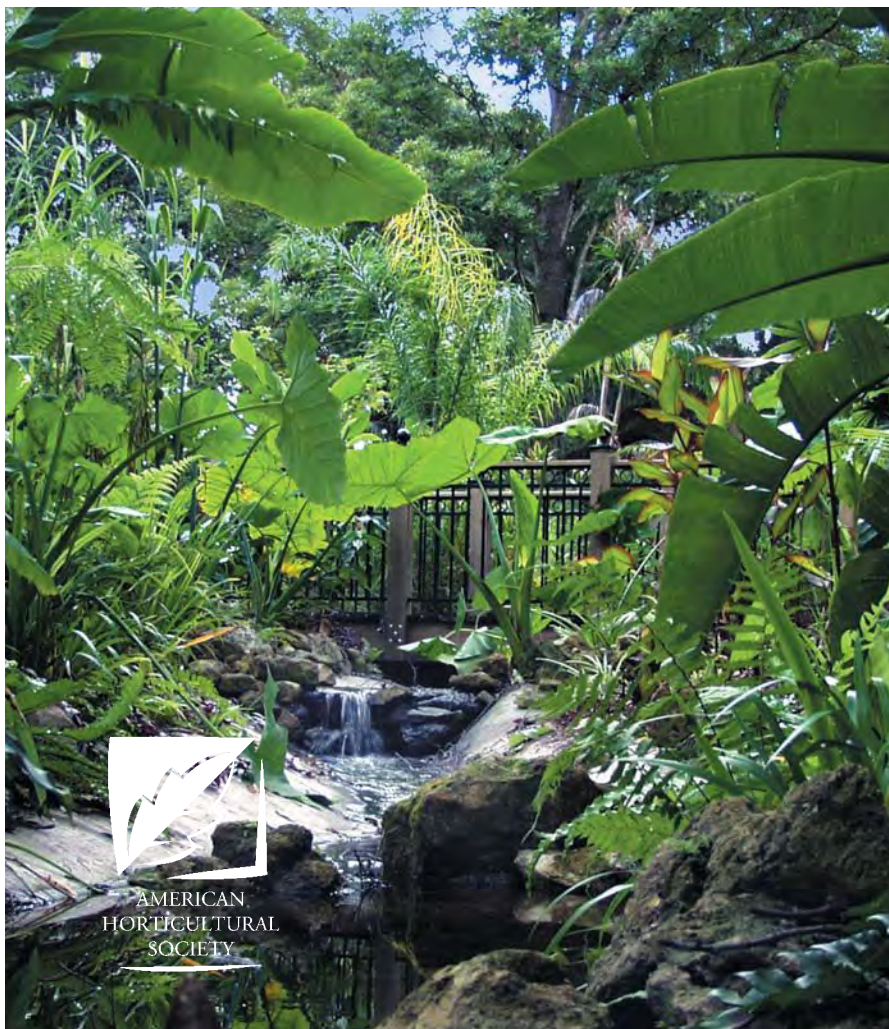
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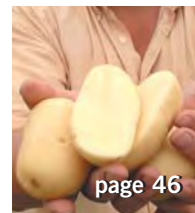
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**NATIONAL CHILDREN AND YOUTH GARDEN SYMPOSIUM (NCYGS)**

Atlanta will be the site of the 2005 NCYGS, which will be held July 28-30, 2005. Be sure to save the date for this event. For more details, e-mail Nancy Busick at [youthprograms@ahs.org](mailto:youthprograms@ahs.org).

**RECIPROCAL ADMISSIONS PROGRAM**

Through this program, AHS members receive free and discounted admission to botanical gardens throughout North America. Participating gardens are listed in this year's *AHS Member Guide* and also in the Membership area of our Web site. To learn how your garden can join this program, call (800) 777-7931 ext. 127.

**TRAVEL STUDY PROGRAM**

AHS members and friends can visit spectacular gardens around the world through the Society's exclusive arrangement with Leonard Haertter Travel. To learn about upcoming trips, call (800) 942-6666 or visit the Events section of our Web site.

**WASHINGTON BLOOMS!**

AHS's annual celebration of spring will be held April 1 to 30, 2005, at River Farm. Special events will include the Friends of River Farm Spring Plant Sale and a new AHS Garden School: "The Art and Science of Color in the Garden." For more information, see the ad on page 13.

**WEB SITE: [www.ahs.org](http://www.ahs.org)**

The AHS Web site contains information about AHS programs and activities, gardening events in your area, and links to other useful Web sites. In 2004, AHS members can reach the member's-only area of the site by typing in this year's password: **meadow**.

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## NOTES FROM RIVER FARM

THE AMERICAN HORTICULTURAL SOCIETY headquarters at George Washington's River Farm is being transformed. Now that the Master Plan is complete, our attention is focused on the most exciting project to date—the AHS Center for American Horticulture. The dream that began in 1973, when garden philanthropist Enid Haupt generously gave 25 of the most beautiful and historic acres in America to the AHS, is on the way to becoming reality.

The excitement this process has generated was palpable during the annual AHS Gala this past September (see page 9 for more on the gala), where a set of former White House gates provided a symbolic link between the past, present, and future of the AHS. Guests marveled at these stately wrought-iron gates, which had stood at the White House from 1820 to 1934 before ending up at River Farm. With Virginia Senator John Warner and his wife, Jeanne, in attendance as Honorary Gala Chairs, we celebrated the importance of protecting all our national treasures—from historic artifacts like the White House gates to the beauty of the natural landscape.

Even though the main focus of our energy is directed at River Farm, we have been busy setting up a number of outstanding programs for AHS members around the country. As you start thinking about travel plans for spring, consider joining us at one of these events—you'll find a complete list on page 10. Each is designed to introduce you to great American gardeners, inspire you with new information, take you to unforgettable American garden destinations, and ensure you enjoy some relaxation and fun at the same time!

In early March, join the AHS President's Council for specially arranged tours of public and private gardens of the Brandywine Valley as well as a preview of the Philadelphia Flower Show—where the restored White House gates will debut in the show's entrance exhibit.

From March 31 to April 1, please come to River Farm to meet Dr. H. Marc Cathey and other garden experts, who will be presenting a new AHS Garden School, "The Art and Science of Color in the Garden."

In mid-April, join us in Orlando, Florida, for the AHS Great American Gardeners Conference in partnership with the Epcot International Flower and Garden Festival. This program includes attendance at the grand opening of the Epcot Festival, tours of nearby public and private gardens, and being part of the AHS Great American Gardeners Award Ceremony, where each year we honor an inspirational group of men, women, and organizations who have made valuable contributions to American horticulture.

We have a special treat in store on May 27, which is AHS Member Day at the Cleveland Flower Show. I will be there with Brian Holley, who is First Vice Chair of our Board and executive director of the Cleveland Botanical Garden. In addition to enjoying the flower show, you can tour the garden's amazing new glasshouse and acclaimed Hershey Children's Garden.

Experience the diversity of American horticulture by treating yourself to a garden adventure next year with the AHS.

Happy Gardening!



—Katy Moss Warner, AHS President



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## MEMBERS' FORUM

### KUDOS FOR DESIGN SERIES

I am writing to let you know how much I am enjoying the "Garden by Design" series. Garden/nature writing isn't often so lively and witty.

I've never been particularly comfortable with garden design, so it has been helpful to see the series start from "the ground up," giving us beginners a foundation so that we can participate in the series' journey. Keep up the good work.

*Mike Kerkman  
Pasadena, California*

### YOUTH PROGRAM SUPPORTER

At one time I was thinking about allowing my AHS membership to lapse, but after reading about how your organization supports America's and the world's youth, I changed my mind. Although I have no children of my own, I have raised several.

The curiosity that they have for everything, especially plants, is amazing.

My main support system locally is through the 4-H clubs in Georgia and South Carolina. The children in these programs have taught even old me how to look forward to the future and not get bogged down in the past.

*Bill Adams  
North Augusta, South Carolina*

### STICKING UP FOR HEATHERS

In his review of Thomas Hobbs' book *The Jewel Box Garden* (September/October 2004), Ian Adams stated that "Hobbs hates heathers and dwarf conifers...and prefers the spikes...of foliage plants such as *Kniphofia*." I sincerely hope most gardeners don't adopt Hobbs' opinions about these plants, because they denigrate entire groups of very useful shrubs.

*Juniperus communis* 'Compressa', for instance, is anything but "dull" and "blobby-shaped," and heathers can assume tree form, creep along the ground, or even pour over rocks, depending on the selection. Both dwarf conifers and heathers also come in a range of foliage colors.

Following the lead of James Thompson, who incorporated existing torch lilies (*Kniphofia* spp.) in his world-famous heather garden in Manchester, California, I use both torch lilies and dwarf conifers as accent plants in my own heather garden.

*Ella May T. Wulff  
President, North American Heather Society  
Philomath, Oregon*

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



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—William Wordsworth



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## 2004 AHS Gala a Resounding Success

UNLIKE LAST YEAR, no hurricane threatened this year's AHS Annual Gala, held on September 25. Instead, it was a beautifully clear evening with a bright moon presiding over the festivities. More than 360 guests made this year's gala the best attended yet.

The evening's theme, "Through the White House Gates to River Farm," centered on a set of wrought-iron gates that stood at the northeast entrance to the presidential White House in Washington, D.C., from 1820 to 1934. These historic gates, which until recently graced River Farm's entrance, were grandly displayed against a backdrop of white satin and flanked by plants and flowers. After professional restoration, they will make their next public appearance as the centerpiece of the entrance exhibit to the 2005 Philadelphia Flower Show next March. After that, they will be installed in a new garden at River Farm for all to see.



This year's gala honorary co-chairs, Virginia Senator John Warner and his wife, Jeanne, share a moment at the podium.

Gala Honorary Patron **Laura Bush**, who was not able to attend the event, stated, "The American Horticultural Society is a shining example of a non-profit organization. President Bush and I wholeheartedly applaud your work to promote the best of American gardening."

Virginia Senator **John Warner** and his wife, **Jeanne Warner**, attended the event as this year's Honorary Chairs. In a brief speech, Senator Warner praised the Society's national educational programs and mission. An accomplished artist, the senator also donated one of his floral paintings, which was a hotly contested item in the silent auction.

More than 100 businesses, organizations, and individuals generously donated items for both the silent and live auctions held during the event. The money raised will support the AHS's national programs and maintenance of the historic River Farm headquarters.

## Eastern Performance Trials Coming to River Farm

NEXT FALL, the annual AHS Gala, scheduled for September 24, will share the spotlight with an exciting new event at the AHS's River Farm headquarters—the debut of the Eastern Performance Trials sponsored by the Garden Centers of America (GCA).

River Farm is one of six host sites for the eastern trials of new plant introductions that will offer a sneak peek at the annuals, perennials, and woody plants developed for retail sale in spring 2006. Other host sites for the weeklong event from September 19 to 23 will be **Conard-Pyle** nursery in Philadelphia, Pennsylvania; **Homestead Growers** in Annapolis, Maryland; **Virginia Growers** in Richmond, Virginia; **White Greenhouse and Nursery** in Chesapeake, Virginia; and **McDonald Garden Center** in Virginia Beach, Virginia.

The Eastern Trials are modeled on the California Pack Trials, which draw more than 1,000 growers and garden center retailers to the West Coast every spring to see the newest bedding plant introductions on display at some 25 locations. "We have seen how successful the springtime California trials have been," says GCA President **Jack Bigej**. "Now we see the possibility of bringing a similar experience to the East at a different time of the year."

## Viette Radio Show at River Farm



Nurseryman and author **André Viette** broadcast his radio show, "In the Garden," from River Farm on September 25. Among the guests on the live call-in show that day were AHS Board Chair **Arabella Dane**, shown here with André, and AHS Horticulturist **Peggy Bowers**. André's show is carried by more than 60 stations in eight states. For a list of stations, visit [www.inthegardenradio.com](http://www.inthegardenradio.com).



## AHS NATIONAL EVENTS AND PROGRAMS

# 2004–2005 CALENDAR

Mark your calendar for these upcoming national AHS events and programs! More details about all these events will be available soon in *The American Gardener* and on the AHS Web site ([www.ahs.org](http://www.ahs.org)).

- DEC. 2. **Friends of River Farm (FORF) Volunteer Reception**, George Washington's River Farm, Alexandria, Virginia.

### IN 2005

- FEB. 19. **AHS SMARTGARDEN™ event** in Burlington, Vermont. (Co-sponsored by the Horticultural Gardening Institute and Gardener's Supply Company.)
- MAR. 4 & 5. **AHS President's Council Event at the Philadelphia Flower Show**, Pennsylvania Convention Center, Philadelphia, Pennsylvania.
- MAR. 31–APR. 1. **AHS Garden School: The Art and Science of Color in the Garden**. George Washington's River Farm, Alexandria, Virginia.
- APR. 1–30. **Washington Blooms!** George Washington's River Farm, Alexandria, Virginia.
- APR. 3–5. **Colonial Williamsburg Garden Symposium**. Williamsburg, Virginia.
- APR. 13–15. **AHS Great American Gardeners Conference and Awards Presentation**. Orlando, Florida.
- APR. 22 & 23. **Friends of River Farm Spring Plant Sale and Flower Show**. George Washington's River Farm, Alexandria, Virginia. NOTE: *Members-only preview sale on the evening of April 21.*
- MAY 6. **Magic of Landscaping Conference**. Orlando, Florida.
- MAY 27. **AHS Member Day at Cleveland Botanical Garden Flower Show**. Cleveland, Ohio.
- JUNE 2. **Taste of River Farm**. Alexandria, Virginia.
- JULY 28–30. **AHS National Children & Youth Garden Symposium**. Atlanta, Georgia. Hosted by the Atlanta Botanical Garden and Wonderland Gardens.
- SEPT. 19–23. **Eastern Performance Trials** at George Washington's River Farm, Alexandria, Virginia.
- SEPT. 24. **AHS Annual Gala**, George Washington's River Farm, Alexandria, Virginia.

A complete list of the major plant and seed companies that will provide the plants for the Eastern Performance Trials is still being developed, but it is expected that **Proven Winners** of West Chicago, Illinois, and **Centeron Nursery** in Bridgeton, New Jersey, will be among those supplying the plants for display at River Farm.

"This is a very exciting development for the AHS," says **Tom Underwood**, AHS director of horticultural programs. "The trials will not only make River Farm a gathering place for industry leaders, but will also give AHS members and local garden clubs a wonderful opportunity to preview the latest plant introductions."

## River Farm Named Horticultural Landmark

THE AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE (ASHS) has recognized the AHS headquarters at George Washington's River Farm in Alexandria, Virginia as an ASHS Horticultural Landmark Site. The ASHS, also headquartered in Alexandria, Virginia, bestows this honor based on a site's "historical, scientific, environmental, and aesthetic value."

"River Farm, the home of the American Horticultural Society, was selected for this prestigious recognition because of its distinguished history and leadership role for American gardeners," says **Donald Maynard**, ASHS Board member and historian. The official presentation ceremony will be held at River Farm on December 3, 2004.

"We are so thrilled that River Farm's enduring horticultural legacy has been recognized by one of the nation's most respected horticultural organizations," says AHS President **Katy Moss Warner**. "This designation is particularly appropriate at a time when we are moving ahead with a new Master Plan to make River Farm a national showcase for American horticulture."

Previous sites designated as Horticultural Landmarks include the Arnold Arboretum in Jamaica Plain, Massachusetts, and the Luther Burbank Home and Gardens in Burbank, California.

## Winter Lecture Series

IN PARTNERSHIP WITH **Cleveland Botanical Garden** (CBG), AHS is sponsoring three exciting lectures by nationally recognized gardening experts this winter.

**Tres Fromme**, planning and design leader at Longwood Gardens—and author of the "Gardening By Design" column in *The American Gardener*—will give the first lecture, "Salvation by Design," on January 13. **Allan Armitage** will talk about "Annuals and Perennials for the Northern Garden" on January 26. Allan is a professor of horticulture at the University of Georgia in Athens and author of several books on annuals and perennials. On February 26, **Holly Shimizu**, the executive director of the United States Botanic Garden in Washington, D.C., will talk about attracting pollinators to the garden in her lecture, "Pollinating Partnership."

All lectures will take place in CBG's Clark Hall from 7 to 9 p.m. Tickets are \$25 per lecture; current CBG and AHS members pay only \$20. AHS and CBG members can sign up for the entire series at a discounted rate of \$55; the non-member rate is \$70. Tickets are limited, so call (216) 721-1600 soon to reserve a seat.

## New Demonstration Garden for *The Growing Connection*

THE AHS PROGRAM, *The Growing Connection (TGC)*, recently gained a new demonstration garden in Scranton, Pennsylvania. AHS President **Katy Moss Warner** visited the site and met some of its young caretakers in July. “The children who work in the garden just loved her bubbling energy,” says **Molly Philbin**, Scranton school district project director for the federally funded BEST (Building Educational Success Together) program, which organizes a variety of after-school activities.

*The Growing Connection* is an innovative program created through a collaboration between the AHS, the **Food and Agricultural Organization (FAO)** of the United Nations, and several other partnering organizations and businesses. Its purpose is to connect children around the world as they learn about the science behind growing food plants.



Students in Scranton tend tomatoes growing in a row of EarthBoxes™, part of *The Growing Connection* Demonstration Garden.

In Scranton, local middle-school children tend 150 EarthBoxes™ they planted at the Nay Aug Park Greenhouse. **Mickey Lynch**, a Scranton native, co-invented these specially designed containers, which provide a portable and standardized planting medium for *TGC* participants around the world as they experiment with growing vegetables, fruits, herbs, and flowers in them.

“The children are learning how to garden and how to love gardening, something that will stay with them for the rest of their lives,” says Molly. “They will become better stewards of their Mother Earth as a result of *The Growing Connection*.”

“The children are learning how to garden and how to love gardening, something that will stay with them for the rest of their lives,” says Molly. “They will become better stewards of their Mother Earth as a result of *The Growing Connection*.”

## Warner to Speak at Tree Conference

AHS PRESIDENT **Katy Moss Warner** will be among the expert speakers at the Fourth Annual Great Southern Tree Conference (GSTC) to be held in Gainesville, Florida, on December 2 and 3. The Florida Nursery, Growers and Landscape Association and the University of Florida jointly developed this premier event to keep attendees abreast of new industry developments, products, and management issues in the southern United States.

Katy is scheduled to speak on “Trees: The Backbone of America’s Landscapes” on December 2.

For more information about the GSTC, call (407) 295-7994 or visit [www.greatsoutherntreeconference.org](http://www.greatsoutherntreeconference.org). Registration is required to attend the conference.

*Editorial Intern Viveka Neveln wrote the articles in this section.*

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Cherry Lake Tree Farm is pleased to announce its corporate partnership with the American Horticultural Society and is committed to helping fulfill the AHS mission by promoting the importance of large trees in the landscape.



# AHS NEWS SPECIAL: America In Bloom's 2004 Award Winners

by Viveka Neveln

INDIANAPOLIS hosted the third annual **America in Bloom** (AIB) Awards Ceremony and Educational Symposium, held October 7 to 9. Last year, Indianapolis won the AIB award in the 500,001 to 1 million population category. More than 30 communities from all regions of the United States celebrated their beautification efforts at this year's AIB event.

America in Bloom, a partner of the AHS, is a volunteer non-profit organization whose mission is "planting pride in our communities." Each year, AIB organizes a friendly competition between communities working to improve their parks, streets, and other green spaces. Judges evaluate the communities in eight specific categories: floral, urban forestry, landscape, environment, tidiness, turf and ground covers, heritage, and community involvement.

AHS President **Katy Moss Warner** was the keynote speaker at this year's symposium, which also featured the debut of the AHS sponsored "Community Involvement Award." The city of Vernal, Utah, earned the inaugural award based on the strong volunteering tradition in the community. A complete list of the 2004 award winners for both population levels and special categories is shown at right.

"This was the best educational symposium and awards ceremony yet," says AIB Administrator **Laura Kunkle**. "During the three-day event, AIB participants from all over the United States had a chance to network with other communities and share similar challenges, opportunities, and solutions. Even though it's great for the individual cities that won their population categories, everyone wins by planting pride in their communities."

To find out how you can get your community involved with next year's AIB competition, contact Laura Kunkle at (614) 487-1117 or visit [www.america.inbloom.org](http://www.america.inbloom.org).

*Viveka Neveln is editorial intern for The American Gardener.*



Sandusky, Ohio



Rancho Santa Fe, California



Naperville, Illinois

## 2004 AIB AWARD-WINNING COMMUNITIES

- 5,000 or less                      Rancho Santa Fe, California
- 5,001–10,000                    Goshen, New York
- 10,001–15,000                  Greenfield, Indiana
- 15,001–25,000                  Hershey-Derry Township, Pennsylvania
- 25,001–50,000                  Sandusky, Ohio
- 50,001–100,000                Fayetteville, Arkansas
- 100,001–300,000                Naperville, Illinois
- University Campus              Utah State University, Logan, Utah

## 2004 CRITERIA AWARD WINNERS

- Gardens Alive! Environmental Effort Award *Kalamazoo County, Michigan*
- Proven Winners Landscaped Areas Award *Rancho Santa Fe, California*
- Ball Horticultural Company Floral Displays Award  
*Newburyport, Massachusetts*
- American Horticultural Society Community Involvement Award  
*Vernal, Utah*
- Scotts Company Turf & Groundcover Award  
*Hershey-Derry Township, Pennsylvania*
- Hiron & Company Heritage Conservation Award *Goshen, New York*

American Horticultural Society

# Washington Blooms!

April 1 – 30, 2005

## Celebrate Spring with AHS

**J**oin us this April for Washington Blooms! at River Farm. Nothing compares with the beauty of the early spring blooms in the National Capital area. Cherry blossoms, daffodils, and tulips herald the coming of spring in an explosion of color. Mark your calendar and plan to visit River Farm and the National Capital area this April—you'll find a variety of spring delights with something for every gardener and garden enthusiast, no matter what your passion!

### 2005 Washington Blooms! Events at River Farm

- April 2** Spring Garden & Bulb Tour  
SMARTGARDEN™ Tip of the Week
- April 9** Spring Garden & Bulb Tour  
SMARTGARDEN™ Tip of the Week
- April 16** Virginia Historic Garden Week  
Alexandria House & Garden Tour  
Spring Garden & Bulb Tour  
SMARTGARDEN™ Tip of the Week
- April 21** Members-Only Preview Night  
Friends of River Farm Plant Sale
- April 22 & 23** Friends of River Farm Plant Sale
- April 23** Spring Garden & Bulb Tour  
SMARTGARDEN™ Tip of the Week
- April 30** Family Day at River Farm  
Spring Garden & Bulb Tour  
SMARTGARDEN™ Tip of the Week



#### Ongoing for the month of April at River Farm

- Thousands of spring blooms!
- AHS Green Garage™ Display
- River Farm Cottage Shop
- Botanical and Garden Art Exhibit

#### More Reasons to Visit the National Capital Area in April

- National Cherry Blossom Festival (through April 11)
- Historic Garden Week in Virginia (April 16–24)



### AHS Garden School

**New!** “The Art & Science of Color in the Garden”

March 31 & April 1, 2005

**I**mmerse yourself in the intricacies of color in the garden with this exclusive AHS Garden School offering. Whether you're an avid gardener or a horticultural professional, you can sharpen your skills and explore the kaleidoscope of possibilities of color in the garden with this two-day intensive program held at the Society's River Farm headquarters in Alexandria, Virginia.



- Learn about the art and science of color from a horticultural perspective.
- Get personal insights from industry pros and horticultural experts. If you have ever looked at a perfectly colored border and wondered, “How do they do that?”—this school is for you.
- Find out how an understanding of color and color relationships can transform an average garden into a “knock-your-socks-off” display of horticultural prowess.

Through a variety of presentations, demonstrations, and specially planned activities, participants will learn practical tips and techniques for mastering the effective use of color in the landscape.

The AHS Garden School offers a truly unique environment for life-long learning—intimate, in-depth workshops featuring personal instruction from noted garden authorities; opportunities for practical application and hands-on experiences—all this in a truly inspirational setting—historic River Farm, overlooking the beautiful Potomac River.

Visit [www.ahs.org](http://www.ahs.org) or call (703) 768-5700 for more information about how you can be a part of this exciting program.

Visit [www.ahs.org](http://www.ahs.org) or call (703) 768-5700 for more information.



# Fragrant Foliage

Plants with fragrant leaves make scents throughout the garden.

BY RAND B. LEE

**M**Y FAVORITE GARDENS are those that engage all of my senses: the tactile appeal of leaf, wood, stone, and soil; the sound of bird-song, trickling water, and wind-rustled foliage; the taste of some magical morsel that, if the birds don't beat me to it, I can pluck and pop into my mouth. But above all, my favorite gardens are those that dazzle my sense of smell, not only with perfumed flowers, but also by way of scented foliage. Most plants, after all, produce far more leaves than flowers, which means you get a lot more bang for your olfactory buck with scented-leaf plants.

Now it is true that many flowers will fling their fragrance across the garden at you, while most fragrant foliage must be touched to release their scent. All this

means is you must site the latter where you can tread on them, brush up against them, or pinch them in passing: outside the kitchen window, in the sunroom, flanking entryways, along paths, in patio tubs, between paving stones, or dangling from trellises, hanging baskets, and window boxes.

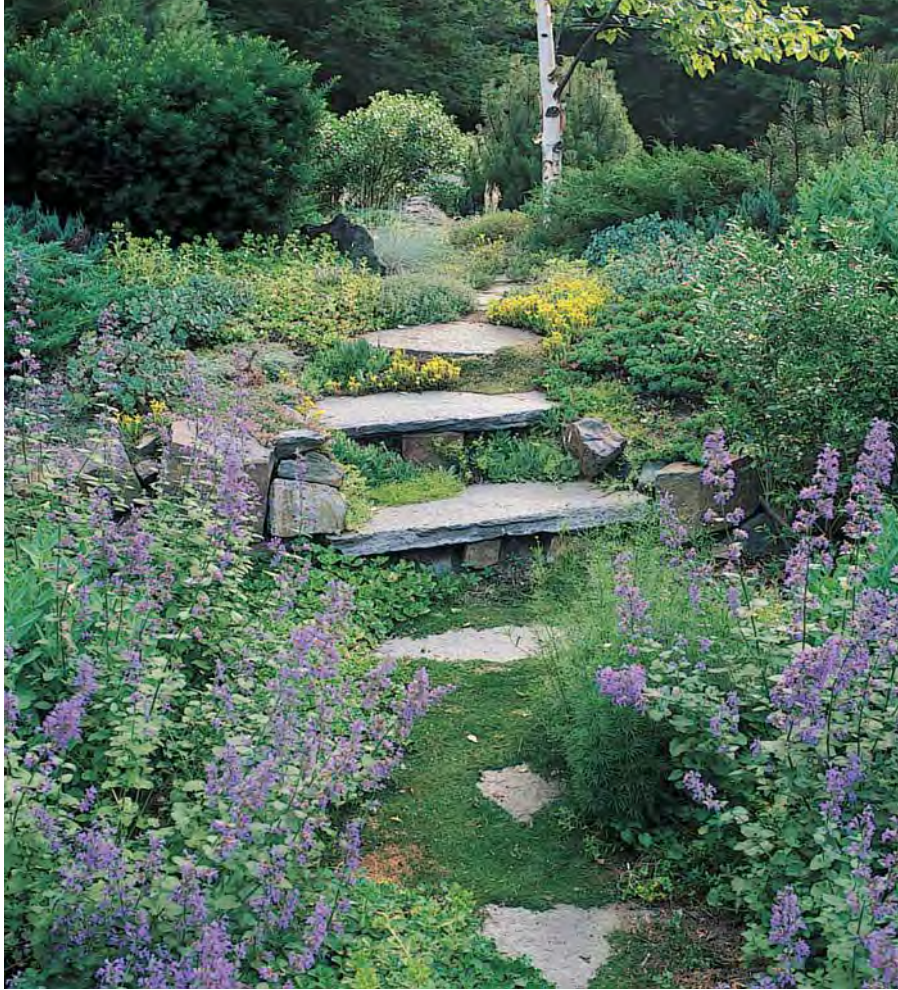
The Elizabethans knew this and incorporated scented plants in garden seats and lawns and around stepping stones in pathways. (For how to plant a scented lawn, path, or seat, see sidebar on page 16.)

## SCENT UNDERFOOT

Perhaps the most widely used plants for the fragrant lawn, path, or seat are the creeping thymes, all of which bloom in late spring to midsummer. They prefer a well-drained site and regular watering.

My favorite is the creeping lemon thyme, *Thymus* 'Doone Valley', which makes a marvelous mat five inches tall and a foot wide. Its shiny, gold-splattered dark green leaves are intensely lemon scented. It bears lilac-pink flowers, is hardy from USDA Hardiness Zones 6 to 9, and tolerates summer temperatures in AHS Heat Zones 9 to 6.

In Santa Fe, where I live, lots of folks plant woolly thyme (*Thymus pseudolanuginosus*, Zones 5–9, 9–5), which is often sold under the name *T. praecox* 'Pseudolanuginosus'. It makes a soft, hairy, gray cushion—delightful to touch—and bears tiny two-lipped, lilac-pink flowers in early summer. Its fragrance is slight but perceptible. It appears to be the most sun-, heat-, and drought-tolerant of the creeping thymes,



and it grows only two inches tall.

Perennial chamomile (*Chamaemelum nobile*, formerly *Anthemis nobilis*, Zones 6–9, 9–6) is another traditional perfumed ground cover. It bears apple-scented, feathery foliage and adorable yellow-centered white daisies. Because it gets a foot tall by a foot and a half wide in bloom, it's more suited to lawns than to paths or seats. For those you'll want the cultivar 'Treneague', a strongly perfumed, non-flowering clone that only grows about four inches tall.

## SUB-SHRUBS AND PERENNIALS

There are quite a few aromatic members of the dead nettle family (Lamiaceae); the

Above: *Nepeta* 'Six Hills Giant' flanks the flagstone steps in this woodland garden. Left: Perennial chamomile bears apple-scented leaves and loads of small white blossoms. Opposite: A scented lawn of thymes (*Thymus citriodorus*, *T. pseudolanuginosis*, and *T. praecox* subsp. *arcticus*) and lavender make a sweet welcome mat for this bungalow.

catmints are favorites of mine, and are fairly widely adapted across the country. Common catnip (*Nepeta cataria*, Zones 3–7, 7–1) grows three feet tall by about a foot and a half wide; its gray-green leaves have furry undersides and bear an incense-like fragrance that humans find relaxing and most cats find intoxicating. There is also a lemon-scented form.

Of greater ornamental value, but no less fragrant, are the many forms of garden catmint (*Nepeta* × *faassenii*, syn. *N. mussinii*, Zones 4–8, 8–1). The most common cultivar is probably 'Dropmore', which makes a soft gray mound 18 to 24 inches tall by 18 inches wide, frosted in summer with lavender blossoms. But I like *Nepeta* 'Six Hills Giant' better. A hybrid, it is just as hardy and just as fragrant as 'Dropmore', but is bigger—three feet

## Resources

**The Botanical Garden** (Vols. I and II) by Roger Phillips and Martyn Rix. Firefly Books, Buffalo, New York, 2002.

**A Garden of Fragrance** by Suzy Bales. ReganBooks, New York, New York, 2002.

**Scented Plants** by David Squire and Lucy Huntington. Sterling Publishing, New York, New York, 2000.

## Sources

**Forestfarm**, Williams, OR. (541) 846-7269. [www.forestfarm.com](http://www.forestfarm.com). Catalog \$5; free online.

**Richters Herbs**, Goodwood, Ontario. (905) 640-6677. [www.richters.com](http://www.richters.com). Catalog online.

**Well-Sweep Herb Farm**, Port Murray, NJ. (908) 852-5390. [www.wellsweep.com](http://www.wellsweep.com). Catalog online.

**Woodlanders**, Aiken, SC. (803) 648-7522. [www.woodlanders.net](http://www.woodlanders.net). Catalog \$4.

tall by two feet wide or more.

Most catmints like a relatively dry, well-drained, neutral to alkaline site in full sun. One that doesn't, however, is Siberian catmint (*N. sibirica*, Zones 3–8, 8–1), which has an upright form, grows to three feet tall by 18 inches or more wide, and bears toothed, oval, dark green leaves on branched stems. Its blossoms are bigger and darker blue than those of most catmints. The whole plant bears a strong minty-fruity perfume. It requires part shade in hot climates and regular moisture, and where it gets it, it can spread like wildfire, so be forewarned.

While lavenders are usually grown for their fragrant blossoms, their foliage is scented, too. The kind with the sweetest scented leaves is the fringed lavender (*Lavandula dentata*, Zones 5–9, 9–4), native



**Above:** Fragrant-leaved plants grown in containers, like the lemongrass shown, can be placed where they are most easily enjoyed in the garden. **Right:** *Salvia officinalis* 'Aurea' and thyme edge a stone path, releasing their fragrance when brushed.



to the Mediterranean and the Arabian peninsula. There are dark green and gray-leaf (*L. dentata* 'Candicans') forms, and in all of them the finely toothed foliage is far more sweetly and persistently scented than are the chubby violet flower spikes.

More English lavender (*L. angustifolia*, Zones 5–8, 8–5) cultivars appear on the market every spring; some of them, like 'Sharon Roberts', bloom twice a year. But my favorite is 'Twickel Purple', one of the oldest lavenders still available in commerce. It makes a stunning, two-foot-by-three-foot hedgehoglike hemisphere of delightfully scented foliage, with deep purple flowers in summer.

A depressing number of aromatic sages are not hardy in Santa Fe, such as balsam-scented *Salvia clevelandii* (Zones 8–10, 10–1), pineapple-scented *S. elegans* (Zones 8–11, 12–1), and—my favorite—the glorious, furry-leafed, fruit-scented, magenta-blossomed Honduran *S. dorisiana* (Zones 9–10, 10–9). I grow these salvias—and other fragrant tender perennials such as lemongrass (*Cymbopogon citratus*)—in containers on my patio, where I can enjoy them up close.

In the garden, however, I can rely on good old culinary sage (*S. officinalis* Zones 5–8, 8–5). All of its cultivars are richly scented; many are strikingly ornamental. My favorites are 'Berggarten',

which has very large, oval gray leaves and dark blue flowers, and two that are hardy only to Zone 7: purple-gray leaved 'Purpurascens', and 'Tricolor', with leaves that are mainly gray-green and yellow-green but can also be marked with white, pink, or red.

All members of the North American genus *Agastache* are fragrant-leaved treats. For gardeners in climes that receive regular rainfall, the best agastaches to grow are probably the anise hyssop (*Agastache foeniculum*, Zones 4–11, 12–5) and the purple giant hyssop (*A. scrophulariifolia*,

## THE FRAGRANT LAWN, PATH, AND SEAT

Unless you are lucky enough to have well-drained soil to start, fragrant lawns and paths are labor-intensive. Prepare the site by digging it to the depth of several inches, removing weeds and stones, and if necessary, lightening it by adding compost, coarse builder's sand, or fine gravel. Incorporate these amendments along with any fertilizers deemed necessary by a soil test. Rake the area smooth.

Whether you start with seed or transplants, you will have to keep the bed evenly moist until the plants are established. If you live in a hot, dry climate, you might want to consider installing a drip irrigation system; it might also be useful to rig a shade cloth over the site while plants adjust to their site. Follow approximately the same procedure when constructing a path composed of stepping stones interspersed with fragrant ground covers.

Don't subject your lawn to much foot traffic the first year. All sorts of weeds will pop up during this time; they need to be uprooted as soon as possible.

If a lawn seems like too much work, consider starting small with a fragrant seat. Stack some cinderblocks into a cube that reaches to a comfortable sitting height, with the solid sides facing outward and the open ends pointing skyward. Fill the openings with a free-draining soil mix, water so that the mix settles, then plant with the same sorts of low-growing aromatics you'd put between paving stones. In time, the plants will spread out over the surface, forming a fragrant cushion. Stone or wood planters make good scented seats, too.

—R.B.L.



## MORE PLANTS WITH FRAGRANT FOLIAGE

Plant name	Height/Spread (inches)	Comments	USDA Hardiness, AHS Heat Zones
<b>FOR LAWNS, PATHS, OR SEATS</b>			
Corsican mint ( <i>Mentha requienii</i> )	1/indefinite	tiny oval leaves, shade loving	6–9, 9–6
Dwarf silvermound ( <i>Artemisia schmidtiana</i> 'Nana')	3/12	evergreen, feathery silver leaves	5–8, 8–3
Feverfew ( <i>Tanacetum parthenium</i> 'Golden Moss')	4/12	yellow-green leaves, mat-forming	4–9, 9–1
Herb baron ( <i>Thymus herba-barona</i> )	4/8	dark green leaves with caraway seed scent	6–9, 9–6
Lemon thyme ( <i>Thymus ×citriodorus</i> )	6–12/10	tiny, medium-green, lemon-scented leaves	6–9, 9–6
<i>Phuopsis stylosa</i>	6/20	light green, musk-scented leaves, rounded pink flower heads	5–8, 8–5
<b>FOR BEDS, BORDERS, AND CONTAINERS</b>			
Beebalm ( <i>Monarda didyma</i> 'Marshall's Delight')	30–36/24	aromatic light green leaves, pink flowers, resistant to powdery mildew	3–9, 9–1
Borage ( <i>Borago officinalis</i> )	24/18	dull green, cucumber-scented leaves, pale blue flowers	0–0, 12–1
Lemon balm ( <i>Melissa officinalis</i> )	24–48/18	wrinkled, light green leaves, minty-lemon scent	4–9, 12–1
Lemon verbena ( <i>Aloysia triphylla</i> )	10 ft./10 ft.	bright green, intensely lemon-scented leaves, good for containers	8–11, 12–8
Pineapple mint ( <i>Mentha suaveolens</i> 'Variegata')	36/indefinite	spreading habit, leaves variegated white and bright green, fruity fragrance	6–9, 9–6
Rosemary ( <i>Rosmarinus officinalis</i> 'Arp')	60/60 (often less)	pungent, evergreen, needlelike leaves, prefers alkaline soil	7–10, 10–8
Sweet marjoram ( <i>Origanum majorana</i> )	32/18	soft, oval gray-green leaves	4–9, 10–2

Zones 4–9, 9–1). Both produce distinctly licorice-scented leaves.

Anise hyssop grows three to five feet tall and a foot wide and bears dense spikes of bluish blossoms from midsummer to frost. It reseeds prolifically but is not a menace. The purple giant hyssop, despite its name, rarely tops four feet. Cultivars include 'Licorice Blue', which bears the usual species flower color, and 'Licorice White', an albino variant.

These hyssops are dullards compared to their dry-climate relatives, the hummingbird mints, which I can grow to perfection in my sun-baked alkaline Santa Fe soil.

Hummingbird mint (*Agastache cana*, Zones 6–11, 12–1), also called wild hyssop, native to New Mexico and West Texas, is an upright, gray-leafed, rather airy plant two to three feet tall by about two feet wide; all its parts smell like a wonderful mix of bubble gum and camphor.

*Agastache aurantiaca* (Zones 7–10, 10–7) grows 18 to 30 inches tall by 24 inch-

es wide, with slim gray leaves and thin frangible stalks, scented of anise and mint; it bears loose clusters of thin orange trumpets in summer. Easy to grow from either cuttings or seeds, it can be coaxed to survive Zone 6 winters with the help of a warm wall, well-drained soil, and protection from wind. 'Apricot Sunrise' is a selection with purplish calyxes and stems and pale orange trumpets.

One fragrant plant I ache to grow is bastard balm (*Melittis melissophyllum*, Zones 6–9, 9–6), but I am still seeking a source for it. This European woodland native makes smallish clumps eight to 28 inches tall by 20 inches wide; its stalks are topped with whorls of attractive, white or pink, two-lipped blossoms, each marked distinctly in pink or purple on their lower lips. It's a magnet for bees. The bastard balm's lightly toothed green leaves are the real treat, however: They are distinctly scented of honey, as you may have guessed from its Latin name.



Anise hyssop has licorice-scented leaves and self sows with abandon.

## MAKING SENSE OF SCENTS

Scent in plants is a serious matter—it is a stimulus for considerable interaction between plants and animals. The most common interactions involving scent are pollination and herbivory, or consumption of the plant.

We all know that scented flowers attract pollinators, but biologists have found that fragrance emitted from other parts of the plant—including leaves—also lure pollinating insects. This plant–pollinator interaction is often very specific. Such relationships suggest that fragrance has played a significant role in the co-evolution of many insect and plant species.

Scented fruits attract animals that consume them, and, passing the seeds through their digestive tracts, disseminate them abroad. Scented bark and roots repel certain above- or below-ground predators.

Scented leaves also repel or kill certain predators. Plants that are poisonous to indigenous herbivores have a distinct survival advantage over those that are not. Extracting these volatile oils has led to the development of several botanical insecticides. Thyme oil has been used in flea collars for pets to repel fleas; products that include oil from the neem tree (*Azadirachta indica*) can be applied to many ornamental plants to protect them against a variety of insect pests.

The volatile compounds that are responsible for scent in leaves also protect certain plants from drought and desiccation. Bright sun stimulates the release of oils as a vapor, providing a buffer that keeps the leaf surface significantly cooler. Observation of this phenomenon led to the old English custom of using branches of rosemary to cool walls that stood in full sun. In addition to rosemary, studies have shown that the volatile oils in thyme and lavender plants demonstrate similar cooling qualities.

*Rita Pelczar, Contributing Editor*



Native to the southeastern United States, the evergreen purple anise (*Illicium floridanum*) contributes year-round scent to gardens in warm climates.

## NOSING AMONG THE SHRUBS

If you're looking for a larger plant with fragrant foliage, there are plenty of winter-hardy aromatic shrubs that you can plant along a pathway or behind a favored bench. I always associate the sweet shrub or Carolina allspice (*Calycanthus floridus*, Zones 5–9, 9–1) with the Deep South, but it is surprisingly hardy; it can get eight feet tall by 10 feet wide. It is usually grown for its spice-scented, reddish-brown summer flowers, but its dark green leaves have a strong, pleasant camphor scent, and its bark smells like cinnamon. The 10-foot-by-12-foot California allspice (*Calycanthus occidentalis*, Zones 6–9, 9–6) also bears sweetly scented leaves. Both grow best in moist, deep soil in sun or part shade.

Similar conditions are favored by the North American native spice bush (*Lindera benzoin*, Zones 4–9, 8–1) and its slightly less hardy relative, the Japanese spicebush (*L. obtusiloba*, Zones 6–9, 8–1).



Roses are known for fragrant flowers, but eglantine roses have apple-scented leaves.

Both bear deliciously fragrant foliage, bright green in *L. benzoin*, which grows 10 feet tall by 10 feet wide, and dark green in *L. obtusiloba*, which grows twice as large.

Purple anise (*Illicium floridanum*, Zones 7–9, 9–4) grows eight feet tall and wide. Its leathery evergreen leaves emit a spicy fragrance when touched. Star-shaped red flowers are a bonus.

There are a number of species roses with scented foliage. Highly aromatic are the fernlike leaves of the incense rose (*Rosa primula*, Zones 5–9, 9–5), a Central Asian native that bears single yellow blossoms. The leaves of my seed-raised eglantine roses (*Rosa eglanteria* syn. *R. rubiginosa*, Zones 4–9, 9–1) already give off the apple scent for which this ancient plant is famous. The slightly less hardy *R. villosa* (Zones 5–12, 12–1) bears apple-scented leaves, too.

## SCENTS ALL AROUND

The relationship between plants with fragrant leaves and the gardener who tends them is an intimate one, because the scent is released only when they come in contact with each other. These plants offer such intoxicating rewards that any chore you can come up with that puts you in their reach becomes a delight. There are so many more of these aromatic wonders, and I love them all. You will too, when you start collecting them. So get to it. 🌿

*Writer and lecturer Rand B. Lee is president and founder of the North American Cottage Garden Society.*

These underused evergreen shrubs offer year-round interest and attract wildlife.

**W**RITING ABOUT the genus *Mahonia* can be, in these controversial times, quite controversial. In the hallowed halls of academia, there is little justification to keep the genus independent from its close barbarian cousins in the genus *Berberis*. I can accept the argument for abandoning *Mahonia* in favor of *Berberis* on an intellectual level, but physically they appear very distinctive (for more on this, see sidebar, page 20). I am treating them as separate entities, as do most current gardening references.

Under any name, the genus of evergreen shrubs known as *Mahonia*—the name commemorates 19th-century American horticulturist Bernard McMahon—offers a surfeit of species and hybrids that lend handsome textural foliage, off-season flowers, and colorful crops of fruit for year-round interest in the American garden.

No fewer than 15 *Mahonia* taxa exist, though numerous intergrades occur between species where their ranges overlap. In the New World, the genus *Mahonia* occurs naturally along the western coast only, from British Columbia to Central America, and only as far east as the Great Basin, where the common name of Oregon grape still adheres. Although the species in northeastern Mexico have garnered considerable taxonomic study, very little is known of those further south in the higher elevations of Guatemala, Nicaragua, and Costa Rica. Another center of distribution of the genus exists from the Himalayan region into eastern China and Japan and as far south as Indonesia.

Along with my talented staff at Heronswood Nursery and its associated five-acre garden, I am growing most of the species I cover in this article on the northern end of the Kitsap Peninsula in Kingston, Washington, and have observed others growing in gardens throughout the United States and in the United Kingdom.

### EARLY INFLUENCE

As a youngster on vacation with my fam-



## make way for *Mahonias*

BY DAN HINKLEY

ily at Mt. Rushmore in South Dakota, I excitedly came upon my first mahonia. It was the so-called creeping mahonia (*Mahonia repens*, USDA Zones 4–9, AHS Zones 9–1), although at that time I believed I was seeing my first holly in the wild. Creeping mahonia is certainly the most rugged of the clan and naturally inhabits the climatically brutal western interior of North America. The suckering

stems rise no taller than a foot in height, and the leathery evergreen foliage assumes bronze and red tints when grown in full sun, becoming especially intense during the winter. I have seen this grown as a superlative ground cover at the Denver Botanic Garden; it is also effectively employed in the more benign climate of the Pacific Northwest as a drought-tolerant garden subject.

**A late-winter bloomer, *Mahonia japonica* 'Bealei' bears powdery blue berries as early as March.**



A North American native, low-growing *Mahonia repens*, top, serves as a ground cover with small leaves that burnish red to purple in winter. Another native, *M. nervosa*, above, features much longer leaves.

The natural range of *M. nervosa* (Zones 5–7, 7–5) extends from northern California to British Columbia. Commonly known as longleaf mahonia, it possesses a much longer, compound leaf than *M. repens*, with seven to 23 leaflets. These take on a striking deep purple winter color when grown in full sun, although this species is typically and commonly found growing in moderately moist, shaded positions at low elevations. Terminal racemes of yellow flowers bloom in late winter and result in comely crops of blue fruit.

## OREGON GRAPE

The tall Oregon grape (*M. aquifolium*, Zones 5–9, 9–3) caused some horticultural twitter when introduced in Britain in

## COUSINS IN NAME ONLY

Taxonomists recently decided that mahonias should be lumped into the genus *Berberis*, but gardeners have not yet embraced this decision.

Both genera are members of the barberry family (Berberidaceae), but whereas barberries (*Berberis* spp.) possess both evergreen and deciduous species, mahonias are unconditionally evergreen; their foliage is pinnately compound, with leaflets arranged along opposite sides of a central stalk or rachis in an alternate fashion. Close observation of the anatomy of barberries reveals that their leaves are also compound, though the leaf rachis is so compressed they appear to possess multiple simple leaves at each node. Mahonias lack the nodal thorns found in barberries; however, their stiff barbed leaves will bite if provoked.

The flowers of both *Berberis* and *Mahonia* are anatomically identical and, depending upon the species, offered in tones of yellow, white, orange, or, rarely, red; and both possess what are known as irritable anthers. These abruptly contract towards the stigma when stimulated at the base and, in the process, dab any nectar-seeking insect with pollen. The flowers of most mahonias are presented in terminal fascicles—dense clusters—of erect simple racemes, whereas the prototypic inflorescence of the barberry is produced in leaf axils by way of solitary racemes.

Another reason to think of these two genera separately is that some barberries are alternate hosts for wheat black stem rust, a fungal disease that plagues wheat and other grains. Several barberries particularly susceptible to this disease—including *B. canadensis*, *B. fendleri*, and *B. vulgaris*—are now illegal to sell or transport in the United States and Canada. —D.H.

1823, setting back the typical obsessive-compulsive gardener of the time by some 10 quid. It is a plastic species in nature, making certain identification difficult, as it readily unites with both *M. repens* and California holly grape (*M. pinnata*) where their natural digs overlap. Found (infrequently) growing on the Kitsap and Olympic Peninsula in Washington State, it forms a vigorous, suckering shrub eight feet or taller, with glossy, pinnate, spiny-edged leaves. In late winter, short, erect racemes of butterscotch flowers result in later sets of blackish blue fruit.

There are a handful of handsome selections based, at least primarily, on *M. aquifolium*. ‘Atropurpurea’ is sensational and should be available much more than it currently is. The glistening purple suffusion of its evergreen foliage does not ripen until the onslaught of low winter temperatures, adding a delicious and rich gleaming presence to the off-season landscape.

In February 2001, while walking through the garden of renowned English plantsman Graham Stuart Thomas, I admired the cultivar ‘Moseri’, which develops rich tones of burgundy in its winter foliage. I am perplexed as to why this handsome and durable shrub, too, is not

more widely used in American horticulture. Another worthy selection is ‘Orange King’, which I received in the early ’90s from J.C. Raulston, who was director of what was then the North Carolina State University Arboretum. This plant remains quite compact in growth, to three and a half feet tall and wide, and has more deeply saturated flowers of rich yellow-orange than the species.

## OTHER NATIVE MAHONIAS

Closely allied to Oregon grape is California holly grape (*M. pinnata*, Zones 5–9, 9–1), with a natural range that extends from Baja to British Columbia. Because it so readily hybridizes with *M. aquifolium*, its past is checkered in regard to both its taxonomy as well as its horticultural application. Cultivated hybrids between the two, which are perhaps more plentiful than first imagined, have been provided the umbrella epithet of *M. ×wagneri*.

True California holly grape, with seven to 11 leaflets per leaf, possesses generally more than *M. aquifolium*’s five to nine. The leaflets of the former are finer textured and appear more spined. At Heronswood Nursery as well as in my new garden in Indianola, Washington, I grow *M. pinnata*



The grapelike clusters of blue berries, above, that follow the yellow blossoms of *Mahonia aquifolium*, right, inspired its common name, Oregon grape. Its southwestern relative, *M. fremontii*, bottom, sports striking bluish-green foliage and is very drought tolerant.

‘Ken Hartman’, a fine garden plant that has medium-textured glossy green foliage emerging in rich tones of copper, densely held along stems that grow up to five feet tall with an equal width. It bears erect clusters of yellow flowers in late winter, but it is for its superb foliage, providing good effects year round, that we grow this plant.

In the greater Southwest, extending into northern Mexico and Baja, the desert mahonias come into play. Although I believe them to be quite muddled taxonomically in the trade, *M. fremontii*, *M. nevinii*, and *M. trifoliata* (and other much rarer species) possess, on the whole, small, very spiny leaves, generally with an excellent bluish cast. The yellow or orange flowers are borne in short, somewhat lax panicles in late winter and early spring. These can make sensational wildlife-attracting garden subjects for arid climates if grown in sharp-draining soil and full sun.

### ASIAN MAHONIAS

Our American mahonias tend to bloom in late winter to early spring; for true winter-blossoming mahonias, one must travel to Asia. At the earliest end of the bloom spectrum are *M. gracilipes* (Zones 8–9, 9–8) and *M. confusa* (Zones 8–9, 9–8), which





The dainty coral-red and yellow flowers of *M. gracilipes*, above left, belie the shrub's substantial, leathery leaves. The blue-green leaves of *M. lomariifolia*, above right, are fernlike and contrast smartly with the bright yellow flowers. Both species hail from Asia.

grow side by side in the mountains of the southwestern provinces of China. These two relatively new additions to our landscapes might more appropriately be considered autumn blossoming.

The former offers coral-red and yellow flowers held in spidery sprays atop stems up to four feet or slightly more. In addition, *M. gracilipes* possesses astonishing leathery textured leaves sporting an underside of brilliant, chalky white.

*M. confusa*, which blossoms slightly later, features upright and dense racemes of red and white flowers. Its elegant foliage displays arresting tones of bluish gray. A naturally occurring hybrid between these two, *M. xsavillii*, commemorates Savill Garden, the Queen's garden in Great Windsor Park, England, where this union was first observed.

These species, while of exciting horticultural potential, do not command the presence of numerous hybrid selections between two other Asiatic species, *M. japonica* and *M. lomariifolia*.

*Mahonia japonica* (Zones 7–9, 9–7) is a mainstay in Japan, where it is massed by

the thousands throughout city landscapes. A dense, rather low-growing species that grows four feet tall or slightly more, it produces lax racemes of fragrant, pale yellow flowers from January to March.

A cultivar of this species (in truth, this is produced by seed, so some references describe it as a seed strain or “group”), ‘Bealei’, is the mahonia most frequently encountered in North America. Here in the Pacific Northwest, it grows rather lax and gangly, but it stays compact and performs superbly in the sultry climate of the lower mid-Atlantic and Southeast. Other named forms of *M. japonica* are starting to appear in nurseries.

*Mahonia lomariifolia* (Zones 8–9, 9–5) on the other hand, is Chinese in origin and offers a remarkable texture to Northwest landscapes. Its narrow, pinnate leaves are two feet or longer, and are densely arranged along upright stems up to six feet tall; its texture is almost fernlike. In mid-winter, stunningly beautiful erect racemes of clear yellow flowers bloom atop each stem. The caveat for this species is tenderness; during the notorious 1990–1991 freeze, specimens

across much of the Puget Sound, as well as Portland, were cut to the ground.

*Mahonia mairei* (Zones 8–9, 9–5) possesses the longest and most elegant foliage of all the species we cultivate at Heronswood, with sharply textured pinnate fronds up to three feet in length. In late winter, substantial sprays of magnificent, orange-yellow flowers appear in spidery, 15-inch terminal racemes. This species, which does not appear in literature, is on the cusp of hardiness in the Pacific Northwest and benefits from the overhead protection found in our woodland garden.

Our sole garden specimen of *M. veitchiorum* (Zones 4–9, 9–5), grown from seed received from China years ago, is very distinctive in foliage, offering notably glossy leaflets of light green accentuated by a bright yellow leaf axis. The stubby terminal racemes of bright yellow flowers are produced in February and March.

Curiously, *M. fortunei* (Zones 8–9, 9–4) has a rather long history of use in gardens of the Pacific Northwest and has, from time to time, been readily available on a commercial basis. It has dull bluish green

pinnate leaves comprised of numerous narrow leaflets that are, sadly, extremely susceptible to powdery mildew. The wimpy racemes of yellow flowers, which open in late autumn, are among the least effective of the genus.

## HYBRIDS

Obviously, there are many fine mahonia species to consider, but it is to the hybrid progeny between *M. japonica* and *M. lomariifolia* that I think gardeners of the western coast and mid-Atlantic states should turn their attention. This group of plants, known collectively as *M. ×media* (Zones 7–9, 9–8), exemplifies the best of all winter-flowering shrubs for our climate.

The pairing of these two species occurred spontaneously at the legendary, but unfortunately no longer existing, nursery of Slieve Donard in Ireland. From a thousand potted plants resulting from seed of *M. lomariifolia*, three distinct and obvious hybrids were noted and selected by the King's gardener, Sir Eric Savill.

The best of these, christened *M. ×media* 'Charity', still grows as a magnificent specimen at the aforementioned Savill Garden. I have paid homage to this celebrated plant—a deep green globe, 15 feet in diameter, with toothsome textural qualities—on numerous occasions. The clear yellow flowers of 'Charity' carry a



*M. ×media* 'Lionel Fortescue' may prove to be the hardiest *M. lomariifolia* offspring.

lovely jasminelike fragrance. Flowering is often in full swing by Christmas—or much earlier during mild autumns.

English gardener Lionel Fortescue made other crosses between the same parents, and the best of the lot bears his name. *M. ×media* 'Lionel Fortescue' thrives on the north side of our home. There it entertains for several weeks each winter, blooming dependably by Thanksgiving Day. Deep green pinnate leaves up to 18 inches long are produced along a narrow upright framework up to eight feet in height while the bright yellow flowers form dense 14-inch clusters of terminal racemes; as many as 50 racemes in each cluster may crowd the top of each stem.

An unusually harsh winter in Seattle in the late 1950s selected a hybrid from a flat of *M. lomariifolia* seedlings accidentally left outdoors at Washington Park Arboretum. All but a single plant perished; the survivor was named 'Arthur Menzies', in honor of the assistant director of Strybing Arboretum in San Francisco, who had provided the seed. This apparent hybrid between *M. lomariifolia* and *M. japonica* 'Bealei' has developed into a sensational, broad, bold-foliaged specimen that is 15 feet tall by 10 feet wide. The bright yellow flowers—borne in dense, upright trusses—are generally open by New Year's Day. Unfortunately, the frigid temperatures we sometimes experience in early January in the Pacific Northwest can ruin the floral display.

## SIDE BENEFITS AND CARE

Besides providing year-round garden interest, mahonias attract a wide variety of birds and insects that feed upon their nectar and fruit. Our colonies of honeybees as well as numerous wild bees and wasps feast on these flowers. We have also seen Anna's hummingbirds and numerous species of migrating warblers sipping from the flowers. These beguiling visitors engender a second season of interest in the form of magnificent crops of large purple-blue berries coated with a powdery white bloom that turn to bright pink as they ripen.

Mahonias have few pest and disease problems and are far from troublesome garden plants. They respond to any soil with good drainage if provided even moisture until fully established. Overstory protection is advisable in colder cli-

## Resources

### A-Z Encyclopedia of Garden Plants

edited by Christopher Brickell and Dr. H. Marc Cathey. DK Publishing, Inc., New York, New York, 2004.

### Manual of Woody Landscape Plants

by Michael A. Dirr. Stipes Publishing, Champaign, Illinois, 1998.

**Western Garden Book** edited by Kathleen Norris Brenzel. Sunset Publishing, Menlo Park, California, 2001.

## Sources

**Fairweather Gardens**, Greenwich, NJ. (856) 451-6261. [www.fairweathergardens.com](http://www.fairweathergardens.com). Catalog \$4; free online.

**Forestfarm**, Williams, OR. (541) 846-7269. [www.forestfarm.com](http://www.forestfarm.com). Catalog \$5; free online.

**Heronswood Nursery, Ltd.**, Kingston, WA. (360) 297-4172. [www.heronswood.com](http://www.heronswood.com). Catalog \$5.

mates. In the Pacific Northwest, species and selections of mahonia can be grown in a range of exposures from full sun to very dense shade.

For the taller species and hybrids, I strongly suggest heavy pruning at a young age to encourage branching from the base. This will sacrifice flowers for the first year or two after planting, but the shrubs will become much fuller and well balanced.

For a full spectrum of garden sites, mahonias will lend a year-round evergreen presence and a beguiling display of flowers at a time of the year when we most need it. They represent a vast contingent of underused trees, shrubs, vines, and perennials that can contribute four-season interest to our landscapes through flower, foliage, and fruit. ☞

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*Author, lecturer, and plant explorer Dan Hinkley is co-founder, with Robert Jones, of Heronswood Nursery in Kingston, Washington.*

# Vertical Accents

Columnar trees add a new dimension to any garden.

BY CAROLE OTTESEN



Because they take up less space than their more expansive counterparts, columnar trees are particularly useful as design elements in small gardens. They also create little shade, so they can be used to add structure and texture to sunny perennial borders. Top left: *Juniperus communis* 'Pencil Point' can frame a view or lead a visitor through the garden. Above: An allée of Yaupon holly (*Ilex vomitoria* 'Will Fleming') deepens apparent space in the Austin, Texas, garden of Jennifer Myers. Left: *Pinus contorta* 'Taylor's Sunburst' is small but makes a colorful specimen plant.

CLOCKWISE FROM TOP LEFT: MICHAEL S. THOMPSON; KAREN BUSSOLINI; JOSEPH G. STRAUCH JR.





Above: As this row of columnar 'Dawyck' beeches matures, it will provide an effective screen in this landscape designed by Richard Bergmann. Left: *Cupressus sempervirens* 'Swain's Golden' echoes the yellow in a perennial bed designed by Glenn Withey and Charles Price. Below: With its extremely narrow silhouette, *Picea glauca* 'Pendula' would look right at home in the cartoon world of Dr. Seuss.



**S**OME PLANTS always manage to look like happy accidents—as if they were deposited by the birds and grew charmingly into place; others grow into an aspect of easy spontaneity only after many summers in the garden. But vertical accents are plants that never relax. They are punctuation marks in the garden, signaling the designer's intent. Their placement affects the garden from every angle and in every season.

Cindy Brown, education coordinator and horticulturist at Green Spring Gardens in Alexandria, Virginia, likens vertical evergreens to statues she saw at the Donald M. Kendall Sculpture Garden located on the 144-acre property of the PepsiCo world headquarters in Purchase, New York. "I photographed three gigantic statues from different angles," says Brown, "and each time the angle changed, the way the three looked was different and the emotional content changed."

Especially if it is evergreen, a vertical element influences your perception of space. Site it just so in the foreground and it forces perspective, deepening apparent space. Site it in the background and it rivets the eye, becoming a focal point. Brown suggests using a pair of verticals to "frame a view of your house or your garden, just like you do with your pictures." To prevent the common problem of plants placed too close to buildings, she advises, "pull them away from the house."



Above, left: *Thuja occidentalis* 'Smaragd' stays fresh green in winter. Above, right: A mature fastigate English oak (*Quercus robur* forma *fastigiata*) stands sentry at the corner of this house.

## Resources

**Conifers: The Illustrated Encyclopedia** by D.M. van Gelderen. Timber Press, Portland, Oregon, 1996.

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

## Sources

**Forestfarm**, Williams, OR. (541) 846-7269. [www.forestfarm.com](http://www.forestfarm.com). Catalog \$5; free online.

**Greer Gardens**, Eugene, OR. (541) 686-8266. [www.greergardens.com](http://www.greergardens.com). Catalog free.

**Roslyn Nursery**, Dix Hills, NY. (631) 643-9347. [www.roslynnursery.com](http://www.roslynnursery.com). Catalog \$3.

A vertical evergreen can be positioned to spot screen an undesirable view, or it can be multiplied for use as a screening hedge. Verticals can even direct traffic. At Lewis Ginter Botanical Garden in Richmond, Virginia, Brown recalls seeing *Chamaecyparis obtusa* 'Crippsii' (USDA Zones 4–8, AHS Zones 8–3), a broadly pyramidal yellow evergreen, repeated in the beds to draw the visitor through the garden. “You follow the yellow brick road of vertical points.”

Because vertical evergreens are strong, year-round design elements, it's crucial to carefully select those that thrive and stay healthy in your garden's microclimate. Susan Martin, curator of the Gotelli Conifer Collection at the U.S. National Arboretum in Washington, D.C., cautions that plants behave differently in different areas. For instance, she says, “We are no longer recommending *Juniperus scopulorum* 'Skyrocket,'” a beautiful columnar evergreen native to the Midwest and West, where it performs well. “Here in the Mid-Atlantic, it tends to do well for five to seven years, and then it gets fungal problems in our hot, humid summers.”

Not only does climate affect health, it can affect a plant's appearance. For example, *Juniperus communis* 'Gold Cone' (Zones 2–7, 7–1), a 10-foot-tall-by-two-foot-wide, cigar-shaped plant that takes drought and full sun, says Martin, “doesn't scream yellow in our area” as it does elsewhere; instead, it develops “a very pale yellow with soft sulfur overtones.”

In winter, evergreens gain prominence and the subtle differences in their colors are readily perceptible. One that has “bright grass-green, fanlike foliage” is the incense cedar (*Calocedrus decurrens*, Zones 5–8, 8–1), although Martin notes that it can be hard to find. It grows about 30 feet tall by three to four feet wide. Another evergreen she recommends is *Thuja occidentalis* 'Smaragd' (Zones 2–7, 7–1; sometimes listed as 'Emerald'). “It's the nicest arborvitae because it doesn't have muddy winter color,” she says. It grows about 15 feet tall by three feet wide. To prevent vertical evergreens from snow splitting in winter, Martin advises training them to a single trunk.

While acknowledging that “deer browse can be a problem,” Martin says that upright yews are “an overlooked group.”

## OTHER TREES FOR VERTICAL ACCENTS

Name	Height/Width (ft.)	Appearance/culture	USDA Hardiness, AHS Heat Zones
<i>Buxus sempervirens</i> 'Graham Blandy' Boxwood	9/1–2	deep green leaves bronze in winter; rich, well-drained soil	6–8, 8–6
<i>Chamaecyparis thyoides</i> 'Rubicon' Atlantic white cedar	15–25/3–5	blue-green foliage turns purple in winter; moist, sandy soil	3–8, 8–1
<i>Ilex crenata</i> 'Sky Pencil' Japanese holly	10/2–3	dark green foliage needs no pruning; moist, slightly acid soil	5–7, 7–5
<i>Ilex opaca</i> 'Slim Jim' American holly	30–50/10–15	slow-growing, symmetrical; breakage resistant; acid soil, part shade	5–9, 9–5
<i>Ilex vomitoria</i> 'Will Fleming' Yaupon holly	15/1–2	male cultivar, best in snow-free areas	7–11, 12–7
<i>Juniperus chinensis</i> 'Spartan' Chinese juniper (also 'Obelisk', 'Spearmint')	20/3–4	fast, dense growth; full sun; tolerates drought, alkaline soils	5–9, 9–5
<i>Juniperus virginiana</i> 'Emerald Sentinel' Eastern juniper	15–20/6–8	dark green foliage; sun, good air circulation	3–9, 9–1
<i>Picea pungens</i> 'Iseli Fastigiata' Colorado spruce	10/3	narrow, upright, blue-gray; sun, cool climate	3–8, 8–1



*Buxus sempervirens* 'Graham Blandy'



*Ilex crenata* 'Sky Pencil'



*Juniperus chinensis* 'Spearmint'

To protect them from deer at the National Arboretum, she says, “we use black netting. You can’t see it against the green foliage color.” A yew she especially likes is *Taxus x media* ‘Flushing’, a female selection that bears red fruits (technically arils) and blackish green foliage. It grows 12 feet tall by 18 to 24 inches wide. Another good selection is ‘Beanpole’, which grows six to eight feet tall and one foot wide and bears bright red fruit. “Yews are easy to maintain if people like to prune,” says Martin. And a little pruning can work magic on many other evergreens, giving them a narrower, more dramatic profile.

Deciduous columnar trees don’t provide the year-round color of evergreens, but their upright framework of branches can provide another kind of winter interest. Two good landscape choices are the columnar English oak (*Quercus robur* forma *fastigiata*, Zones 5–8, 8–3) and the columnar English beech (*Fagus sylvatica* ‘Dawyck’ or ‘Fastigiata’, Zones 4–7, 9–4). All are slow-growing; at maturity the oak will reach 50 feet tall and 10 to 12 feet in diameter, while the beeches can attain 80 feet tall and 10 feet in diameter. Golden- (‘Dawyck Gold’) and purple-leaved (‘Dawyck Purple’) cultivars of the

columnar beech are also available.

Whether it is a focal point or an eye-stopper that blocks an undesirable view, whether it raises the garden up out of the ground plane or is used to frame a view, a vertical accent provides drama in the garden. No matter how it is used, its strong presence draws the eye, so choose one that thrives in your region. And before placing it, rework that old carpenter’s adage about measuring and cutting to: “Think twice and plant once.”

*Carole Ottesen is associate editor of The American Gardener.*



# Cool-Season Annuals

New varieties keep gardens blooming through the fourth season.

BY RITA PELCZAR

*“The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails.”*

—William Arthur Ward

**I**T'S SAIL-ADJUSTING TIME, gardeners! Fall is here, winter's coming, and it's bound to get a lot colder before spring returns. But cold weather needn't signal the end of your flowerbed displays. Heat-loving zinnias and tender impatiens have long since succumbed, but there are bedding plants available to fill those gaps. A few will bloom throughout winter; others will persist, poised to burst into bloom with the first breath of spring.

## LIMITS OF LATITUDE

Of course, the selection of cool-season annuals as well as their blooming schedule varies significantly from one region to an-

other (see “Western Winter Favorites,” page 32). In regions with little or no freezing weather, January annual displays rival those in June, and while different species are appropriate for each season, there are plenty of choices for each.

In fact, many of the plants that northern gardeners consider staples of their summer beds and window boxes, like petunias and geraniums, are grown as “winter annuals” in warmer climates. “Our plant palette is completely different in the winter and summer,” notes Heather Will-Browne, bedding plant specialist at Walt Disney World in Orlando, Florida. On a recent summer trip north, she was amazed at the plant combinations she saw. “Petunias with portulaca!” she marvels. “That would never happen here—it's two completely different seasons for us.”

The term “winter annuals” is not strictly accurate, since some of the plants lumped into this category are biennials (living



Above: Stock grows best in a cool garden, making it a good choice as a winter annual in mild climates. Below, right: 'Icicle' pansies, bred for northern climates, may bloom with snow on the ground. Opposite: Pot marigolds reliably brighten winter gardens in USDA Zones 8 to 10.

through two growing seasons) or short-lived perennials. But they generally are treated as annuals, and like true annuals, they bloom the first year from seed. When their performance goes downhill as temperatures rise in late spring and summer, they are removed and replaced by heat-loving species until fall, when they are replanted for another cool season.

The selection of winter annuals for areas that experience fairly mild winter weather goes well beyond the ubiquitous pansies and ornamental kale. Stock (*Matthiola incana*) bears flowers in a wide range of colors, all of which impart their spicy-sweet fragrance to the cool-season garden. Flowers of the pot marigold (*Calendula officinalis*) are limited to yellow and orange hues and tolerate frost and even a light snow. Other potential season extenders for regions with mild winters are osteospermums, toadflax (*Linaria* spp.), felicias, and wallflowers (*Erysimum* spp.).

As you head northward into cooler climes, the selection of winter annuals is more limited. But even where freezing temperatures and snow cover are regular players on the winter stage, there are a few bedding plants that will add color to gardens through much of the cool season. Some will extend the fall flower display until Thanksgiving or later, and some will jump-start next year's garden come spring.

## THE "BIG FIVE" WINTER ANNUALS

The most popular winter annuals—and, not surprisingly, some of the most cold tolerant—are pansies, violas, dianthus, snapdragons, and ornamental kale. University of Georgia horticulture professor Allan Armitage, an American Horticultural Society Board member and author of several books on annuals and perennials (see "Resources," page 30), calls these plants "the big five."

All persist through some frost and freezing temperatures, although varieties differ in their ability to handle the cold. It should be noted that surviving low temperatures is not the only objective. In order for them to warrant a place in your garden, they must not only survive, but remain attractive, at least far enough into the cold season to put on a good show.

■ **PANSIES AND VIOLAS** It's easy to understand why pansies (*Viola xwittrockiana* and hybrids) are referred to as the king of winter annuals. They bear their distinctive and cheerful five-petaled flowers late into fall, sometimes through winter, and then burst into full glorious bloom very early in spring. Pansies can flower when the thermometer dips into the 20s and will tolerate even colder temperatures, surviving winter as far north as USDA Hardiness Zone 6 or even 5, with some protection. "Nothing comes close for winter and early spring bloom," says Armitage.

Bob Lyons, director of the JC Raulston Arboretum in Raleigh, North Carolina, concurs. "The best flowering annuals for our winters are pansies and violas, with my favorite being the latter." Most varieties flower all winter in Raleigh, experiencing only "an occasional decline when it gets its coldest here in January and February," says Lyons.

This chilly persuasion isn't surprising, given their lineage; pansies were named for the Swedish botanist V.B. Wittrock, who did extensive breeding work on them in the late 19th and early 20th centuries, crossing and backcrossing several viola species, all alpine natives. Pansies are actually biennials or short-lived perennials, but they are commonly grown as annuals.



'Icicle' pansy

## Resources

**Annuals and Tender Plants for North American Gardens** by Wayne Winterrowd, Random House, New York, New York, 2004.

**Armitage's Manual of Annuals, Biennials, and Half-Hardy Perennials** by Allan M. Armitage. Timber Press, Portland, Oregon, 2001.

**Ohio State University Extension Service.** OSU Learning Garden's Pansy/Viola Cultivar Trial 2003-2004. <http://floriculture.osu.edu/Pansy04.html>.

**University of Georgia Trial Gardens.** Winter Trials 2002-2003. <http://ugatrial.hort.uga.edu/WinterTrials/>.

## Sources

Look for many of these cool-season annuals at your local garden centers or grow them from seed next summer.

**Burpee**, Warminster, PA. (800) 888-1447. [www.burpee.com](http://www.burpee.com). Catalog free.

**Johnny's Selected Seeds**, Winslow, ME. (800) 854-2580. [www.johnnyseeds.com](http://www.johnnyseeds.com). Catalog free.

**Plants of the Southwest**, Santa Fe, NM. (800) 788-7333. [www.plantsofthesouthwest.com](http://www.plantsofthesouthwest.com). Catalog free.

**Thompson & Morgan**, Jackson, NJ. (800) 274-7333. [www.thompson-morgan.com](http://www.thompson-morgan.com). Catalog free.

Violas (*V. cornuta*, *V. tricolor*, and hybrids) are closely related to pansies. Compared to pansies, violas generally are smaller plants that bear smaller flowers in greater quantities; they are often more heat tolerant, and are more likely to re-seed themselves, returning from one year to the next. That said, with all the hybridizing and introduction of new varieties of both violas and pansies in the last few years, many are difficult to distinguish.

Plant breeders have developed varieties of both pansies and violas that produce more and earlier flowers with a greater range of size, colors, and color combinations. Colors range from white to nearly black, from vibrant purples, yellows, oranges, blues, and reds, to subdued pastel tones, so it's easy to find a fit for any color scheme. Additionally, flowers may be solid, multicolored, or blotched with markings that give them that familiar "face." Heat tolerance and vigor have also been enhanced.

One of the most significant achievements in pansy hybridization is the development of non-daylength-sensitive plants, which flower through the short days of winter when older pansies varieties tend to remain vegetative (see "The Daylength Factor," page 32).

Although extending flowering through the shorter days of fall

and spring is an improvement, removing daylength as a constraint to flower production in winter "is more an issue in the greenhouse than in the garden," says Armitage. "If it's cold, it doesn't really matter. The cold overrides anything else."

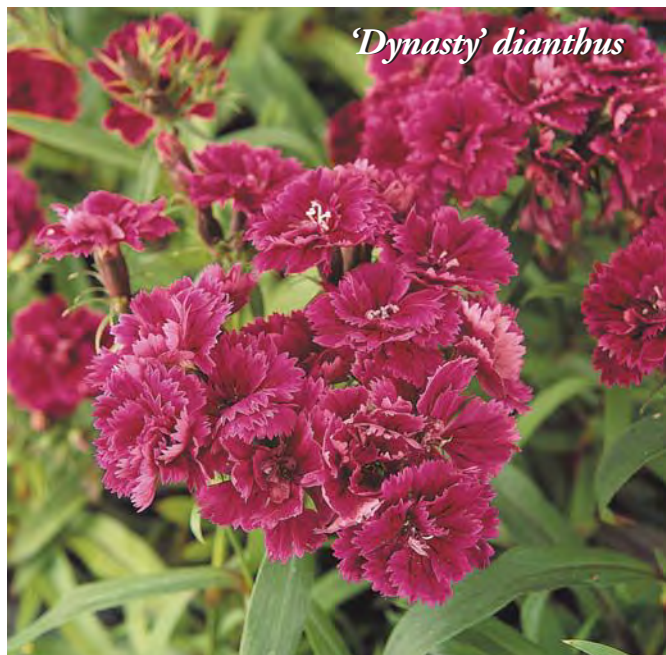
The winter of 2002-2003 was unusually cold in Athens, Georgia (USDA Hardiness Zone 7), where Armitage and his team set out to compare the performance of a broad selection of winter annuals. Despite the cold, they noted several pansies that outperformed others, including 'Bingo Blue Blotch', 'Dynamite Ocean', 'Iona Frosty Lemon', and 'Nature Beacon'. Among the top violas were 'Sorbet Coconut Swirl', 'Hobbit Bilbo Baggins', and 'Sorbet Yellow Delight'.

Similar comparisons of pansy and viola cultivars were run at Ohio State University in Columbus (USDA Hardiness Zone 5) last winter (2003-2004). Top-rated pansies among those trialed include 'Nature Blue', 'Dynamite Lavender', and 'Ultima Morpho'. And among violas, 'Sorbet Beaconsfield', 'Gem Yellow', 'Sorbet Blackberry Cream', 'Sorbet Plum Velvet', and 'Penny Violet Flare' gave the best show.

Complete results of both the Georgia and Ohio trials are available online (see "Resources," above).



*'Sorbet Lemon Swirl' viola*



*'Dynasty' dianthus*



## WESTERN WINTER FAVORITES

“There is a lot more to pansies than just the common Charlie Chaplin-faced ones. More and more violas and miniatures are being used,” says Panayoti Kelaidis, curator of plant collections at the Denver Botanic Gardens. Adds Kelaidis, “The second best autumn bedding plant is Iceland poppy.”

But Kelaidis’s favorite winter annual is *Phacelia campanularia*, “which forms a wonderful rugose mat of deeply purple stained leaves when sown in midwinter... it can produce its intense blue flowers all spring and well into summer.” Other seed-sown selections for Colorado include *Salvia carduacea* and *Clarkia* species.

Don Mahoney, horticultural manager at the San Francisco Botanical Garden, says two of his favorite winter annuals are natives: meadowfoam (*Limnanthes douglasii*) and baby blue eyes (*Nemophila menziesii*). One of his favorite combinations is “a lawn of meadowfoam underplanted with yellow daffodils and blue anemones... It only lasts for February and March, but is quite showy.” Mahoney also uses several South African species in his winter gardens, including selections of *Dimorphotheca*, *Heliophila*, *Arctotis*, and *Ursinia*.

At the Santa Barbara Botanic Garden, director of living collections and nursery Carol Bornstein says, “We grow quite an array of annual wildflowers here for late winter and spring color, including meadowfoam (*Limnanthes douglasii*), tansy-leaf phacelia (*Phacelia tanacetifolia*), punch-blow godetia (*Clarkia bottae*), Chinese houses (*Collinsia bicolor*, syn. *C. heterophylla*), and tidytips (*Layia platyglossa*). Several of these species reliably re-seed themselves.” —R.P.

Among the best winter annuals for western gardeners are *Clarkia amoena*, above left; tansy-leafed phacelia (*Phacelia tanacetifolia*), top; and Iceland poppy (*Papaver croceum*, formerly *P. nudicaule*), above.

■ **HYBRID PINKS (DIANTHUS HYBRIDS)** “Fall, winter, and spring are the perfect seasons for dianthus in central Florida,” says Will-Browne of Disney World. “They look good—blooms and all—right after a frost or freeze.”

Crosses between China pinks (*D. chinensis*) and sweet William (*D. barbatus*) have given rise to a tough group of hybrids that have been labeled *Dianthus hybridus*, *Dianthus ×heddewiggii*, or simply *Dianthus* hybrids. Whatever you call them, they are more cold and heat tolerant than the China pinks, freer flowering than sweet William, and combine well with many other winter plants.

Flowers of the hybrid pinks have fringed—or “pinked”—petals and appear in terminal clusters. Colors include white, all shades of red and pink, and bicolors. The Ideal, Telstar, Princess, Melody, Floral Lace, and Diamond series are widely available. The Dynasty series offers double flowers that resem-

ble miniature carnations on 16-to-20-inch stems. “I love the taller *Dianthus* ‘First Love’ and ‘Melody Blush Pink’—always covered with blooms ranging from pure white to dark rose on the same plant,” reports Will-Browne. “They are perfect for a wildflower look or background planting.” Like other members of the genus, these hybrids grow best in a well-drained, neutral to slightly alkaline soil in full sun.

The terraces at Sarah P. Duke Gardens in Durham, North Carolina, are planted extensively in the fall with a mixture of spring-flowering bulbs and winter annuals. Several varieties of dianthus, including selections of the Telstar and Floral Lace series team up with ornamental onions (*Allium* spp.) and *Ornithogalum* spp. for a dramatic spring display. Harry Jenkins, superintendent and horticulturist at the Duke Gardens, explains that planting winter annuals “begins in mid-October, and we try

## THE DAYLENGTH FACTOR

Plants flower at different times of the year, but each species is more or less consistent. One of the major factors responsible for determining flowering season is a phenomenon known as photoperiodism: Many plants are stimulated to initiate flowers by seasonal changes in daylength.

Studies conducted in the 1920s by USDA scientists W.W. Garner and H. A. Allard determined that the length of time a plant is exposed to light has an effect on when it flowers. Some plants—pansies, petunias, and calendulas, for example—bloom when they are exposed to long days, and thus are referred to as long-day plants. Short-day plants such as hyacinth bean, moonflower, and chrysanthemum bloom when days shorten in late summer and fall.

Further research revealed that it is not the length of exposure to light that is critical, but rather the length of the dark period. Extending the light period or interrupting the dark period with artificial lights will prevent short-day plants from inducing flowers. Poinsettia growers take advantage of this phenomenon to delay flowering of the short-day poinsettia until the holiday season.

Short- or long-day sensitive plants can be further categorized as facultative—those which will flower more readily when exposed to a certain length of darkness—or obligate—those that require a specific minimum dark period before flower induction will occur.

Adding one more layer of complexity, many plants—including older pansy varieties—must have a cool period before they can be stimulated by daylength to induce flowers.

Other plants—including stock, geraniums, and impatiens—are termed day-neutral; their flowering time-table is not determined by the length of darkness but by other factors such as maturity. Most flowering annuals fall into this category.

New varieties of many long- and short-day plants that get around the limitations of flowering during a specific season have been developed by crossing daylength-sensitive plants with less-daylength-sensitive types. Pansies are an example.

The pansy was originally developed from perennial *Viola* species native to the Swiss Alps. “These perennials passed through a cold winter and began flowering as the days grew longer in spring. Modern pansies retained some of their ancestral traits, flowering best after receiving sufficient chilling, under increasing daylength,” explains Bob Croft, technical manager for Sakata Seeds America. By cross-breeding with less daylength-sensitive types, breeders have developed new varieties that “are not dependent on temperature or daylength to flower,” says Croft.

Non-daylength-sensitive pansies include the Majestic Giant, Majestic Giant II, Dynamite, Dynasty, and Supreme series. Among violas, ‘Gemini’ and the Angel series are non-daylength sensitive. —R.P.



*‘Best Mix’ snapdragon*

to have all the beds planted by the end of November.” In addition to dianthus, the beds feature pansies, violas, snapdragons, mustard, and phlox. Peak flowering is late March through mid-April; by mid-May, the replanting begins for summer.

■ **SNAPDRAGONS** (*Antirrhinum majus*) Snapdragons flower best in cool weather, are quite frost tolerant, and their roots are hardy to Zone 8; with some protection, they will often make it through the winter in Zone 7. For these and warmer zones, plants can be set in the garden in mid-fall. Flowering times vary with location. In northeast Texas, at the Fort Worth Botanic Gardens (USDA Hardiness Zone 7–8), senior horticulturist Steve Huddleston observes, “snaps bloom a little in the fall, keep their green foliage during the winter, and then bloom again in spring.”

In central Florida, “we use a lot of the smaller snapdragons *en masse* in beds from October through the first of April,” says Will-Browne, who prefers the diminutive Montego and Floral Showers series. “The little guys seem to bloom more and require less maintenance than the taller varieties,” says Wille-Browne. “They go a little green in mid-winter, but once spring hits, you just can’t stop them from blooming.”

North of Zone 7, snaps can be planted after danger of hard freezes are past for an early spring splash of color. Where summers are mild, full sun is best; where summers are hot, plant in part shade. Blooming may lapse during summer’s heat, but will resume with the onset of cooler weather in fall.

■ **ORNAMENTAL KALE AND CABBAGE** (*Brassica oleracea*) These non-flowering ornamental edibles have been sta-





*'Red Chidori' kale and 'Fiesta' cabbage*

ples of the fall garden for a long time—and for good reason. They are easy to grow, remain attractive for months, and can be grown at least as far north as Chicago; plants tolerate temperatures well below freezing. Smooth and feathered leaf selections can be juxtaposed for a colorful and texture-rich display.

The somewhat arbitrary basis for distinguishing between ornamental cabbage and kale comes down to their leaf margins: A smooth leaf margin earns the handle of cabbage, while a fringed or feathered margin is considered a kale. There are white, pink, and red varieties. Exceptional smooth-leaf types include 'Tokyo' and the petite Pigeon series. For feathery leaves, the Peacock and Coral series are good choices. 'Redbor' kale with its ruffled, deep burgundy leaves, and its white counterpart, 'Winterbor', make attractive foils for colorful pansies and snapdragons.

These plants develop their best color after several frosts and when temperatures at night remain below 50 degrees Fahrenheit. In Georgia's mild climate, reports Allan Armitage, cabbages and kales look good "at least into December or January."

Other colorful edible plants that work well as winter annuals include 'Red Giant' mustard and Swiss chard varieties 'Pink Passion', 'Ruby Red', and 'Bright Lights'. These provide bold textural contrast for the usual flowers in cool-season gardens. Rob Johnston, founder of Johnny's Selected Seeds in Albion, Maine, says that 'Bright Lights', with its vivid red, orange, and yellow stalks, is "planted as much ornamentally as it is as a vegetable." The roots, he adds, will usually survive winters in USDA Zones 6 or 7 and warmer.



*'Tokyo Pink' cabbage*



*'Bright Lights' Swiss chard*

TOP TO BOTTOM: DAVID CAVAGNARO; KAREN BUSSOLINI; COURTESY OF JOHNNY'S SELECTED SEEDS

*Rita Pelczar is a contributing editor to The American Gardener.*

# State Flowers, State

The history behind the selection of official state flowers is often intriguing and—in a few cases—controversial.

BY DAN RAFTER

**L**YNN JENKINS doesn't want to be known as an enemy of the peony. She's long grown the flower in her own garden, the red, white, and rose flowers provide splashes of color early in the season before her other perennials burst into life.

But Jenkins, a resident of Zionsville, Indiana, doesn't think that the plant, despite its beauty, should serve as the official state flower of Indiana, a designation it has held since 1957.

Jenkins' reasoning is simple. An official symbol, she says, should tell visitors something about the state. Indiana's state bird, after all, meets this criteria. It is the cardinal, and these red birds can be found flitting from tree to tree in Hoosier backyards all year long. Its state tree is the tulip tree, which shades front lawns from the sandy dunes area of northwest Indiana all the way to the rolling hill country at the bottom of the state. Even the state's official song, "On the Banks of the Wabash, Far Away," adopted by the state General Assembly back in 1913, rhapsodizes of cornfields, woodlands, sycamores, and, of course, the Wabash River—all natural landmarks that help distinguish this Midwest state from its neighbors.

But the peony isn't native to Indiana or even to the United States. And the way Jenkins sees it, that alone should disqualify it from serving as the state flower.

"We should have pride in our heritage," says Jenkins, an active member of the Indiana Native Plant and Wildflower Society (INPAWS). "There are so many wonderful things in this state: our natural resources, our native plants, our wildlife. It's a shame that Americans don't seem to appreciate the beautiful wildflowers they have."

## LOBBYING FOR NATIVES

Jenkins is far from alone in wondering what her state legislators were thinking when naming an official flower. Lawmakers in Maine, after all, named the white pine cone and tassel as their state flower, glossing over the technicality that the pine cone isn't a true flower. Similarly, the official state flower of Oklahoma is



Indianans Jo Ellen Meyers Sharp, above left, and Lynn Jenkins, above right, would like to see fire pink, left, named the state flower.

mistletoe—although that's a story in its own right (see sidebar, page 37). And the General Assembly in Georgia selected the Cherokee rose (*Rosa laevigata*) as its state flower in 1916, even though that species, like the peony, originated not in the United States but in Asia.

Goldenrod (*Solidago serotina*), a Kentucky native, overcame foreign competition to become that state's official flower, but not without a fight. Many Kentuckians, as well as officials from the U.S. War Department, lobbied strongly in favor of the spiky inflorescences of Kentucky bluegrass (*Poa pratensis*), which is the symbol of the state's militia. Despite its common name, Kentucky bluegrass is not a native species, but is indigenous to Europe and Asia. The Kentucky Federation of Women's Clubs, who supported the native plant, prevailed, and in 1926, goldenrod was named Kentucky's state flower.

ians, as well as officials from the U.S. War Department, lobbied strongly in favor of the spiky inflorescences of Kentucky bluegrass (*Poa pratensis*), which is the symbol of the state's militia. Despite its common name, Kentucky bluegrass is not a native species, but is indigenous to Europe and Asia. The Kentucky Federation of Women's Clubs, who supported the native plant, prevailed, and in 1926, goldenrod was named Kentucky's state flower.

# Pride

A majority of states have selected native plants—or plant genera that include both natives and exotics—as their official state flowers, but there are still a few states like Indiana and Georgia that for one reason or another have bucked the trend. Native plant advocates in these states have lobbied their legislators to either change their state flowers to native species or at least create a second official designation of a state wildflower.

Sometimes these efforts succeed, such as in 1998, when members of the Michigan Botanical Club successfully convinced the state's legislators to name the dwarf lake iris (*Iris lacustris*) the official state wildflower. This tiny plant with showy blue flowers is actually endangered because of the loss of its shoreline habitat.

In other cases, though, such campaigns have fallen short. The members of Jenkins' group, unfortunately, have long been on the losing side of this issue. INPAWS members spent more than three years trying to convince the state General Assembly to replace the peony with the fire pink (*Silene virginica*), a wildflower native to Indiana that features distinctive bright-red flowers shaped like stars. But legislators never allowed a bill approving the change in state flower designation to come to a vote. Last year, INPAWS members officially gave up that effort, posting a somber announcement on their Web site: "The fire pink bill is now dead. Long live the fire pink!"



The purple coneflower (*Echinacea purpurea*) is a leading contender to become Indiana's native state wildflower.

## VIOLET AND ROSE WIN POPULARITY CONTEST

When it comes to the honor of being the most popular state flower, violets and roses are neck and neck. Four states have chosen a version of those flowers as their official floral symbol. Illinois, New Jersey, Rhode Island, and Wisconsin are in the violet camp, while Georgia, Iowa, New York, and North Dakota have championed the rose (for a complete list of state flowers, see page 38). The rose *does* hold one big advantage over its rival, however; it is also the official national flower.

While it's easy to understand the appeal of the rose as a symbol, the violet's popularity is less obvious. Gary Sherwin, president of the American Violet Society, cites several reasons for this. First, it was the earliest commercial cut flower. Secondly, it was associated with love long before the rose became the flower of choice for Valentine's Day. But children and their flower-gathering habits may be the biggest reason for favoring the violet as a state flower, Sherwin says, alluding to a bygone time when schoolchildren voted on state emblems.

"If you live in an area where violets grow, there are two flowers that you picked for your mother and teacher when you were a child: the violet and the dandelion," Sherwin says. "And no one is going to name the dandelion a state flower." —D.R.



The common violet (*Viola papilionacea*, also listed as *Viola soraria*), above right, is depicted as a token of love in a vintage Valentine greeting card, left.

Despite this setback, Jenkins and her fellow INPAWS members are not yet ready to give up. They are now considering new tactics that might fare better in a state where peonies have long been loved by gardeners, and where many residents use them to decorate the graves of U.S. servicemen and women on Memorial Day.

Rather than continuing to battle the peony lobby, INPAWS members decided to take a cue from their neighbors in Michigan and try to establish a separate designation for an official state wildflower. They are still debating which plant to promote as the wildflower, but an early favorite is the hardy and colorful purple coneflower (*Echinacea purpurea*), a plant with a broad native range that encompasses Indiana and graces countless gardens throughout the state.

"I know there are still some people out there who would love to replace the peony with a native plant," says Jo Ellen Meyers Sharp, an advanced Master Gardener and INPAWS member who is working with Jenkins to develop the new native flower strategy. "But we gave that three passes, and none of them have worked. I guess in my mind it's now about being more pragmatic. Just getting the state to name an official native flower, I think, would be a big improvement over what we have now."

## ROOTS OF NAMING STATE FLOWERS

The movement to name native plants as state flowers is far from a new one. Supporters of the concept, in fact, have been pushing state legislators to name only native plants as official state flowers since the early 1900s.

David DeKing, executive director of the New England Wild Flower Society in Framingham, Massachusetts, has studied the history of state flowers. One of the historic reasons for naming a state flower, he says, was to protect a state's native plants from over-collection.



Trailing arbutus, Massachusetts' state flower since 1918.

In the 1900s, immigrants to the United States would often earn money by gathering plants from the wild for sale as fresh flowers or holiday decorations, DeKing says. The plants they gathered varied depending on the season. During the spring in Massachusetts, for example, people would gather bushels of fragrant *Epigaea repens*, better known as the mayflower or trailing arbutus. And in winter they used the plant's evergreen leaves for garlands and wreaths. Unfortunately, notes DeKing, the pickers were too efficient. "It got to the point where it was almost extinct within miles of any city," DeKing says.

Other states experienced similar problems, DeKing says. In Connecticut, the blossoms and evergreen leaves of mountain laurel (*Kalmia latifolia*) were heavily harvested in late spring to early summer to decorate hospitals and churches. "There was a wholesale rape of the countryside going on to gather ferns and other native plants," DeKing says.

To reduce the damage, newly formed state wildflower societies adopted several tactics. One was to educate state residents about the proper way to harvest plants such as trailing arbutus without ripping their roots from the ground. As part of the educational effort, societies also began asking legislatures to adopt official state flowers. In 1907, Connecticut named the mountain laurel its state flower, while 11 years later the mayflower became Massachusetts' state flower. —D.R.

So Meyers Sharp and Jenkins are gearing up for another round of writing gardening clubs, lobbying lawmakers, and organizing meetings across the state. They both recognize that the effort is going to swallow large chunks of their time. And they realize, too, that there's no guarantee they will ever succeed.

### WHY GO NATIVE?

This begs the question: Why go through so much trouble to fight for something that's purely symbolic? It's something that won't have much impact on a state that is dealing with the very real, very serious problems of a sluggish economy, a steady stream of lost manufacturing jobs, and a statewide reassessment of property taxes that has scores of homeowners wondering how they're going to pay their property-tax bills.

"To me it's a matter of state pride," says Carolyn Harstad, who led the unsuccessful fire pink effort. Harstad recently moved from Indianapolis to Lakeville, Minnesota, but was named a lifelong INPAWS member before she left. "You should be proud enough of your state to select something that is actually from it to serve as your symbol," says Harstad.

Harstad's sentiment is echoed by gardeners across the country. Folks such as her, not to mention Meyers Sharp, Jenkins, and the other members of the Hoosier wildflower society, are part of a growing effort to honor the native wildflowers of the United States.

If they succeed and convince the Indiana legislature to establish a state wildflower, the Hoosier state will become the eighth to do so. In addition to Michigan and its dwarf lake iris, other states with official wildflowers are Florida with the coreopsis; Georgia with the azalea; Louisiana with the Louisiana iris; New Hampshire with the pink lady's slipper; Ohio with the large white trillium; and Tennessee with the maypop.

Gardeners who love native American wildflowers—and are amazed by the variety found in the 50 states—are cheering on groups such as the Hoosier contingent. The more recognition paid to native flowers, the better, say these wildflower advocates.

"It is bizarre that any of our state flowers should be non-native," says Debra Strick, marketing and public relations director with the New England Wild Flower Society in Framingham, Massachusetts, the oldest plant conservation group in the country.



"Really, the question shouldn't be, 'Why should an official state flower be a native plant?' It should be, 'Why wouldn't it be?' Each region of our country has a very definite flavor and character. It has its own smell and its own sound when you're walking through it. These things give you a sense of place as much as does an area's

Indian paintbrush is Wyoming's state flower.



**Left:** The native Southern magnolia is the state flower of Mississippi and Louisiana. Louisiana has also adopted a state wildflower, *Iris gigantea caerulea*, above.

architecture or the accents its residents have. By not honoring these things, we've allowed quite a bit of sameness in our culture.”

## NATIVE VERSUS NATIVE

Campaigns to change state flower designations don't always involve replacing exotics with natives. In many cases, the battle has pitted one native against another. Pity the Indian paintbrush (*Castilleja* spp.). When the Arizona legislature voted to name a state flower in 1931, many state residents lobbied for this flower, but lawmakers instead chose the blossom of the saguaro cactus.

What happened to the Indian paintbrush? Reportedly, it was the victim of a smear campaign by saguaro supporters, who claimed the saguaro made a better choice because the paintbrush is a parasite that lives off other vegetation. Lawmakers agreed.

But Indian paintbrush fans weren't totally left out in the cold. They had only to look to Wyoming, which selected *Castilleja linariaefolia* as its state flower in 1917.

Lawmakers in Louisiana named the Southern magnolia (*Magnolia grandiflora*) their state flower in 1900. In the 1950s, though, members of the Society for Louisiana Irises (SLI) asked the legislature to replace the magnolia with the blue iris, arguing that the iris made a better choice because it grew primarily in Louisiana, while magnolias grew throughout the South.

The magnolia won out after its supporters used the counter argument that the blue iris often grew in unattractive swamps. Magnolia loyalists also pointed out the stately rows of bronze magnolias that grew outside the state capitol building, which the lawmakers could not ignore when they looked out their windows.

But because of the tenacity of the SLI, that's not the end of the story. After further lobbying efforts, the Louisiana legislature named the Louisiana iris the official state wildflower in 1990.

This move pleased Tom Dillard, an Arkansas resident and secretary of the SLI. “It's nice of them to honor the iris in that way,” Dillard says. “It's a magnificent flower.” Dillard can appreciate the sometimes odd logic behind the state flower naming process. After all, the state flower in his home state is the apple blossom. Lawmakers selected it in 1901, when Arkansas

## INTERESTING LEGENDS

The reasoning behind the selection of many state flowers has been lost to time. But the legends associated with some flowers have managed to survive.

In her children's book *State Flowers* (Franklin Watts Publishing, 1992) author Elaine Landau recounts the story of how mistletoe (*Phoradendron leucarpum*, syn. *P. serotinum*) came to be the state flower of Oklahoma. The legend states that a New York woman, who was one of the first settlers of what was then the territory of Oklahoma, became ill as she was expecting her first child. She was advised to return East for better care but refused to leave the territory without her husband, who wasn't able to accompany her. Sadly, both the mother and child died during birth. Because it was close to the Christmas holidays, and fresh flowers and greenery were unavailable, mourners placed sprigs of mistletoe leaves and berries on the coffin. Later, as the story goes, family friends in the legislature introduced a bill to name mistletoe the state flower, which it officially became in 1893.

Landau also explains that Ohioans chose the scarlet carnation (*Dianthus caryophyllus*) as the state flower to honor a home-state hero. President William McKinley, who was born in the town of Niles, Ohio, was a fan of the scarlet carnation and was often seen in public with the flower pinned to the lapel of his jacket. McKinley, of course, was assassinated in 1901, at the start of his second term. In 1904, the Ohio General Assembly voted to honor McKinley by naming his favorite flower as the state's official one.

—D.R.



## OFFICIAL FLOWERS OF THE 50 STATES

Here are the official state flowers, listed alphabetically by state. Plants marked with asterisks indicate species not native to North America. State wildflowers are listed for states that have designated such a plant.

**Alabama** Camellia (*Camellia japonica*)\*

**Alaska** Forget-me-not (*Myosotis alpestris*)

**Arizona** Saguaro (*Carnegiea gigantea*)

**Arkansas** Apple (*Malus coronaria*)

**California** California poppy  
(*Eschscholzia californica*)

**Colorado** Rocky Mountain columbine  
(*Aquilegia caerulea*)

**Connecticut** Mountain laurel  
(*Kalmia latifolia*)

**Delaware** Peach (*Prunus persica*)\*

**Florida** Orange (*Citrus sinensis*)\*

**Wildflower** Coreopsis (*Coreopsis* spp.)

**Georgia** Cherokee rose (*Rosa laevigata*)\*

**Wildflower** Azalea (*Rhododendron* spp.)

**Hawaii** Native yellow hibiscus  
(*Hibiscus brackenridgei*)

**Idaho** Wild mock orange  
(*Philadelphus lewisii*)

**Illinois** Native violet (*Viola* spp.)

**Indiana** Peony (*Paeonia* spp.)\*

**Iowa** Wild rose (*Rosa* spp.)

**Kansas** Native sunflower  
(*Helianthus annuus*)

**Kentucky** Goldenrod (*Solidago altissima*)

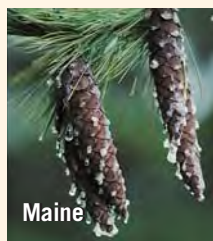
**Louisiana** Southern magnolia  
(*Magnolia grandiflora*)

**Wildflower**

Louisiana iris  
(*Iris gigantea*)

**Maine** White pine  
cone and tassel  
(*Pinus strobus*)

**Maryland** Black-eyed Susan  
(*Rudbeckia hirta*)



**Massachusetts** Mayflower (*Epigaea repens*)

**Michigan** Apple (*Malus coronaria*)

**Wildflower** Dwarf lake iris (*Iris lacustris*)

**Minnesota** Showy lady's slipper  
(*Cypripedium reginae*)

**Mississippi** Southern magnolia  
(*Magnolia grandiflora*)

**Missouri** White hawthorn  
(*Crataegus* spp.)

**Montana** Bitterroot  
(*Lewisia rediviva*)

**Nebraska**  
Goldenrod  
*Solidago gigantea*

**Nevada** Sagebrush  
(*Artemisia tridentata*)

**New Hampshire**

Purple lilac (*Syringa vulgaris*)\*

**Wildflower** Pink lady's slipper  
(*Cypripedium acaule*)

**New Jersey** Woolly blue violet  
(*Viola sororia*)

**New Mexico** Yucca (*Yucca glauca*)

**New York** Rose (*Rosa* spp.)

**North Carolina** Flowering dogwood  
(*Cornus florida*)

**North Dakota** Wild prairie rose  
(*Rosa arkansana*)

**Ohio** Scarlet carnation  
(*Dianthus caryophyllus*)\*

**Wildflower** Large white trillium  
(*Trillium grandiflorum*)

**Oklahoma** American mistletoe  
(*Phoradendron leucarpum*)

**Wildflower** Indian blanket  
(*Gaillardia pulchella*)



**Oregon** Oregon grape  
(*Mahonia aquifolium*)

**Pennsylvania** Mountain laurel  
(*Kalmia latifolia*)

**Rhode Island** Violet (*Viola palmata*)

**South Carolina** Carolina jessamine  
(*Gelsemium sempervirens*)

**South Dakota** Pasque flower  
(*Pulsatilla hirsutissima*)

**Tennessee** Iris (*Iris* spp.)  
**Wildflower** Maypop  
(*Passiflora incarnata*)

**Texas** Bluebonnet  
(*Lupinus subcarnosus* and  
*Lupinus texensis*)

**Utah** Sego lily  
(*Calochortus nuttallii*)

**Vermont**  
Red clover  
(*Trifolium pratense*)\*

**Virginia**  
Flowering  
dogwood  
(*Cornus florida*)

**Washington**  
Pacific  
rhododendron  
(*Rhododendron  
macrophyllum*)

**West Virginia** Rosebay rhododendron  
(*Rhododendron maximum*)

**Wisconsin** Woolly blue violet  
(*Viola sororia*)

**Wyoming** Indian paintbrush  
(*Castilleja linariaefolia*)



was more widely known as an apple-growing state. Today, few people associate the state with the fruit. “If they were naming a state flower today, you can bet they wouldn’t pick the apple blossom,” Dillard says.

Intriguingly, the botanical name given for the official apple species designated by the Arkansas legislature, *Malus coronaria*, refers not to the orchard apple tree but rather to a wild native crabapple. Both “apples,” however, have similar, fragrant blossoms.

### HOPE FOR HAPPY ENDINGS

The successful conclusion to the Louisiana iris story gives members of the INPAWS hope that they can eventually convince

their lawmakers to elevate the purple coneflower—or some other native wildflower—to the same level of official esteem.

“We have put so much time and energy into the process and have achieved no results, so it has been extremely frustrating,” says Ellen Jacquart, vice president of INPAWS. “Now I can see how groups in other states, like in Michigan, gave up on the state flower process and went with the naming of a state wildflower. They recognize that the state flower is something that, for whatever reason, legislators agreed on years ago, and that’s it—it’s not going to change.”

*Free-lance writer Dan Rafter gardens in Chesterton, Indiana.*



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# Getting the Vision on Paper

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

**S**O FAR IN THIS SERIES we have contemplated the abstract meanings of gardens and the process of design. We have looked at gardens as much more than mere spaces to be filled with plants and features. We have paused, we have reflected, and we have had a little fun exploring the use of dynamic metaphors. Now it's time for getting some ideas down on paper.

## MIND OVER BODY

The initial and illusively facile step in designing a garden is to decide what you want your garden to be. This is not nearly as overwhelming as it may seem if you begin by thinking on the scale of the proverbial “big picture.”

When I design, I first work with the people involved to frame an overarching vision for the garden. At this stage, a design benefits more from creative description than from strict definition. This written vision is an open, evolving framework guiding creativity rather than a proscriptive edict settling the garden once and for all. Designers often call these documents “program statements.” Don't be put off by the term—it is really nothing but a highfalutin' name for a listing of ideas of what you want your garden to be and to do for you—and a precursor to putting those ideas into the form of a landscape plan.

Many people want to start the design process by discussing physical components they would like the garden to contain, such as gazebos, ponds, perennial borders, patios, compost piles, and the like. However, there is a grave error inherent in this strategy similar to Dr. Frankenstein's infamous blunder. Gardeners often jump into stitching together a body of ill-matched parts from various sources. No matter how energized the result becomes, it still lacks a basic necessity—a single soul, a purpose for being.

A program statement provides the garden with a guiding spirit as well as a blueprint for

a body. It presents a compelling vision for the future; outlines ideas and concepts for the design to turn into reality. The statement may even be composed in a narrative style, presenting a story to capture the imagination and enthusiasm of those involved.

## WALK THE TALK

One of the most effective ways I have found to generate a program statement is to walk with a person through his or her



TOM CLIFTON



property and listen to them spin a tale about what the garden should be like and what they want to do in it. If you want to try this process yourself, recruit a friend or family member willing to listen to you and take some notes. You can even record your own thoughts using a tape recorder, although I find dialogue with another person helps stimulate all kinds of connections and ideas that might not have been previously vocalized! The important thing is to let yourself babble without censoring yourself or trying to make “perfect sense.”

When I work with a client (or design my own garden), I pay close attention to the way a person begins to subdivide the property into areas of unique identity or “theme,” the paths they take through and between the sub-areas, and the descriptions and emotions evoked specifically for each. I listen and probe for what functional uses the person assigns the sub-areas, what maintenance issues might emerge, and what aesthetic qualities are brought up. I listen for both what a person overtly says, as well as for what is subtly suggested.

## FINDING PATTERNS

Most importantly, I try to see the patterns connecting—or possibly connecting—all the discrete components into a holistic vision for the garden. Once you have your notes, take some time to contemplate and digest the information. Then I suggest you put the notes aside for a week or so to gain some perspective before reviewing them again.

Look for consistent ideas, needs, and issues that repeatedly emerge and try to group specific items into larger categories to review their interrelationships. For example, relocating the driveway, adding a woodland path, and paving the walk to the front door are all items related to “circulation enhancements.” They also probably relate to each other in terms of materials, cost, construction timing, and similar logistical factors.

During this process, names for the various sub-areas of the garden may emerge. These can help create a rough “map” in words. An “entry area” might lead to the “breakfast garden” off the kitchen, itself communicating with the “party terrace,” surrounded by “the buffer zone.”

Names can capture the initial essence of how function and form may meld into a garden. I then try to assign key phrases and ideas from the site walk to describe the functions, moods, contents, and purposes of each area.

## ADDRESSING CHALLENGES

The other patterns for which I listen are overarching and repeating major issues that affect the design process and the garden. The term “issues” in this case includes both positive and challenging aspects of the project. I find it best to identify these issues early on in the design process and then begin to deal with them in a creative and constructive manner, hence their inclusion in the program statement.

Common issues include circulation (how to move people and materials through the garden), screening and directing views, creating spaces to support outdoor living, cultural conditions for plants, and making spaces for children and pets. Although certain issues may intensify in one sub-area, overarching issues usually touch upon the entire garden in some way.

## PROGRAM WITH A PURPOSE

A thoughtful and well-crafted program statement offers a gardener several critical benefits for the design process.

### Vision

The program statement often inspires enthusiasm and excitement for a project. Seeing critical ideas and future elements of your garden in a concise format may also make the project seem more achievable.

### Finances

Deciding what you want and how it all fits together can save you money in the long run. Since designers often charge hourly for consultations, knowing what you want saves design fees and the embarrassment of paying a stranger to watch you and your significant other argue over where the dog run should go.

### Communication

A well-written program statement allows everyone involved to review and to discuss the project “on the same page.” The document also jump starts the design process if you decide to hire a professional designer.

### Designer Selection


The statement is an excellent interviewing tool should you choose to hire a professional designer. You can use it to evaluate whether the designer is in sync with your own vision and will be able to collaborate with you to achieve it.

### Prioritization and Evolution

The program statement is a standard against which to judge and prioritize conflicting goals and ideas, answering the question “does (blank) support the program?” Also, since gardens do not mature in a day or even a season, a statement can outline a course for future plantings, construction, etc.

## BE FLEXIBLE

No one is able to predict, and therefore control, every aspect of a garden—not even on paper. Deciding irrevocably at this point what you want your garden to be generates a myopic focus, negating your ability to test almost infinite possibilities. So, seriously consider what you want, but be open to ideas that may not have occurred to you before.

What you should derive from a program statement is an ever-clarifying vision for what you want in your garden and how the components, functions, and other factors relate holistically to each other and your life (see sidebar for some benefits). In the next issue I will discuss how to begin translating the vision of the program statement into a more concrete form. 

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

## Deer in the Garden

by Dr. H. Marc Cathey

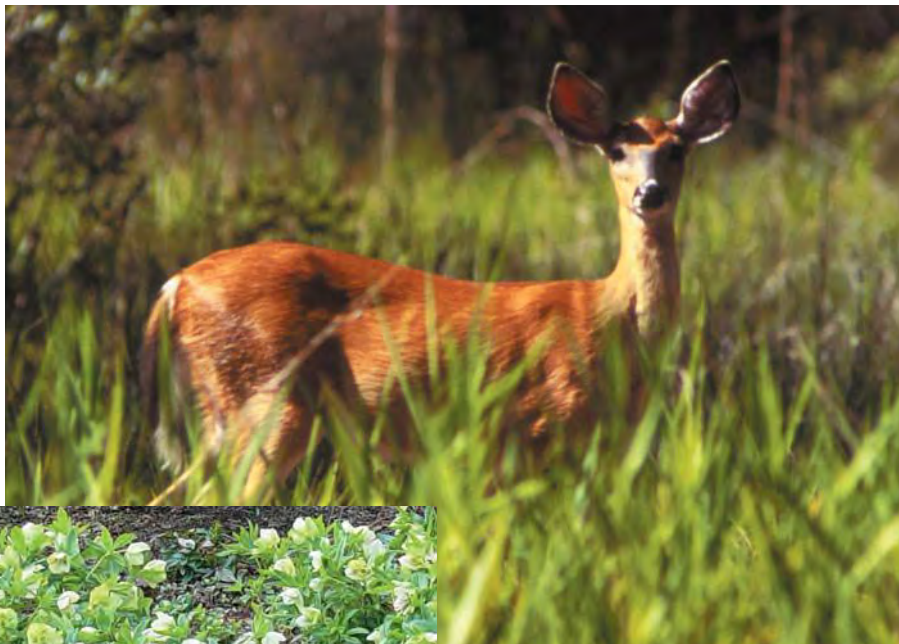
**M**Y YEARS OF experience as a host or guest on call-in garden radio shows has familiarized me with the top priorities for gardeners. And the number one concern of gardeners across America is how to control deer.

Why is this such a difficult situation to resolve? The answer is that deer have become a form of sacred cow in our society. Garden pests such as moles, rabbits, voles, and squirrels just don't generate the emotional attachment that people seem to feel for deer. Over the last few decades, we have allowed deer to become the dominant wild animal in the eastern United States. In fact, the deer population in this region is believed to be larger now than it was when European colonists first arrived in the 1600s.

Because deer habitat has in the same time frame been greatly reduced by development, more and more deer are being forced to exist in ever-decreasing green space. Hence our gardens and parks—as well as our roadways—are part of their new habitat. In addition to the annoyance of garden grazing, this has created much more serious problems, including the spread of Lyme disease and a greater incidence of dangerous deer-related vehicle crashes.

I've been around gardening long enough to be aware of the many products available to gardeners to help prevent deer damage—there are as many different products and ideas for controlling deer as there are suggestions for a uniform and fair national health plan.

The type and variety of chemical products that are offered to ward off deer continue to mystify me. Some—such as predator urine, for instance—seem to be



White-tailed deer are common unwanted visitors to gardens in the eastern United States, where they feast on a variety of ornamental plants. One control strategy is to select plants they usually find unpalatable, such as hellebores, left.

so exotic that their efficiency and sustainability for long-term use is questionable. Given that such products must be applied to plants with a wide range of forms, surfaces, and textures, it's evident that no one formulation can have universal application or effectiveness.

The best advice I can give is to apply a number of different approaches to deterring deer. Test a range of products to find the ones that seem to work best, and then rotate their use so the deer don't have time to become used to them. At the same time, put up sections of black mesh deer fencing in places where you know deer come into your garden—deer can't see this fencing and don't like the sensation of running into it. You can change the placement of the fencing

from time to time as well to keep the deer honest. And, of course, be sure to include plants in your garden that are not tasty to deer—lists of plants for your region are usually available through local Extension offices or Master Gardener groups.

After seeing the damage to my garden in the last few winters, I have greatly reduced the amount and variety of plants that they like—such as hostas—so that now there are slim pickin's for them.

In the meantime, I hope our scientists and natural resource managers can come up with humane ways to reduce the deer population. In the end, it will make life better for the deer and for gardeners. 🍀

*Dr. H. Marc Cathey is president emeritus of the American Horticultural Society.*

## Protecting Rare Habitats, Rare Plants, in Florida

by Elizabeth Garcia-Dominguez

**T**HE MIAMI ROCK RIDGE is only a few feet above sea level, rising above the coastal marshes of the Atlantic to the east and the swamps of the Everglades to the west. Even so, it's high enough to pass for "high ground" in low-lying South Florida. There, a diversity of rare and endemic plant species once flourished in the pine rockland habitat. Unfortunately, this habitat is also a prime location for cities, farms, and orchards, and now less than 10 percent of the original habitat area consists of natural vegetation.

Imperiled native plants of at-risk Florida habitats like the pine rocklands are getting help from a team of researchers at Fairchild Tropical Botanic Garden in Coral Gables, which is part of a network of gardens affiliated with the Center for Plant Conservation (CPC).

Historically, the rocklands were subject to naturally occurring fires, but the current policy to suppress fire in many urban areas means that trees and shrubs are encroaching and shading out understory species, including the federally endangered tiny polygala (*Polygala smallii*), a biennial with yellowish green flowers. Fairchild scientists are now testing whether mechanical removal of trees and bushes can be used as a surrogate for fire to aid the survival of tiny polygala and other endangered wildflowers.

In 2002, trees and shrubs were thinned in four experimental plots. Researchers counted the total number of polygala plants and measured the amount of ground they covered. They also analyzed the overall diversity of species that spring up in the wake of bush and tree removal.

"The preliminary results indicate that plots thinned mechanically had more native species than control plots," reports Fairchild's Joyce Maschinski. "What is es-



Fairchild botanists are re-introducing beach jacquemontias on this coastal Florida dune.

pecially important is that there was not an increase in exotic species in response to the thinning treatment." Now the research team is seeking permission to conduct a burn on a nearby site, says Maschinski, so "we can compare the results to the mechanical treatment."

As in the pine rockland habitat, Florida's coastal dunes suffer from development and fire suppression. There, Fairchild's CPC botanists are conducting experimental reintroductions of beach jacquemontia (*Jacquemontia reclinata*). In one of these experiments, plants were spaced out along a transect starting at the high tide line and moving further inland. Researchers aimed to discover what conditions give this sprawling vine the best chance to survive.

"It turns out the plants that are mid-distance, behind the foredune, had the greatest survival," reports Maschinski. "Those closest to the ocean were affected by a hurricane and got buried by sand, and the ones further from the ocean were eaten by what we think were marsh rabbits."

A different set of problems plagues the Florida Keys, low-elevation reef islands where rising salinity levels and an introduced moth threaten native flora. Until last year, Florida semaphore cactus (*Opuntia corallicola*), a Keys native, was known from only a single population of eight individuals. Luckily, a second population of 600 plants has recently been discovered on another key. In the Florida International University/Fairchild molecular laboratory, researchers using DNA fingerprinting discovered that the two populations are very closely related. This research, funded by the National Park Service, will help guide future conservation efforts.

"Habitats throughout Florida are being developed," Maschinski says. "Less and less remain. We're trying to work with plants from several habitats, both in the greenhouse and out in the field, to help land managers best conserve the species."

*Elizabeth Garcia-Dominguez is the communications coordinator for the CPC.*

## Bats Solve Insect Problems in the Garden

by Jo Ann Abell

**F**EW ANIMALS HAVE BEEN so burdened with myth and superstition as bats. For centuries, these flying mammals have been associated with evil and death, and regarded by some as carriers of disease. But in the last decade or so, thanks to the efforts of conservation groups and federal and state wildlife agencies, bats are being seen in a different light for the valuable role they play in the ecosystem.

Gardeners in particular should appreciate bats for helping to reduce insect pest populations, including those pesky mosquitoes that take some of the fun out of being outdoors in summer. According to Barbara French, conservation officer at Bat Conservation International (BCI), “As primary predators of night-flying insects, bats are essential to the balance of nature.”

North America is home to 46 bat species. Most are insect-eaters, with the exception of three species found in Arizona, California, and Texas that feed on nectar and pollen. Texas holds the title of “battiest” state in the union—32 species of bats call the Lone Star State home at various times of the year.

Bats are nocturnal, hunting in the dim hours between sunset and sunrise. Using a form of sonar known as echolocation, they literally hear their way through the world, crying out through the darkness in a language of high-pitched (ultrasonic) noises and listening for the echoes to return. Sound waves bounce off insects and solid objects and send back a “picture,” helping the bat to navigate in the dark.

### BROWN AND RED BATS

The most common of the native North American bats, the **big brown bat**, is found in every part of the country except the southern parts of Florida and Texas. Russet to dark brown in color, this bat averages between four and five inches in



The red bat can be found in wooded areas throughout the eastern half of North America.

length with a wingspan of about 13 inches. Their favorite roosts include attics, barns, bell towers, behind window shutters, and in manmade bat houses. These efficient feeders prey on June bugs, stinkbugs, mosquitoes, leafhoppers, and cucumber beetles.

**Little brown bats** look a lot like big browns, but smaller, only between three and four inches long, and are also common throughout most of the United

States. They can be identified on the wing by their swift, erratic flight. They voraciously consume thousands of insects in one outing, eating as many as 1,200 mosquito-sized insects in an hour! Mated females form maternity colonies inside abandoned buildings, hollow trees, rock crevices, or similar warm areas. Males and unmated females roost under shingles, the eaves of buildings, loose bark of trees, and in rock outcroppings.

One of North America’s most beautiful bats, the **eastern red bat**, ranges in color from bright orange to yellow-brown. Long, pointed wings and swift flight at low levels mark this bat as it forages for crickets, flies, beetles, and cicadas. They are known to congregate around corncribs, where they feast on grain moths, much to the delight of farmers. Red bats are found in wooded areas east of the Rocky Mountains from Canada to as far south as central

Florida, roosting in trees where they resemble dead leaves or pinecones.

### FREE-TAILED AND LONG-NOSED BATS

The **Mexican free-tailed bat** is found at lower elevations throughout California, across southern Nevada, and southern Utah, Arizona, New Mexico, Texas, and parts of Oklahoma. Colonies are also found throughout the southeastern United States from Mississippi down through Florida and over to South Carolina. Their colonies are the largest con-

## HOW YOU CAN HELP BATS

Like many other animals in our increasingly urban environment, bats are often the victims of diminishing natural habitats. Gardeners can help provide these useful creatures with places to feed and live by making a few adaptations to the landscape.

- Bats can be encouraged to live in manmade bat houses if the houses are properly constructed and sited where they will get adequate sunlight and be protected from predators. Bat houses can be purchased, or you can make your own—see “Resources,” right.
- Bats prefer habitats with different types of cover, such as a mix of agricultural fields and wooded areas. Plant a variety of perennials, herbs, and night-blooming flowers to lure the insects that will, in turn, attract bats.
- Bats are drawn to aquatic areas, where insect populations tend to be greater. Add a pond or other water feature to your landscape to ensure lucrative foraging for bats.
- Avoid using chemical pesticides that can harm non-target organisms such as bats and other wildlife.

gregations of mammals in the world. Besides caves, free-tail bats like to roost in culverts, old buildings, tunnels, and under bridges.

When hungry free-tails come out at sundown, humans reap the benefit. In central Texas, for example, 100 million Mexican free-tailed bats cruise over lawns, gardens, farm fields, and orchards, gobbling up some two million pounds of insects every night. This bat is truly the farmer’s best friend—one of its favorite foods is the number one-ranked agricultural pest in America, the corn earworm moth. Other crop-damaging pests on the bat’s menu include armyworm moths,

codling and corn borer moths, locusts, and leafhoppers.

**Long-nosed bats** are a keystone species in the ecosystems of the Sonoran Desert in the southwestern United States. These pollinators have long tongues that can reach deep into flowers for nectar. Bees, moths, lizards, and many birds depend on plants pollinated by long-nosed bats, either for food or shelter. Without the bats, there would be serious disruptions to the ecosystem.

### SPECIAL NEEDS

Because they have highly specialized habitat requirements, bats have not been

## Resources

**America’s Neighborhood Bats: Understanding and Learning to Live in Harmony with Them** by Merlin Tuttle. University of Texas Press, Austin, 1997.

**The Bat: Wings In The Night Sky** by M. Brock Fenton. Firefly Books, New York, New York, 1998.

**Bats of the World** by Gary L. Graham. Golden Guide, St. Martin Press, New York, New York, 2001.

**Building Homes for Bats**, a 33-minute video that includes a complete set of plans is available for \$12.95 on the Web site of Bat Conservation International (see below).

**Bat Conservation International**, (800) 538-2287. [www.batcon.org](http://www.batcon.org). This non-profit organization is dedicated to protecting and restoring bats and their habitats worldwide.

adept at adjusting to environmental change. Most produce only one offspring per year and often live in large colonies that can easily be wiped out in a single catastrophe. These traits leave bats extremely vulnerable to extinction. With many species suffering population declines due to loss of roosting habitat, loss of wetlands (which serve as insect-breeding grounds), and pesticide poisoning, gardeners can do their part to help stem the tide by making the home landscape more bat-friendly (see the sidebar on this page for how to get started).

Welcoming bats to the garden will pay dividends. These winged wonders have long played an important role in nature’s systems of checks and balances. In a healthy ecosystem, for every insect pest we might find, there is a natural predator. One of these is the silent hunter of the night, the under-appreciated bat.

*Jo Ann Abell writes and gardens in Middletown, Maryland. Her article on attracting pollinators to the garden appeared in the September/October 2003 issue of The American Gardener.*



**Voracious insect-eaters, bats can consume thousands of mosquitoes, cucumber beetles, and other garden pests in a single night. This big brown bat swoops in on a hapless moth.**

## Horticultural News and Research Important to American Gardeners

### SPUDS GO LOW CARB

The popularity of the Atkins diet, advocating low carbohydrate/high protein intake for weight loss, has generated a plethora of low-carb products. Self-proclaimed low-carb versions of ice cream, soup, soft drinks, and even candy are popping up on supermarket shelves like mushrooms. Now, a low-carb potato has been developed by the Dutch seed company HZPC and is expected to appear in the gourmet produce aisles of America's grocery stores early next year.



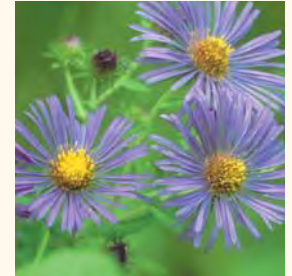
**Chad Hutchinson of the University of Florida shows off some of the low-carb potatoes expected to hit supermarkets next year.**

While a 3.5 ounce serving of a typical Russet Burbank baking potato weighs in at about 19 grams of carbohydrates, the same size serving of the as-yet-unnamed low-carb potato will deliver only 13 grams, says potato expert Chad Hutchinson, an assistant professor of horticulture at the University of Florida in Gainesville. That is 30 percent fewer carbs as well as 25 percent fewer calories. Though "it's not a genetically-engineered crop," says Hutchinson, this potato won't

### *Aster La Vista?*

Rumblings in the world of plant taxonomy that began a decade ago may eventually change the way we refer to a common genus of flowers—namely, the asters. That's if we care to be "BC"—botanically correct.

In a discipline in which genera are generally either lumped or split, the 306 species-rich genus *Aster* was a splitter's sitting duck. In 1994, Guy L. Nesom, now head of research at the Botanical Research Institute of Texas, used morphology to show that North American asters are part of a distinct, natural group that originated from South American and Old World species. Using



**Botanists now classify bigleaf aster, left, in the genus *Eurybia*, and New England aster, right, in the genus *Symphyotrichum*.**

DNA technology, other researchers subsequently confirmed Nesom's conclusions.

"Molecular evidence strongly shows that there are no true members of the genus *Aster* in North America," says John C. Semple, director of the WAT Herbarium and a professor of biology at the University of Waterloo, Ontario, Canada. "The one exception is the Arctic-alpine *Aster culminis*."

Of the many North American species formerly in the genus *Aster*, says Semple, "the majority belong in *Eurybia* and *Symphyotrichum*." For example, New England aster (*Aster novae-angliae*) is now considered *Symphyotrichum novae-angliae*, and white wood aster (*Aster divaricatus*) is now *Eurybia divaricata*.

While botanists have already adopted these nomenclatural changes, it may take some time for gardeners, horticulturists, and reference books to follow suit. Name changes, says Ron Petersen, a professor of botany at the University of Tennessee, are "often unpopular, for everyone has learned the 'popular usage' concept, and resents the imposition of the new name, even though it is scientifically necessary." For now, we're going to continue the practice of calling them asters.

"look like anything that's now on the market." Superb for baking, it is described as having exceptionally smooth skin and yellow flesh that hints at a healthful carotenoid content.

The Florida growers cooperative that purchased the only North American license to grow this potato plans to have it in supermarkets by January 2005; look for it in the gourmet vegetable section. Unlike storage potatoes that may be held for months, the low-carb spud is meant

to be eaten fresh and will reach consumers within days of harvest.

### EMERALD ASH BORER UPDATE

Emerald ash borers (EAB) are serious pests from Asia that attack all species of ash trees by destroying the vessels that conduct water and nutrients. They are so aggressive, they can kill a tree in two to three years. So far, they have destroyed 16 million ash trees in Michigan, where EABs were found in 13 counties in 2002.

In spite of quarantines in Michigan, in Ohio counties, and in Windsor, Canada, where the EAB has also appeared and remains a serious pest, infestation is spreading to other parts of North America. In August 2003, the insect appeared in the Mid-Atlantic—in ash trees at a Maryland nursery. In spring 2004, the EAB was discovered in two Indiana counties.

“The threat is enormous. EAB is nastier than expected,” says Edith Makra, community trees advocate at the Morton Arboretum in Lisle, Illinois. “They put



**Morton Arboretum research assistant Eric Katora secures a plastic strip on a tree to create a trap for emerald ash borers in Illinois's Lake County Forest Preserve District.**

one in a wind tunnel and it flew six miles,” adds Makra.

Horticulturists at the Morton Arboretum aren't waiting for the insect to appear; they are taking a proactive approach.

“It's all about preparedness,” says Makra. With a grant from the Illinois Department of Agriculture, the arboretum has assembled a team of 40 area communities, green organizations, and state and federal agencies in a mere eight months to monitor the incidence of EAB in northeastern Illinois. EAB experts in the team are traveling throughout the region inspecting trees, identifying stressed specimens, and conducting follow-up observations to check for the presence of the insects.

“So far, we're clean, but it's not over yet,” says Makra, who adds hopefully, “if you're monitoring and surveying, you're ahead of the game.”

## CELEBRATING LEWIS AND CLARK

Two hundred years ago, Meriwether Lewis and William Clark began their fabled voyage of discovery to the Pacific, departing from what would become Illinois on May 14, 1804. Beginning in 2003 and continuing into 2005, places all along their route to the Pacific—in Iowa, Idaho, Illinois, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Oregon, and Washington—are celebrating the bicentennial of the Corps of Discovery expedition.

In addition to the many regional celebrations, a traveling exhibit, “Lewis and Clark: The National Bicentennial Exhibition,” opens on November 6, 2004, at the Academy of Natural Sciences in Philadelphia, Pennsylvania. The Academy already houses some 226 dried specimens collected by Lewis in its Lewis and Clark Herbarium.

Some of these herbarium specimens will be displayed along with the expedition artifacts that are part of the National Bicentennial Exhibition, which will be at the academy through March 20, 2005. For more information visit the academy's Web site at [www.acnatsci.org](http://www.acnatsci.org).

## KITCHEN GARDENERS CELEBRATE

Kitchen Gardeners International (KGI), with members in 35 countries, is an organization dedicated to celebrating home-grown, home-cooked foods produced in a healthier, more sustainable, and more pleasurable food system. To celebrate the “diversity of delicious foods...from our own backyards, both literally and figuratively,” KGI inaugurated Kitchen Garden Day on August 22, 2004.

“If some of the world's largest food companies can establish the entire month of February as ‘Snack Food Month’, home gardeners and cooks deserve their own day,” says KGI president Roger Doiron, who founded the organization when he realized there was a powerful connection between food and the “big picture” issues such as health and the environment.

To sign up for a free e-mail newsletter featuring profiles of gardeners from around the world along with their tips for growing vegetables and recipes, visit KGI's Web site, [www.kitchengardeners.org](http://www.kitchengardeners.org).

## PEOPLE and PLACES in the NEWS

### ‘Big Boy’ Breeder Dies

On June 25, 2004, Oved Shifriss, plant breeder, geneticist, and recipient of the 1993 AHS Luther Burbank award, died at the age of 89. As Director of Vegetable Research at the Burpee Seed Company, Shifriss developed the ‘Big Boy’ tomato in 1949 after years of breeding. It revolutionized tomato culture by enabling home gardeners to succeed at growing what had been a finicky crop. In Shifriss' honor, the Burpee Tomato Trial Gardens in Doylestown, Pennsylvania, were renamed Oved Shifriss Field at a dedication held this past September.

### Arson Destroys Seed Bank

On August 4, a fire, later determined to be arson, destroyed the offices of Abundant Life Seed Foundation in Port Townsend, Washington. The Foundation makes available open-pollinated varieties for organic agriculture, distributes seed to the needy via the World Seed Fund, and stewards seed germplasm for future generations. The group's catalog seed inventory and World Seed Fund seed inventory were lost. Tax-deductible donations for rebuilding the World Seed Fund and the education and research programs may be sent to: ALSF, Box 772, Port Townsend, WA 98368.

### Scotts Acquires Smith & Hawken

The Ohio-based lawn and garden giant Scotts Company, manufacturer of fertilizer and pesticide products such as Miracle-Gro, Ortho, and Roundup, has acquired Smith & Hawken, a well-known purveyor of plants and upscale garden goods that opened its first retail store in 1985. The company will remain headquartered in California says Smith & Hawken CEO Barry Gilbert. “We are thrilled we now have the Scotts Company resources, which will enable us to really grow the Smith & Hawken brand,” says Gilbert.

## BENGHAL DAYFLOWER INVADERS THE SOUTH

Benghal dayflower (*Commelina benghalensis*), also called tropical spiderwort, is invading the American South. Present in the United States for seven decades and on the Federal Noxious Weed List since 1983, its population has recently exploded, smothering fields of cotton and peanuts.

Observed in only five Georgia counties in 1999, "by 2003 it was a moderate to severe pest in 29 counties in Georgia and occurred in over 50 Georgia counties," says Theodore M. Webster, a research agronomist with the USDA Agricultural Research Service in Tifton, Georgia. It is also considered a serious pest in Florida and has spread to North Carolina.

While increasing awareness of the weed may account for some of the apparent spread, "the importance and troublesomeness of this weed has definitely increased," says Webster. He speculates that inadequate pest management strategies are also abetting the increase. "Glyphosate-based pesticides," he says, "are not very effective on tropical spiderwort, offering less than 55 percent control."



Benghal dayflower, left, looks deceptively benign. In the photo above, USDA research agronomist Theodore Webster stands amid a Georgia cornfield that has been entirely overtaken by the plant, leaving only a few cornstalks to stand.

TOP: COURTESY OF A. STANLEY CULPEPPER, UNIVERSITY OF GEORGIA-TIFTON. BOTTOM: HERB PILCHER/COURTESY OF USDA-ARS

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## Recommendations for Your Gardening Library

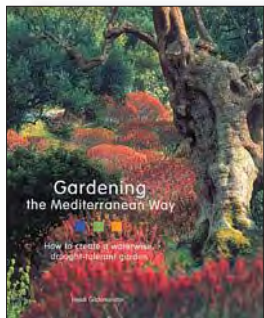
### Gardening the Mediterranean Way: How to Create a Waterwise, Drought-Tolerant Garden.

Heidi Gildemeister. Harry N. Abrams, Inc., New York, New York, 2004. 222 pages. Publisher's price, hardcover: \$35.

### Plants and Landscapes for Summer-Dry Climates.

Nora Harlow, editor. East Bay Municipal Utility District, Oakland, California, 2004. 336 pages. Publisher's price, hardcover: \$49.95.

MEDITERRANEAN GARDENING looks easy but is not. Those of us who live in these challenging zones need all the help we can get to make our gardens interesting, practical, and beautiful while at the same time conserving water. The two books reviewed here offer gardeners ample help towards achieving these goals, but they differ in approach.



Heidi Gildemeister, a founder and past president of the Mediterranean Garden Society, preaches restraint in *Gardening the Mediterranean Way*. It is easy to understand why she states it is not necessary to “splash contrasting colors around,” to use plants with contrasting shapes, or to strive for “constant display” and “excitement.” Where she lives, nature alone provides the excitement.

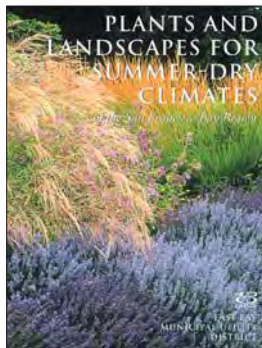
A few years ago, I had the pleasure of visiting Gildemeister's garden, nestled in a dramatic setting on the island of Majorca. The narrow road to the house plunged steeply past a romantic sheep field studded with immense limestone rocks and cliffs, sculpted by wind and rain. These rocks are shown in some of the author's stunning, 200-plus photographs, which will appeal to artists and gardeners alike. As I followed a gently curving path edged with well-groomed shrubs and enjoyed vistas of the azure Mediterranean framed by ancient trees, I realized her techniques had resulted in a uniquely beautiful landscape using far less irrigation than most Californians would apply to a garden of similar size.

There are some familiar themes in this book, such as using trees to frame views, planting bulbs that can survive on rainfall alone, and using borrowed scenery. But, instead of planting for shock and surprise as advised in some garden books, Gildemeister suggests creating peacefulness by pruning shrubs into low, rounded shapes, and using repetition in place of variety. Rather than amassing “vast numbers of species,” she counsels gardeners to stay with the few tried and true.

Overall, the book tells Mediterranean gardeners how to cooperate with their environment and the long summer drought.

The goal is an artistic, harmonious, and peaceful garden that extends the beauty of surrounding nature.

For those of us who live in the coastal zones of California, *Plants and Landscapes for Summer-Dry Climates*, edited by Nora Harlow, provides instant practical help. It is one of the best books on Mediterranean gardening I have yet encountered because it's well organized, highly informative, and gallops along in an entertaining manner. Though this book is aimed at Bay Area gardeners and incorporates the views of a number of distinguished northern California experts, most of the plants illustrated in the 547 color photographs grow equally well in southern California.



Almost without exception, the plants discussed in this book are colorful. They bring contrast and, yes—willy-nilly—excitement to any garden. The photographs in the opening chapters show drought-resistant plants in various landscape situations. The illustrated plant catalog identifies 650 trees, shrubs, perennials, and climbers adapted to our dry summers. A section called “Plants for Special Places” helps gardeners choose plants for specific needs.

These two books offer readers a stimulating choice of gardening styles. Gildemeister's garden philosophy brings about a distinctive Mediterranean look of mounded shrubs and simple planting, while the book edited by Harlow definitely leans more to the wild side of summer-dry gardening.

—Pat Welsh

*Pat Welsh is the author of Pat Welsh's Southern California Gardening: A Month-by-Month Guide (Chronicle Books, 1999) and The AHS Southwest SMARTGARDEN™ Regional Guide (DK Publishing, 2004). She lives and gardens in Del Mar, California.*

### Planting Green Roofs And Living Walls.

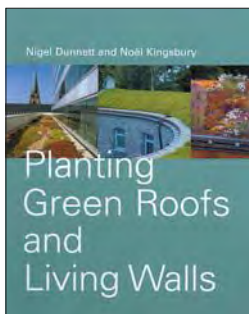
Nigel Dunnett and Noël Kingsbury. Timber Press, Portland, Oregon, 2004. 256 pages. Publisher's price, hardcover: \$34.95.

THIS BOOK COULD NOT have come at a better time. With the emerging green roof market gathering steam but lacking written resources, Nigel Dunnett, senior lecturer at the University of Sheffield, England, and Noël Kingsbury, a well-known British garden writer, have given this growing landscape sector its first reference with broad appeal.

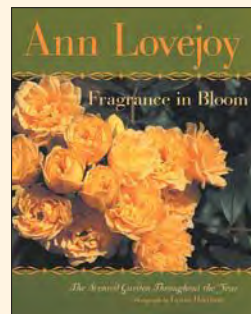
Combining an attractive, well-organized format with a formidable wealth of information, Dunnett and Kingsbury start off with the history and evolution of green roofs and mention many fascinating examples of contemporary green roofs from around the world. They explore in depth the economic, aesthetic, environmental, and other benefits behind their popularity today. Better still, they explain in layman's terms how these landscapes can exist in less than six inches of medium and why, because of this, all green roof components have to be carefully considered and planned.

The authors also delve into the related concept and practice of creating living walls—technically known as “façade greening.” Plentiful photographs illustrate the geographic and design range of these innovative ways to green up the sides of buildings. For both façades and roofs, the book's photographs, tables, and schematics are helpful for novice and professional gardeners alike.

Most of the information and examples used in the book are derived from Europe, which leads the way in green roofs and living walls, so specific choices relative to plant selections will have to be tempered against regional requirements in North America. Having noted that, Dunnett and Kingsbury offer plant suggestions throughout the book, as well as convenient plant directories at the end of the book. These plants are excellent starting points for anyone interested in installing a green roof or wall in the United States or Canada.



**G**ARDENS are not just for the eyes. They can be for the nose, too, as Anne Lovejoy points out in her book, **Fragrance in Bloom: The Scented Garden Throughout the Year** (Sasquatch Books, 2004, 212 pages, softcover, \$19.95). As Lovejoy explains, “This book will help to guide you through the selection process so that you end up with plants that are regionally appropriate and beautiful as well as marvelously scented.” She emphasizes using plants in concert and orchestrating the garden to provide a symphony of scents throughout the year. Lovejoy's writing is so vivid, the reader can almost smell what she's describing. Beautiful photographs by Lynne Harrison further enhance this feast for the senses.



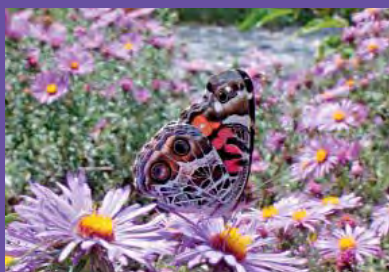
and orchestrating the garden to provide a symphony of scents throughout the year. Lovejoy's writing is so vivid, the reader can almost smell what she's describing. Beautiful photographs by Lynne Harrison further enhance this feast for the senses.

—Viveka Neveln, Editorial Intern

I highly recommend this book and look forward to many more on this subject as the industry grows. I say to the authors, in my best British accent, “Well done, indeed.”

—Ed Snodgrass

*Ed Snodgrass is the owner and president of Emory Knoll Farms and Green Roof Plants in Street, Maryland. He lectures widely on green roofs at regional, national, and international conferences.*



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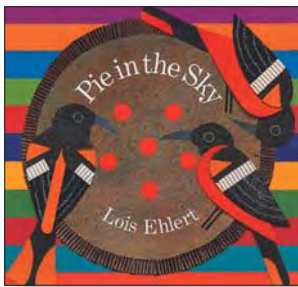
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## Books for Young Gardeners

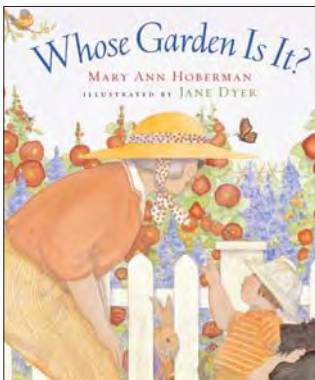
**M**Y NEPHEWS, eight-year-old Thomas and five-year-old Jack, love books and also love growing things and being outdoors, so I often try to find books for them that will encourage their penchant for gardening. However, with scads of children's literature on the market, selecting just the right book becomes a real challenge. Of the garden-related books for children published this year, here are some our editorial staff particularly enjoyed.

One of the sweetest joys of gardening is, quite literally, enjoying the fruits of your labor. Lois Ehlert weaves this theme into her new book, *Pie in the Sky* (Harcourt, Inc., 2004, hardcover, \$16) for ages three to seven. Told from the point of



view of a child, the story centers around a tree that the father calls a pie tree. The skeptical child watches the tree through the seasons but sees no pie. At last, the tree yields cherries, which they make into a tasty pie (recipe included). Colorful collage illustrations enhance the book's appeal.

A variety of creatures appear in *Whose Garden Is It?* by Mary Ann Hoberman and illustrated by Jane Dyer (Harcourt, 2004, hardcover, \$16). Rhyming verses and whimsical illustrations in-



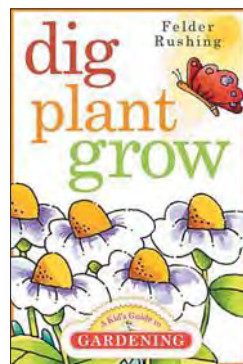
roduce kids from three to seven to all the characters that might "own" a garden. In addition to the gardener himself, rabbits, worms, insects, plants, and other denizens all stake a claim. Even the soil, sun, and rain explain their important role in the garden.

For a look at the sweet and often humorous memories a family can create in their garden, there's *In Our Backyard Garden*



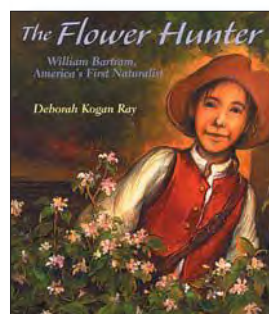
by Eileen Spinelli with illustrations by Marcy Ramsey (Simon & Schuster Children's Publishing, 2004, hardcover, \$15.95). Recommended for ages four to eight, this book features easy-to-read poems and lively pictures about one family's backyard adventures through the seasons.

Children from four to eight will find inspiration as well as instructions for starting their own gardens in *Eddie's Garden and How to Make Things Grow* by Sarah Garland (Frances Lincoln, 2004, hardcover, \$15.95). Young readers follow Eddie, his little sister Lily, and his mother as they buy supplies, dig the earth, plant and water the seeds, and watch everything grow. The colorful, botanically accurate illustrations bring the story to life. There's a handy how-to section at the end for growing plants mentioned in the story.



*Dig, Plant, Grow* by Felder Rushing (Cool Springs Press, 2004, softcover, \$16.99) is packed with fun projects that encourage kids aged six to 10 to get creative, experiment, and learn about plants and the outdoors. The book also includes a list of easy plants for kids to get to know and grow from "Awesome Annuals" to "Super Shrubs." Adults can check out the special section for teachers and parents. It has ideas for how they can help kids learn even more from the projects and plants.

Kids age eight and up will enjoy the picture book biography, *The Flower Hunter: William Bartram, America's First Naturalist* by Deborah Kogan Ray (Farrar, Straus & Giroux, Inc., 2004, hardcover, \$17). Starting as an eight-year-old, Bartram tells the story through journal entries as he grows up

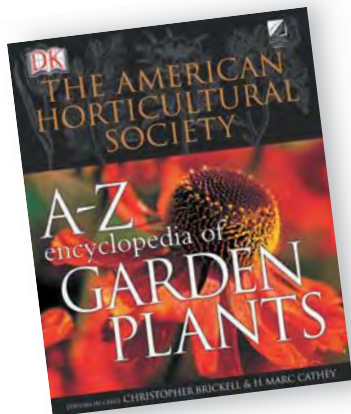


in the 1700s. As a boy, he accompanies his botanist father, John, on collecting expeditions. Then, as an adult, he explores wild parts of America on his own and describes his adventures while discovering new plants and peoples. Beautiful paintings and maps by the author accompany the story.

Viveka Neveln, Editorial Intern

## GIFTS FOR THE GARDENER

*For the gardeners on your list—or to treat yourself—here are some nifty gift ideas for green thumbs young and old.*



### *AHS A-Z Encyclopedia of Garden Plants*

Newly revised and updated, this indispensable gardening reference book features 15,000 plants and thousands of color photographs. To order, visit [www.ahs.org](http://www.ahs.org) and click on the “Books” link to order from [amazon.com](http://amazon.com) for \$54.40.



### *Solar Lantern Bird Feeder*

This elegant and unique state-of-the-art feeder holds 2½ pounds of birdseed. Six solar-powered LEDs turn the feeder into a lantern at night. Available from Gardener’s Supply Company for \$125. (800) 427-3363. [www.gardeners.com](http://www.gardeners.com)



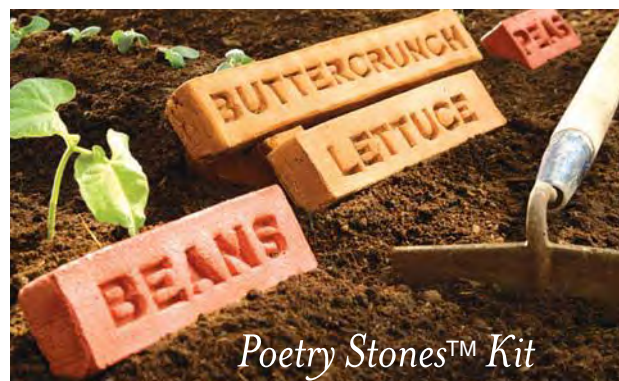
### *Ladybug™ Clogs*

Made especially for women, these durable, waterproof garden clogs come in a variety of colors as well as some zany new designs such as “butterfly” (shown) and “daisybug.” They range in price from \$20 to \$25, depending on the retailer, and come in whole sizes from 5 to 11. You’ll find them for \$19.95 from Greenshoes. (877) 499-4768. [www.greenshoes.com](http://www.greenshoes.com).



### *Hedgehog Thumbpot Waterer*

Add whimsy to watering with this terracotta critter. Submerge it in water to fill it, then place a thumb over the hole on the top. Water comes out the fine holes at the bottom when you remove your thumb. Available from Kinsman Company for \$10.95. (800) 733-4146. [www.kinsmangarden.com](http://www.kinsmangarden.com).



### *Poetry Stones™ Kit*

Make one-of-a-kind concrete plant markers, path pavers, or flower bed poem plaques with these do-it-yourself kits. Four different versions are available: Marker Stones, Creative Stepping Stones, Words In Stone, and Poetry Stones Deluxe. Kits contain everything you need to complete each project. Priced from \$24.95 to \$49.95. To order, call (800) 370-7697 or visit [www.magneticpoetry.com](http://www.magneticpoetry.com).



## Radiant Sun Wall Art

Brighten up the indoors or outdoors with this unique wall sculpture by artist Michael Nathan. Made from barrel lids of 16-gauge steel and painted with a copper Raku finish, each one measures 23½ inches in diameter. Available from Garden Artisans for \$85. (410) 721-6185. [www.gardenartisans.com](http://www.gardenartisans.com).

## Gilded Leaf Ornaments



These unique ornaments will add glittering beauty to the holiday tree. Real maple, redwood, and oak leaves are dipped in copper, nickel, and then gold. A gilded seed accompanies each leaf. Gardener's Supply Company sells them for \$18.95 each or \$17.50 for two or more. (800) 427-3363. [www.gardeners.com](http://www.gardeners.com).

## Kid-sized Tools

Made with forged steel and hard wood, these tools allow little hands and arms to get a grip on gardening. A six-piece set sells for \$44.95, with mix-and-match options, from the National Gardening Association. (800) 538-7476. [www.kidsgardening.com](http://www.kidsgardening.com).



## Maine Garden Hods

Modeled on traditional clam-collecting baskets known as hods, these wood-framed harvesting baskets are both practical and attractive. The open wire body makes hosing your vegetables clean in the garden a snap. Lee Valley offers a medium size for \$31.50 and a large size for \$38.50. (800) 871-8158. [www.leevalley.com](http://www.leevalley.com).

## Macroscope

Get up close and personal with flowers, insects, and more with this magnifying gadget. It can focus on a subject as close as 18 inches, allowing you to see tiny details clearly. Available for \$149 from Rittenhouse at (877) 488-1914 and [www.rittenhouse.ca](http://www.rittenhouse.ca) or from Close To Infinity at (907) 258-1505 and [www.closeinfinity.com](http://www.closeinfinity.com).



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

## REGIONAL HAPPENINGS

# Horticultural Events from Around the Country

### NORTHEAST

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

**RAP** NOV. 19–JAN. 9. **Holiday Train Show.** The New York Botanical Garden. Bronx, New York. (718) 817-8700. [www.nybg.org](http://www.nybg.org).

NOV. 20 & 21. **Ocean State Orchid Society's 3rd Annual Orchid Show & Sale.** Varnum Armory. East Greenwich, Rhode Island. (401) 295-1107. [www.oceanstateorchidsociety.org](http://www.oceanstateorchidsociety.org).

**RAP** NOV. 20–JAN. 9. **Winter Holiday Horticulture Exhibit.** Steinhardt Conservatory. Brooklyn Botanic Garden. Brooklyn, New York. (718) 623-7200. [www.bbq.org](http://www.bbq.org).

**RAP** NOV. 21. **Heirloom Apples and Homemade Cider.** Garden demonstration. Wave Hill. Bronx, New York. (718) 549-3200. [www.wavehill.org](http://www.wavehill.org).

**RAP** DEC. 4 & 5. **Holiday Marketplace.** Exhibition and sale. Berkshire Botanical Garden. Stockbridge, Massachusetts. (413) 298-3926. [www.berkshirebotanical.org](http://www.berkshirebotanical.org).

**RAP** DEC 12. **Holiday House Tour.** Coastal Maine Botanical Gardens. Boothbay, Maine. (207) 633-4333. [www.maine gardens.org](http://www.maine gardens.org).

### MID-ATLANTIC

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

NOV. 20–JAN. 9. **Garden of Lights.** Brookside Gardens. Wheaton, Maryland. (301) 962-1453. [www.brooksidegardens.org](http://www.brooksidegardens.org).

NOV. 25–JAN. 2. **Christmas Blooms at Longwood Gardens.** Display. Longwood Gardens. Kennett Square, Pennsylvania.

Events sponsored by or including official participation by AHS or AHS staff members are identified with the **AHS** symbol.

Events hosted by botanical gardens and arboreta that participate in AHS's Reciprocal Admissions Program are identified with the **RAP** symbol. Current AHS members showing a valid membership card are eligible for free or discounted admission to the garden or other benefits. Special events may not be included; contact the host site for details or visit [www.ahs.org/events/reciprocal\\_events.htm](http://www.ahs.org/events/reciprocal_events.htm).

## Oatlands Celebrates Bicentennial Year

OATLANDS PLANTATION, a property of the National Trust for Historic Preservation located in Leesburg, Virginia, will wrap up its bicentennial year with its annual "Christmas at Oatlands" festival. This year's theme is "Child's Christmas in Loudoun County." The decorations are guaranteed to "catapult you into the yuletide spirit," according to David Boyce, the executive director.

This historic 360-acre property, once the home of Virginia gentryman George Carter, includes an extraordinary collection of rare trees and other plants. It features four acres of formal gardens and the oldest restored greenhouse in the country, which was built in 1810. Its restoration was completed this year, just in time for Oatlands' bicentennial. "Our garden staff is now propagating out of it, while the Potting Shed portion continues to serve as a successful retail operation," says Boyce.

Holiday tours will be conducted Monday through Saturday from 10 a.m. to 4 p.m. and on Sundays from 1 p.m. to 4 p.m. Special candlelight tours will be offered on the evenings of November 27, December 11, and December 18. Oatlands will close from December 31 until March 28 to prepare for the 2005 spring season.

As Oatlands is a Reciprocal Admissions Program (RAP) participant, AHS members receive free admission to the gardens and grounds. Members also receive a 10 percent discount on purchases from the Carriage House Gift Shop and the Potting Shed shop, which offer a large and unique selection of holiday gifts. To arrange a tour, call (703) 777-3174. For more information, go to [www.oatlands.org](http://www.oatlands.org).

—Viveka Neveln, Editorial Intern



The house at Oatlands, decorated for the holidays, will be open for three candlelight tours.

(610) 388-1000. [www.longwoodgardens.org](http://www.longwoodgardens.org).

**RAP** NOV. 26–JAN. 2. **GardenFest of Lights.** Lewis Ginter Botanical Garden. Richmond, Virginia. (804) 262-9887. [www.lewisginter.org](http://www.lewisginter.org).

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

DEC. 1 & 8. **Holiday Plant Displays and Care Demonstration.** Hillwood Museum & Gardens. Washington, DC. (202) 686-5807. [www.hillwoodmuseum.org](http://www.hillwoodmuseum.org).

**RAP** DEC. 4. **Gardeners' Holiday.** Workshops. Green Spring Gardens. Alexandria, Virginia. (703) 642-5173. [www.greenspring.org](http://www.greenspring.org).

DEC. 7. **Separate Beds: Stories of Successful Gardening.** Free lecture. Scott Arboretum of Swarthmore College. Swarthmore, Pennsylvania. (610) 328-8025. [www.scottarboretum.org](http://www.scottarboretum.org).

**RAP** JAN. 1–9. **Bonsai Winter Silhouettes.** Exhibit. U.S. National Arboretum. Washington, DC. (202) 245-2726. [www.usna.usda.gov](http://www.usna.usda.gov).

Looking ahead  
JAN. 21–23. **Virginia Flower & Garden Show.**

The Virginia Horticultural Foundation. Virginia Beach Pavilion. Virginia Beach, Virginia. (877) 882-0057. [www.vafgs.org](http://www.vafgs.org).

#### SOUTHEAST

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

**RAP** NOV. 19–21. **Deerfield Orchid Society Show.** American Orchid Society Visitor Center and Botanical Garden. Delray Beach, Florida. (561) 404-2000. [www.aos.org](http://www.aos.org).

**RAP** NOV. 20. **Southern Medicinal Plants, A Living Tradition.** Symposium. Atlanta Botanical Garden. Atlanta, Georgia. (404) 591-1551. [www.atlantabotanicalgarden.org](http://www.atlantabotanicalgarden.org).

**AHS** DEC. 3 & 4. **Great Southern Tree Conference.** AHS President Katy Moss Warner will speak at this event. Hilton University of Florida Conference Center and the GSTC Demonstration Site. Gainesville, Florida. (800) 375-3642. [www.greatsouthernreeconference.org](http://www.greatsouthernreeconference.org).

DEC. 5. **36th Annual Christmas Tour of Homes.** The Garden Club of Saint Augustine. St. Augustine, Florida. (904) 471-2165.

**RAP** DEC. 5. **Holiday in the Garden.** Festival. Atlanta Botanical Garden. Atlanta, Georgia. (404) 591-1551. [www.atlantabotanicalgarden.org](http://www.atlantabotanicalgarden.org).

#### Looking ahead

JAN. 20–22. **The Tampa Bay Flower Show.** Tropicana Field. St. Petersburg, Florida. (727) 596-1204. [www.flowershow.com](http://www.flowershow.com).

JAN. 21–23. **19th Annual Southern Gardening Symposium.** Callaway Gardens. Pine Mountain, Georgia. (800) 225-5292. [www.callawayonline.com](http://www.callawayonline.com).

JAN. 22. **Garden Gurus VII.** Plant sale, auction, and workshops plus speaker P. Allen Smith. Purchase Area Master Gardener Association. Paducah, Kentucky. (270) 554-9520. <http://ces.ca.uky.edu/mccracken/horticulture/gardengurus.htm>.

#### NORTH CENTRAL

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

NOV. 22–JAN 2. **A Victorian Christmas Conservatory Display.** Holiday display. Reiman Gardens. Iowa State University. Ames, Iowa. (515) 294-2710. [www.reimangardens.iastate.edu](http://www.reimangardens.iastate.edu).

**RAP** NOV. 25–JAN 2. **Christmas Around the World & Holiday Traditions.** Holiday display and festival. Frederik Meijer Gardens & Sculpture Park. Grand Rapids, Michigan. (616) 957-1580. [www.meijergardens.org](http://www.meijergardens.org).

**RAP** NOV. 26–DEC. 30. **Deck the Hall!**

Holiday display. Stan Hywet Hall and Gardens. Akron, Ohio. (888) 836-5533. [www.hallandgardens.com](http://www.hallandgardens.com).

**RAP** NOV. 26–JAN. 2. **Celebrations! A Festival of Flowers, Lights & Music.** Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. [www.chicagobotanic.org](http://www.chicagobotanic.org).

**RAP** NOV. 26–JAN. 2. **Wintershow.** Holiday display. Cleveland Botanical Garden. Cleveland, Ohio. (216) 721-1600. [www.cb garden.org](http://www.cb garden.org).

NOV. 27 & 28. **Saginaw Valley Orchid Society Show.** Saginaw Valley Orchid Society. Midland, Michigan. (989) 465-1634.

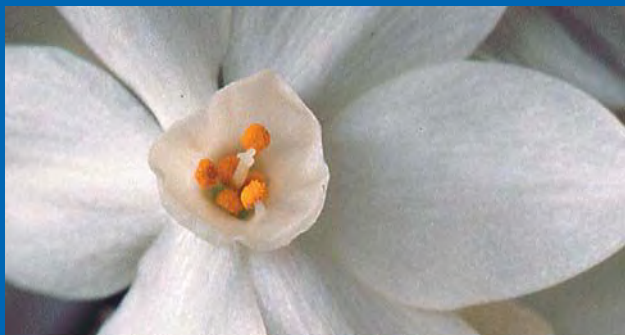
**RAP** DEC. 4–31. **Holiday Express—Flower and Model Train Show.** Olbrich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. [www.olbrich.org](http://www.olbrich.org).

DEC. 8 & 9. **Pesticide Resistance Management.** Online workshop. University of Nebraska–Lincoln. Lincoln, Nebraska. (402) 472-3030. [www.unl.edu](http://www.unl.edu).

#### Looking ahead

**AHS** JAN. 13. **Salvation by Design.** Lecture by Tres Fromme. Cleveland Botanical Garden. Cleveland, Ohio. (216) 721-1600. [www.cb garden.org](http://www.cb garden.org).

### AHS President's Council Philadelphia Flower Show and Gardens Tour March 3–5, 2005



**E**xclusively for AHS President's Council Members, this excursion will include special tours of the must-see gardens in the Philadelphia area as well as a chance to attend the pre-opening party at the Philadelphia Flower Show. AHS has partnered with the Show on the entrance exhibit featuring restored historic White House gates on loan from AHS—the theme “America the Beautiful” says it all.



For more information on this tour, or to find out how to join the President's Council, call Joe Lamoglia at (703) 768-5700 ext. 115.



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## SOUTH CENTRAL

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

**RAP** NOV. 20–DEC. 30. **Holiday Lights Display.** Garvan Woodland Gardens. Hot Springs National Park, Arkansas. (800) 366-4664. [www.garvangardens.org](http://www.garvangardens.org).

**RAP** NOV. 24–JAN. 2. **Holiday Flower and Train Show.** Missouri Botanical Garden. St. Louis, Missouri. (314) 577-9400. [www.mobot.org](http://www.mobot.org).

**RAP** NOV. 26–DEC. 31. **Holiday at the Arboretum.** Dallas Arboretum. Dallas, Texas. (214) 515-6500. [www.dallasarboretum.org](http://www.dallasarboretum.org).

## SOUTHWEST

AZ, NM, CO, UT

**RAP** DEC. 4 & 5. **Wreath Workshops.** Red Butte Garden. University of Utah. Salt Lake City, Utah. (801) 581-4747. [www.redbuttegarden.org](http://www.redbuttegarden.org).

**RAP** DEC. 4–12. **Luminaria Lights.** Holiday display. Tucson Botanical Garden. Tucson, Arizona. (520) 326-9686. [www.tucsonbotanical.org](http://www.tucsonbotanical.org).

**RAP** DEC. 10 & 17. **Annual Holiday Open House.** Holiday display. Western Colorado Botanical Gardens. Grand Junction, Colorado. (970) 245-3288. [www.wcbotanic.org](http://www.wcbotanic.org).

### Looking ahead

JAN. 14–16. **Maricopa County Home & Garden Show.** Arizona State Fairgrounds. Phoenix, Arizona. (800) 995-1295. [www.phoenixhomeshow.com](http://www.phoenixhomeshow.com).

## WEST COAST

CA, NV, HI

**RAP** DEC. 4 & 5. **Wreath-making demonstrations.** Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. [www.descansogardens.org](http://www.descansogardens.org).

**RAP** DEC. 10–27. **Holiday Festival.** Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. [www.descansogardens.org](http://www.descansogardens.org).

JAN. 7–9. **South Bay Spring Home & Garden Show.** Santa Clara Convention Center. Santa Clara, California. (800) 765-3976. [www.southbayhomeshow.com](http://www.southbayhomeshow.com).

### Looking ahead

**RAP** JAN 28 & 29. **Beyond the Garden Gate.** Symposium. San Francisco Botanical Garden. San Francisco, California. (415) 661-1316. [www.sfbotanicalgarden.org](http://www.sfbotanicalgarden.org).

## NORTHWEST

AK, ID, MT, OR, WA, WY

**RAP** NOV. 27–JAN. 1. **Garden d'Lights.** Holi-

## Winter Classes for Gardeners

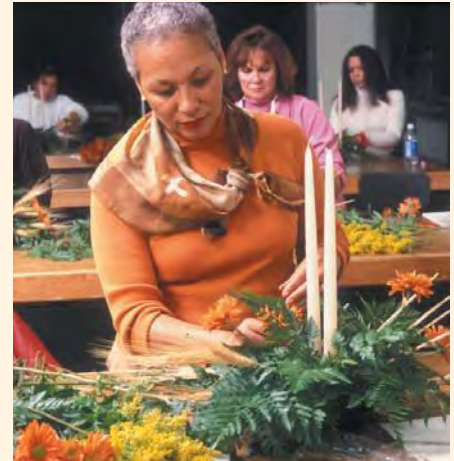
AS GARDENS SLOW DOWN during the colder months, it's the perfect time to come indoors and brush up on your horticultural knowledge. Many botanic gardens offer a variety of courses, lectures, and workshops to keep both home gardeners and professionals busy during the dormant season. Here's a look at some of the programs available at three gardens in different regions of the country.

The **New York Botanical Garden** offers everything from short how-to classes to more in-depth courses. One area of growing interest is the use of native plants in the garden. On January 8, Brad Roeller, manager of display gardens at the Institute of Ecosystem Studies, will teach a class on "Native Perennials." Roeller will also teach "Native Trees and Shrubs for Landscaping" on January 15. Both classes will cover plant selection and care. For experienced gardeners, there are programs such as "Advanced Landscape Care and Maintenance," which will take place every Wednesday from January 5 to January 26. For registration and other information, call (800) 322-6924 or visit [www.nybg.org/edu](http://www.nybg.org/edu).

Through the **School of the Chicago Botanic Garden**, introductory to advanced classes on plants, garden design, botany, landscaping, and many other topics are available. Choose from several seasonal classes such as "Winter Window Box Workshop" on December 7 and "Gardening Techniques: Winter Plants in Perspective" on January 8. For those wishing to get into the holiday spirit, the "Merry, Berry Wreath" workshop is on December 14. To register, call (847) 835-8261 or visit [www.chicagobotanic.org/education.html](http://www.chicagobotanic.org/education.html).

At **San Francisco Botanical Garden** at Strybing Arboretum, students may choose from a cornucopia of classes. These include "Ferns in the Garden" on December 6, 12, and 13, and "Growing Natives in Containers" on December 10. Starting on January 11, "Introduction to Botany" will explore topics such as plant physiology and classification during six Tuesday evening classes and two Sunday field trips. Registration is required for all programs. Call (415) 661-1316 ext. 354 or visit [www.sfbotanicalgarden.org](http://www.sfbotanicalgarden.org) for more information.

—Viveka Neveln, Editorial Intern



Flower-arranging classes at The New York Botanical Garden are always popular.



Workshops at San Francisco Botanical Garden, like this one on bonsai, often draw a crowd.

day display. Bellevue Botanical Garden. Bellevue, Washington. (425) 451-3755. [www.bellevuebotanical.org](http://www.bellevuebotanical.org).

### Looking ahead

JAN. 26–30. **Tacoma Home and Garden Show.** Tacoma Dome. Tacoma, Washington. (253) 756-2121. [www.tacomahomeandgardenshow.com](http://www.tacomahomeandgardenshow.com).

## CANADA

DEC. 1–JAN. 6. **Christmas at the Gardens.** Holiday display. The Butchart Gardens. Victoria, British Columbia. (866) 652-4422. [www.butchartgardens.com](http://www.butchartgardens.com).

DEC. 2. **A Gulf Island Gardener in the Gardens of Ireland.** Lecture. VanDusen Botanical Garden. Vancouver, British Columbia. (604) 878-9274. [www.vandusengarden.org](http://www.vandusengarden.org).





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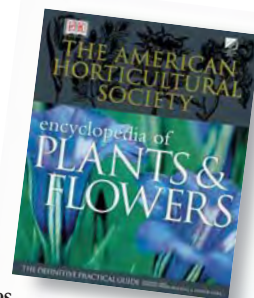
**Heat Tolerance Map** In 1997, AHS introduced the AHS Plant Heat Zone Map, which has revolutionized the way American gardeners select region-appropriate plants.

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

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

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

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



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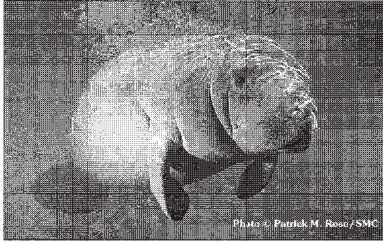
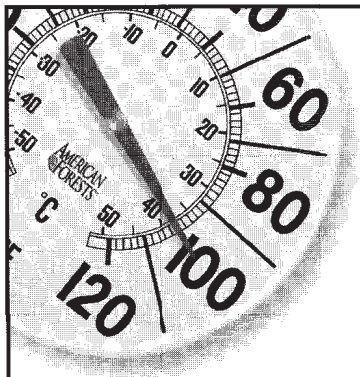


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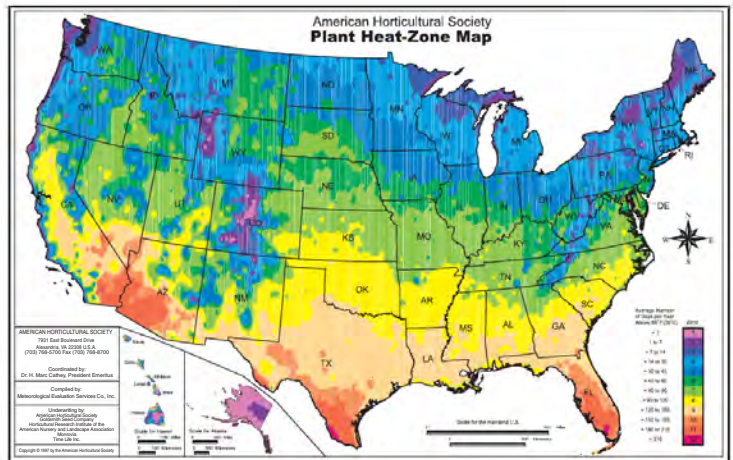
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# PRONUNCIATIONS AND PLANTING ZONES

Most of the cultivated plants described in this issue are listed here with their pronunciations, USDA Plant Hardiness Zones—based on the 2003 revised hardiness map, which is currently under review by the USDA—and AHS Plant Heat Zones. These zones suggest a range of locations where temperatures are appropriate—both in winter and summer—for growing each plant. While the zones are a good place to start in determining plant adaptability in your region, factors such as exposure, moisture, snow cover, and humidity also play an important role in plant survival. The codes tend to be conservative; plants may grow outside the ranges indicated. A USDA zone rating of 0–0 means that the plant is a true annual and completes its life cycle in a year or less. To purchase a two-by-three-foot glossy AHS Plant Heat Zone Map for \$9.95, call (800) 777-7931 or visit [www.ahs.org](http://www.ahs.org). Hardiness and Heat zone codes are generated by AHS and documented in the Showtime<sup>®</sup> database, owned by Arabella Dane.



## A–D

- Agastache aurantiaca** ah-guh-STAH-she ar-an-tih-AY-kuh (USDA 7–10, AHS 10–7)  
**A. cana** A. KAN-uh (6–11, 12–1)  
**A. foeniculum** A. fee-NIK-yew-lum (4–11, 12–5)  
**A. scrophulariifolia** A. skrof-yew-lar-ee-ih-FO-lee-ah (4–9, 9–1)  
**Antirrhinum majus** an-tihr-RYE-num MAY-juss (7–9, 9–1)  
**Brassica oleracea** BRASS-ih-kuh o-luh-RAY-see-uh (0–0, 8–1)  
**Calendula officinalis** kuh-LEN-djew-lah o-fiss-ih-NAL-iss (0–0, 6–1)  
**Calocedrus decurrens** kal-o-SEED-rus deh-KUR-renz (5–8, 8–1)  
**Calycanthus floridus** kal-ee-KAN-thus FLOR-ih-dus (5–9, 9–1)  
**C. occidentalis** C. ahk-sih-den-TAL-iss (6–9, 9–6)  
**Chamaecyparis obtusa** kam-ee-SIP-uh-riss ahb-TOO-suh (4–8, 8–3)  
**Chamaemelum nobile** kam-may-ME-lum NO-bil-ee (6–9, 9–6)  
**Clarkia amoena** KLARK-ee-uh a-MEE-nuh (0–0, 9–1)  
**C. botatae** C. BOT-ee (0–0, 9–1)  
**Collinsia bicolor** col-IN-see-uh BY-kul-ur (10–11, 12–9)  
**Cylindropuntia echinocarpa** sih-lindro-PUN-shuh ee-kine-o-KAR-puh (9–11, 12–1)  
**Cymbopogon citratus** sim-bo-PO-gon sih-TRAY-tuss (6–11, 9–1)  
**Dianthus barbatus** dy-AN-thus bar-BAY-tus (3–8, 9–1)  
**D. chinensis** D. chy-NEN-sis (9–11, 12–1)  
**D. hybridus** D. HY-brih-dus (9–11, 12–1)

## E–L

- Echinacea purpurea** ek-ih-NAY-see-uh pur-PUR-ee-uh (3–9, 9–1)  
**Epigaea repens** ep-ih-GEE-uh REP-enz (3–9, 9–1)  
**Fagus sylvatica** FAY-gus sil-VAT-ih-kuh (4–7, 9–4)  
**Ilex crenata** EYE-leks kreh-NAY-tuh (5–7, 7–5)  
**I. opaca** I. o-PAH-kuh (5–9, 9–5)  
**I. vomitoria** I. vom-ih-TOR-ee-uh (7–11, 12–7)  
**Illicium floridanum** ih-LISS-ee-um flor-ih-DAN-um (7–9, 9–4)  
**Juniperus chinensis** joo-NIP-er-iss chy-NEN-sis (5–9, 9–5)  
**J. communis** J. com-YEW-niss (2–7, 7–1)  
**J. scopulorum** J. skop-yew-LOR-um (4–7, 7–1)  
**Lavandula angustifolia** lah-VAN-dyew-luh ang-gus-tih-FO-lee-uh (5–8, 8–5)  
**L. dentata** L. den-TAY-tuh (5–9, 9–4)  
**Layia platyglossa** LAY-ee-uh plat-ih-GLOSS-uh (0–0, 10–9)  
**Limnanthes douglasii** lim-NAN-theez dug-LASS-ee-eye (0–0, 9–1)  
**Lindera benzoin** lin-DAIR-uh BEN-zo-in (4–9, 8–1)  
**L. obtusiloba** L. ahb-TOO-sih-lo-buh (6–9, 8–1)

## M–P

- Mahonia aquifolium** mah-HONE-ee-uh ah-kwi-FO-lee-um (5–9, 9–3)  
**M. confusa** M. kon-FEW-suh (8–9, 9–8)  
**M. fremontii** M. free-MON-tee-eye (7–10, 10–7)  
**M. fortunei** M. for-TEW-nee-eye (8–9, 9–4)

- M. gracilipes** M. gruh-SIL-ih-pees (8–9, 9–8)  
**M. japonica** M. jah-PON-ih-kuh (7–9, 9–7)  
**M. lomariifolia** M. lom-ar-ee-ih-FO-lee-uh (8–9, 9–5)  
**M. mairei** M. MARE-ee-eye (8–9, 9–5)  
**M. xmedia** M. MEE-dee-uh (7–9, 9–5)  
**M. nervosa** M. ner-VO-suh (5–7, 7–5)  
**M. nevinii** M. neh-VIN-ee-eye (7–10, 10–7)  
**M. pinnata** M. pin-NAY-tuh (5–9, 9–1)  
**M. repens** M. REP-enz (4–9, 9–1)  
**M. xsavillii** M. sah-VIL-ee-eye (8–9, 9–8)  
**M. trifoliata** M. tri-fo-lee-AY-tuh (8–10, 10–8)  
**M. veitchiorum** M. vee-CHEE-or-um (4–9, 9–5)  
**M. xwagneri** M. wag-NUR-eye (7–9, 9–7)  
**Matthiola incana** mah-tee-O-luh in-KAN-uh (5–8, 8–5)  
**Melittis melissophyllum** mel-LIT-tiss-mel-lis-o-FIL-um (6–9, 9–6)  
**Nemophila menziesii** nee-MAF-ih-luh men-ZEES-ee-eye (0–0, 12–2)  
**Nepeta cataria** NEP-eh-tuh cat-AH-ree-uh (3–7, 7–1)  
**N. xfaassenii** N. fah-SEN-ee-eye (4–8, 8–1)  
**N. sibirica** N. sy-BEER-ih-kuh (3–8, 8–1)  
**Opuntia phaeacantha** o-PUN-shuh fee-uh-KAN-thuh (9–12, 12–7)  
**Papaver croceum** puh-PAH-vur KRO-see-um (2–8, 8–1)

- Phacelia campanularia** fuh-SEE-lee-uh kam-pan-yew-LAIR-ee-uh (0–0, 9–1)  
**P. tanacetifolia** P. tan-uh-see-tih-FO-lee-uh (0–0, 9–1)  
**Picea pungens** PY-see-uh PUN-jenz (3–8, 8–1)

## Q–Z

- Quercus robur** KWER-kus RO-bur (5–8, 8–3)  
**Rosa eglanteria** RO-zuh egg-lan-TER-ee-uh (4–9, 9–1)  
**R. primula** R. PRIM-yew-luh (5–9, 9–5)  
**R. villosa** R. vih-LO-suh (5–12, 12–1)  
**Salvia carduacea** SAL-vee-uh kar-dyew-AY-see-uh (8–10, 10–8)  
**S. clevelandii** S. cleev-LAND-ee-eye (8–10, 10–1)  
**S. dorisiana** S. dor-ih-SEE-ay-nuh (9–10, 10–9)  
**S. elegans** S. EL-ih-ganz (8–11, 12–1)  
**S. officinalis** S. o-fiss-ih-NAL-iss (5–8, 8–5)  
**Silene virginica** SY-lean vir-JIN-ih-kuh (4–8, 9–3)  
**Taxus xmedia** TAK-suss MEE-dee-uh (4–7, 7–1)  
**Thuja occidentalis** THEW-yuh ahk-sih-den-TAL-iss (2–7, 7–1)  
**Thymus pseudolanuginosus** TY-mus soo-doh-lan-oo-jih-NO-sus (5–9, 9–5)  
**Viola cornuta** VY-o-luh kor-NEW-tuh (6–9, 9–1)  
**V. tricolor** V. TRY-kul-ur (3–9, 12–1)  
**V. xwittrockiana** V. wih-trah-kee-AN-nuh (4–8, 9–1)

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*Index compiled by Elaine Lee and Petra Fisher.*


## PERFECT PLANT COMPANIONS

### Two of a Kind in an Oregon “Desert” Garden

by Carole Ottesen



**N**EEDLE EVERGREENS are not the only garden subjects that keep a garden interesting throughout the cold season. Despite the winter weather, the plant combination in this Oregon rock garden literally shines. Haloed in starry light, the silver cholla's (*Cylindropuntia echinocarpa*) humanlike figure is coated with spines that are covered with papery sheaths.

At the feet of the silver cholla, a Mojave prickly pear cactus (*Opuntia phaeacantha*) flows over rocks that support surprising patches of deep green, velvety moss and gray lichen. Red fruits from the prickly pear obtrude from its flat, spiny pads, adding rich, dark texture that is further augmented by tufts of tiny but painfully sharp glochids—the technical term for the small, easily detachable spines. Subtly colored, this combination, along with the juniper and agave in the background, is an arresting mix of contrasting habits and textures. 

*Carole Ottesen is associate editor of The American Gardener.*

**Silver cholla** (*Cylindropuntia echinocarpa*, syn. *Opuntia echinocarpa*) is a native of the Sonoran Desert of western Arizona, southern Nevada, and southeastern California and grows up to five feet tall. Its branches, called “joints,” are a yellowish-green oblong shape. It thrives in sandy, gravelly soil at elevations under 5,000 feet. Yellow-green flowers are followed by green fruit. (USDA Zones 9–11, AHS Zones 12–1)

**Mojave prickly pear cactus** (*Opuntia phaeacantha*) grows two to four feet tall. Its round to oblong pads grow five to 10 inches long. Yellow flowers are followed by edible, red fruits. (Zones 9–12, 12–7)

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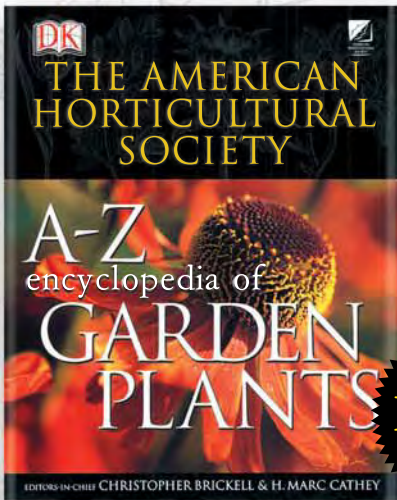


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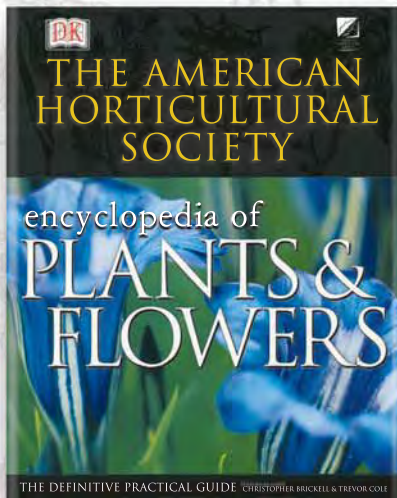
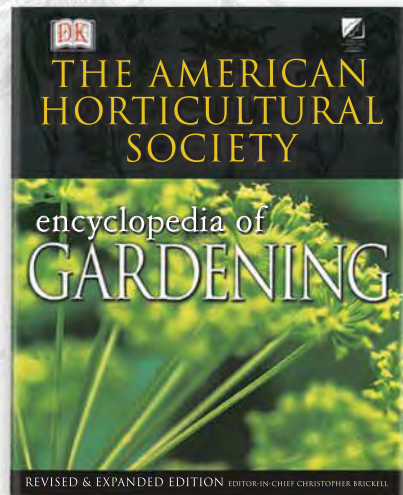
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