

The background of the cover is a close-up photograph of several vibrant purple clematis flowers with yellow centers and green leaves. A dark, weathered metal helmet is positioned at the top center, partially overlapping the title. The title 'The American GARDENER' is written in a large, white, serif font, with 'The American' in a smaller size above 'GARDENER'. A registered trademark symbol (®) is located at the end of the word 'GARDENER'.

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The Magazine of the American Horticultural Society

March / April 2016

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NOTES FROM RIVER FARM

WHILE IT FEELS like the phrase “experience of a lifetime” is often thrown around lightly these days, those are precisely the words that come to mind when I think about my experience earlier this year with our AHS Travel Study program. My wife, Jane, and I were very fortunate to be able to participate in the “South Africa: Gardens of the Cape” trip in January. Since its inception over 40 years ago, our Travel Study program has been offering exceptional garden travel experiences to destinations around the world. Our recent trip to South Africa was a most memorable example.

We and a congenial group of fellow travelers spent 11 days getting acquainted with the horticultural wonders and natural beauty in and around Cape Town—an area recognized as one of the world’s most botanically diverse regions. The Cape Floral Kingdom is the smallest yet richest of the world’s six floristic regions. Numerous plants of horticultural interest in the United States are endemic to South Africa, including agapanthus, clivias, gazanias, and proteas. Seeing these plants in their native habitats gave our group a new perspective on species that have become so much a part of American landscapes.

Our tour included visits to many noteworthy public and private gardens, historic estates, wineries, and expansive nature reserves. A highlight in Cape Town proper was a visit to the Company’s Garden, a living tribute to the days when sailing ships stopped in Cape Town to replenish supplies and the East India Company prospered. At each of these locations, we had the opportunity to meet fellow garden aficionados and exchange notes on gardening in our respective corners of the world.

While we experienced an astonishing diversity of plants on our South African journey, there are alternative ways to traveling to a distant continent to enjoy a rich plant palette. The feature articles in this issue of *The American Gardener* can help you do just that. They focus on the amazing range of plants we have to work with right here at home. Some of the topics you’ll find when you turn the page include inspiration for elevating your garden to new heights with vines; fragrant perennial pinks sure to bedazzle you; and a peek inside the fascinating and addictive world of competitive vegetable growing.

As spring arrives, I hope the season brings each of you many memorable experiences—whether it’s exploring a stunning garden that’s new to you, watching seeds you’ve sown thrive, or meeting a remarkable person who shares a piece of valuable plant knowledge. When you garden, untold special moments are just waiting to be discovered!

Happy gardening!

Tom Underwood
Executive Director



Striking mountains form a picturesque backdrop for participants on the recent AHS tour to South Africa.

The American GARDENER

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CONTACT US

The American Gardener

7931 East Boulevard Drive

Alexandria, VA 22308

(703) 768-5700

EDITORIAL

E-MAIL: editor@ahs.org

ADVERTISING

E-MAIL: advertising@ahs.org

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MEMBERS' FORUM

POOR PRUNING

I am disappointed that a magazine of the caliber of *The American Gardener* would feature a mutilated palm on its cover (November/December 2015). Over pruning of palms is a destructive fad that has spread coast to coast. Removing green, and even half-dead, fronds reduces a palm's photosynthetic ability. Over-pruned palms basically starve to death, and this process is accelerated in areas like Florida that have nutrient-poor soil. Over-pruned palms may suffer a progressively narrowing trunk, which makes them more likely to snap in heavy winds than palms with normal canopies.

There is no problem with removing dead fronds or fruiting and flowering stalks. It is acceptable, though not usually necessary, to prune fully healthy palms as long as all fronds whose tips are higher than the point where the frond

attaches to the tree are preserved. This practice follows the American National Standards Institute (ANSI) statement that no palm should be pruned above a horizontal plane represented by nine and three on a clock face (with the center located at the point where the lowest fronds emerge).

It is a pity that the stately and potentially beautiful palm you featured faces a dim future.

*Jeanette Lee Atkinson
Naples, Florida*

Editor's Note: Readers interested in learning the correct techniques for pruning palm trees may enjoy this helpful video, narrated by Doug Caldwell, an Extension agent and certified arborist with the University of Florida: <http://floridalandscapingtoday.com/palm-tree-trimming-and-pruning-video>.

CORRECTIONS

In the profile of Weesie Smith in the January/February 2016 issue ("Weesie Smith: Driving Force for Native Plants" by Allen Bush), the name of University of Alabama botanist Joab Thomas was rendered incorrectly. Thomas went on to become president of the University of Alabama. Also, Smith's friend, D.D. Martin, lives in Courtland, Alabama.

In the article "The Worldwide Dwarf Tomato Project" by Craig LeHoullier (January/February 2016) the name of Tatiana Kouchnareva, one of the tomato seed company owners quoted, was misspelled.

PLEASE WRITE US! Address letters to Editor, *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308. Send e-mails to editor@ahs.org (note Letter to Editor in subject line). Letters we print may be edited for length and clarity.



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NATIONAL CHILDREN & YOUTH GARDEN SYMPOSIUM For information about the Society's annual National Children & Youth Garden Symposium, e-mail education@ahs.org, or visit www.ahs.org/ncygs.

RECIPROCAL ADMISSIONS PROGRAM The AHS Reciprocal Admissions Program offers members free admission and other discounts to nearly 300 botanical gardens and other horticultural destinations throughout North America. A list of participating gardens can be found on www.ahs.org/rap. For more information, call (800) 777-7931 ext. 119.

RIVER FARM The AHS headquarters at River Farm is open 9 a.m. to 5 p.m. weekdays year-round (except Federal holidays), and 9 a.m. to 1 p.m. Saturdays from April through September. For information about events, rentals, and directions, visit the About River Farm section of www.ahs.org.

TRAVEL STUDY PROGRAM Visit spectacular private and public gardens around the world through the Society's acclaimed Travel Study Program. For information about upcoming trips, call (703) 768-5700 ext. 127, e-mail development@ahs.org, or visit the Gardening Programs section of www.ahs.org.

WEBSITE: www.ahs.org The AHS website is a valuable source of information about the Society's programs and activities. Users must set up a username and password to access the member's-only sections.

News from the AHS

March / April 2016

PROGRAMS • EVENTS • ANNOUNCEMENTS

YOUTH GARDEN SYMPOSIUM HEADS TO SOUTH CAROLINA

THE AMERICAN HORTICULTURAL SOCIETY'S 24th annual National Children & Youth Garden Symposium will be held July 13 to 16 in Columbia, South Carolina. This event brings together teachers, landscape designers, and youth program leaders from around the country to collaborate, share, and learn about engaging young people with plants.

This year's regional co-hosts are **Clemson University Extension, Heathwood Hall Episcopal School, and Riverbanks Zoo & Garden**. One of the event's



The Medicine Wheel Garden at Heathwood Hall Episcopal School, one of this year's symposium hosts.

highlights will be tours of local public and school gardens, including the Riverbanks Zoo & Garden's new children's garden, "Waterfall Junction." Participants also may choose from more than 50 educational sessions and workshops on a variety of topics, and attend *A Sense of Wonder*, a one-woman play by **Kaiulani Lee**. The play is based on the life of scientist Rachel Carson and her experiences following the pub-

lication of her ground-breaking environmental book, *Silent Spring*.

Additional pre-symposium tours will feature visits to notable regional gardens, including the **Pearl Fryar Topiary Garden** and **Moore Farms Botanical Garden**. For more information, visit www.ahs.org/ncygs or call (703) 768-5700 ext. 121. For regular updates, follow @AHS_NCYGS on Twitter.

PRESIDENT'S COUNCIL TRIP TO CHICAGO, ILLINOIS, IN MAY

THIS YEAR the annual AHS President's Council Trip destination is the greater Chicago area from May 17 to 21. Participants will explore the windy city's world famous parks



Millennium Park

and gardens and stay at the historic Drake hotel overlooking Lake Michigan. The trip includes visits to notable private gardens in the area as well as many of the city's renowned public gardens including the **Lurie Garden** in Millennium Park, **Chicago Botanic Garden**, the **Morton Arboretum**, and **Garfield Park Conservatory**. A special guided tour of the **Ball Horticulture Company's** laboratories and trial and demonstration gardens also has been arranged.

Along the way, participants will see the work of some of America's foremost architects and landscape architects—including Frank Lloyd Wright, Frederick Law Olmsted, and Jens Jensen—all of whom contributed to Chicago's extraordinary wealth of gardens and parks. A unique view of the city's architecture and urban landscaping will be

offered during a narrated river cruise aboard "Chicago's First Lady."

To obtain a trip itinerary and learn how to join the President's Council, e-mail development@ahs.org or visit www.ahs.org/ways-to-give/presidents-council.

TOP: COURTESY OF TODD BEASLEY. BOTTOM: COURTESY OF CHICAGO ARCHITECTURE FOUNDATION

VIRGINIA HISTORIC GARDEN WEEK

EACH SPRING, more than 250 beautiful gardens in Virginia open to the public during the Garden Club of Virginia's Historic Garden Week. During this year's event, taking place from April 23 to 30, more than 30 tours will showcase a wide-ranging



Gardens, like this one, throughout Virginia will be open for visitors during the Garden Club of Virginia's Historic Garden Week in April.

array of the Old Dominion's most picturesque and charming public and private homes and gardens. Among the featured gardens is River Farm, the AHS's historic headquarters overlooking the Potomac River in Alexandria, Virginia.

Called "America's largest open house," Virginia Historic Garden Week is the longest running statewide garden tour in the country. Debuting in 1929, the event has helped raise funds to continue the preservation and restoration of gardens across Virginia, while at the same time allowing an opportunity for these special properties to be more widely enjoyed.

For tickets and additional information about the Garden Club of Virginia's Historic Garden Week visit www.vagardenweek.org or call (804) 644-7776 ext. 22.

COALITION OF AMERICAN PLANT SOCIETIES MEETING

THE FIFTH ANNUAL meeting of the Coalition of American Plant Societies (CAPS) will be held May 3 to 5 at the headquarters of the American Rose Society in Shreveport, Louisiana. The AHS has been closely involved with this alliance of national plant organizations since it was founded in 2012. These annual meetings, held at different sites around the country, provide a forum to discuss common opportunities and challenges facing gardening organizations, to network, and to foster mutual success. The meeting schedule typically includes tours of local public and private gardens and nurseries, presentations on topics of interest to membership organizations, and workshops.

ANNUAL SPRING GARDEN MARKET AT RIVER FARM

ON APRIL 8 and 9, the AHS's Spring Garden Market at its River Farm headquarters will include a wide variety of edible and ornamental plants along with garden-related books, art, tools, and

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AHS NATIONAL EVENTS CALENDAR

Mark your calendar for these upcoming events that are sponsored or co-sponsored by the AHS. Visit www.ahs.org or call (703) 768-5700 for more information.

- APR. 8 & 9. **Spring Garden Market at River Farm.** Alexandria, Virginia (Member's preview morning of April 8).
- APR. 16. **Great Gardens and Landscaping Symposium.** Woodstock, Vermont. (AHS partner event.)
- APR. 21-MAY 1. **Gardens of Portugal: Lisbon, Sintra and the Island of Madeira.** AHS Travel Study Program.
- APR. 23-30. **Historic Garden Week in Virginia.** AHS partner event.)
- APR. 24-26. **Colonial Williamsburg Garden Symposium.** Williamsburg, Virginia. (AHS partner event.)
- MAY 17-21. **AHS President's Council Trip to Chicagoland area.** Illinois.
- JUNE 2. **Great American Gardeners and AHS Book Awards Ceremony and Banquet at River Farm.** Alexandria, Virginia.
- JULY 13-15. **The Gardeners of America/Men's Garden Club of America annual convention.** Green Bay, Wisconsin. (AHS partner event.)
- JULY 14-16. **National Children & Youth Garden Symposium.** Columbia, South Carolina.
- SEPT. 1-10. Italy: **Architecture and Gardens of the Veneto, Dolomites, and Venice.** AHS Travel Study Program. **SOLD OUT**
- SEPT. 17. **AHS Annual Gala at River Farm.** Alexandria, Virginia.
- SEPT. 22-OCT. 1. Italy: **Architecture and Gardens of the Veneto, Dolomites, and Venice.** AHS Travel Study Program.
- OCT. 6-8. **America in Bloom Symposium.** Grande Arroyo, California. (AHS partner event.)



All kinds of plants will be available at the Spring Garden Market.

more. This annual event also will feature a kids' table featuring family-friendly garden activities, food from **Rocklands Barbeque and Grilling Company**, and a free raffle for plants and garden products. Local Master Gardeners will be available for gardening advice. A special attraction this year is the **National Capital Area's**

Gifts of Note

In addition to vital support through membership dues, the American Horticultural Society relies on grants, bequests, and other gifts to support its programs. We would like to thank the following donors for gifts received between December 22, 2015 and February 24, 2016.

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Dr. Jeffrey Taylor

If you would like to support the American Horticultural Society as part of your estate planning, as a tribute to a loved one, or as part of your annual charitable giving plan, please call (703) 768-5700.

District II Garden Clubs' Standard Flower Show, which will be open to visitors during the Spring Garden Market.

The event kicks off on Friday April 8 with the AHS Members-Only Morning from 10 a.m. to noon. At noon, the market opens to the general public until 6 p.m. Saturday hours are 10 a.m. to 6 p.m. Parking is \$5 per car (cash only), and free for AHS members (please bring your current member card or other proof of membership such as this magazine).

For more information, call (703) 768-5700 or visit www.ahs.org/GardenMarket. Follow River Farm on Facebook or Twitter (@AHS_Riverfarm) for announcements about the Spring Garden Market as well as other news and happenings in the area.

News written by AHS Staff

THE AMERICAN HORTICULTURAL SOCIETY'S 24TH ANNUAL

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- Share ideas, success stories, and inspiration with like-minded colleagues from across the nation.

FOR MORE INFORMATION:
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AHS MEMBERS MAKING A DIFFERENCE: Betty Mackey

by Uziel Crescenzi

WHEN PLAYING outfield as a child, Betty Mackey often paid more attention to the clover and other little plants in the turf than she did to the batter at the plate. This may have been her first clue



Betty Mackey

that her future would involve gardening. However, she began her professional life as a freelance writer specializing in politics. She had grown up gardening in rural Maryland, and continued to do so whenever she could. It was only a

matter of time before her passion for plants would take over every aspect of her life.

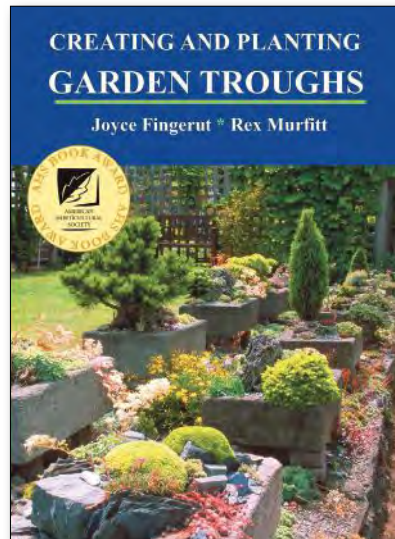
A SWITCH TO GARDEN WRITING

After moving to Florida in 1983, she began writing about gardening for the local newspaper. She found that her experience as a new gardener to the area resonated with her audience. Taking advantage of her skills and equipment gained from producing a printed newsletter, she decided to self-publish her first book, *A Cutting Garden for Florida*, in 1985. It was the start of her own garden publishing company, Longwood Cottage Publishing.

In the late 1980s, she moved to the Philadelphia area in Pennsylvania and became involved with the active gardening scene there. She joined the Delaware Valley chapter of the North American Rock Garden Society and also became a member of the American Horticultural Society (AHS). She continued publishing books, changing the name of her company to B.B. Mackey Books to avoid confusion with nearby Longwood Gardens.

ESTABLISHING A NICHE

Back then, Mackey recalls, larger publishing companies offered meager contracts and set draconian deadlines. And this was



This title received an AHS Book Award in 2000.

only if unknown authors, in particular, could manage to beat the nearly impossible odds of having their book proposal accepted. As an independent publisher, her approach differed: Mackey used her platform to provide an outlet for more special-

ized horticultural writing that didn't fit the mold set by traditional publishers.

Her press, which she runs herself with the help of a few outside consultants, has released books on diverse topics such as rock gardening, garden humor, and citrus. One of these books, *Creating and Planting Garden Troughs*, won the AHS Book Award in 2000. Another title, *Creating and Planting Alpine Gardens*, won an award from the Garden Writers Association in 2006.

Mackey somehow found time to write books of her own. Among these is *The Gardener's Home Companion* (Macmillan, 1991), for which she served as the lead writer; and *Cutting Gardens* (Simon & Schuster, 1993), which she co-authored. She freelanced for several garden magazines, too.

ONGOING EFFORTS

Mackey is busier than ever these days. She's currently working with an author on a sequel to a book on fairy gardens she published last year. She feels that creating fairy gardens is a great way to engage families in gardening and increase environmental awareness in children. For her, inspiring people—especially kids—to “make the world a greener place” is the key to a healthier planet.

In addition to shepherding books through the publishing process, she writes a garden column for *The Hunt*, a magazine for the Brandywine Valley area of Pennsylvania and beyond.

She frequently gives presentations on a variety of horticultural topics at venues like Longwood Gardens. Of course, she maintains her own garden, and she volunteers in her local community garden and with the rock garden society.

Through her writing, teaching, and gardening, Mackey's goal is the same: to encourage the everyday gardener to achieve more and try new things. Considering her many achievements, this mantra has clearly served her well as she enriches the world around her.



Betty Mackey's publishing company caters to niche topics in the home gardening genre.

Uziel Crescenzi is an editorial intern for *The American Gardener*.

AHS 2016 Great American Gardeners National Award Winners

The American Horticultural Society (AHS) is proud to announce the distinguished recipients of the Society's 2016 Great American Gardeners Awards. Individuals, organizations, and businesses who receive these national awards represent the best in American gardening. Each has contributed significantly to fields such as plant research, garden communication, landscape design, youth gardening, teaching, and commercial horticulture. We applaud their passionate commitment to American gardening and their outstanding achievements within their areas of expertise.

The 2016 awards will be presented on the evening of June 2 during the Great American Gardeners Awards Ceremony and Banquet at River Farm, the AHS's headquarters in Alexandria, Virginia. For more information, or to register to attend the ceremony, visit www.ahs.org/awards or call (703) 768-5700.

Nominations for 2017

Help us give recognition to deserving "horticultural heroes" by nominating someone you know for one of the 2017 Great American Gardeners Awards. To do so, visit www.ahs.org/awards for more information.

LIBERTY HYDE BAILEY AWARD

Given to an individual who has made significant lifetime contributions to at least three of the following horticultural fields: teaching, research, communications, plant exploration, administration, art, business, and leadership.



THE LIFETIME contributions of **John G. Fairey** to American horticulture touch numerous fields, from teaching and research to the nursery industry. Born into a family of gardeners, Fairey found his own path to horticulture. After receiving a Master of Fine Arts degree from the University of Pennsylvania in 1964, he began his career as a college professor at Texas A&M University in College Station, where he taught design to architecture students.



In 1971 Fairey purchased a rural property in Hempstead, Texas, and began creating a garden he eventually named Peckerwood. Fairey's interest in finding plants adapted to the challenging climate of the central South led him to start exploring southern Texas and neighboring regions of northeastern Mexico. Over the years, Fairey participated in over 100 plant-hunting trips both on his own and in partnership with public gardens, universities, and nurseries. Among these was a 1991 expedition to Mexico with Harvard University on behalf of the American Cancer Society. The goal was to locate a rare yew species that researchers believed might contain compounds effective against ovarian cancer. In 1987 Fairey cofounded Yucca Do, a mail-order nursery, as a way to introduce and share with other gardeners some of the promising new plants he was discovering and selecting.

Over time Peckerwood grew from seven to 19 acres and became not only a renowned botanical showplace, but a haven for plant diversity. As issues such as overgrazing, mining, and development threaten Mexico's natural areas, Fairey's extensive efforts to document and preserve their rich flora have become increasingly imperative. By some estimates, Peckerwood's preemptive conservation efforts may already have saved thousands of plant species from extinction. To ensure the preservation of the garden and its mission, Peckerwood is now owned by a nonprofit foundation with support from the Garden Conservancy.

Over the course of Fairey's career, he has received many awards, including the prestigious Scott Medal from the Scott Arboretum of Swarthmore College in Pennsylvania in 2013, and the Commercial Award from the American Horticultural Society in 1996 for his work with Yucca Do.

H. MARC CATHEY AWARD

Recognizes outstanding scientific research that has enriched the field of horticulture.

After earning his doctorate at Cornell University in 1957, **Charles Edward Hess**



spent the bulk of his 50-year career as a horticulture professor, researcher, and administrator at Purdue University, Rutgers University, and the University of California–Davis. A dedicated researcher, he published more

than 125 articles, many relating to his work on plant propagation. Hess was appointed to the USDA as Assistant Secretary for Science and Education. He served as president of the American Society for Horticultural Science (ASHS) and the International Plant Propagators Society, among many leadership roles. In 2013, he was elected to the ASHS Hall of Fame.

PAUL ECKE JR. COMMERCIAL AWARD

Given to an individual or company whose commitment to the highest standards of excellence in the field of commercial horticulture contributes to the betterment of gardening practices everywhere.

Scott Skogerboe has selected, discovered, and bred numerous plants.



Often tracking down selections believed lost forever, his horticultural detective work has led him to exciting finds, such as the last surviving apple tree planted by Johnny Appleseed. Skogerboe ran

his own edible plant nursery for several years before joining Fort Collins Wholesale Nursery in Colorado, where he has spent the last 30 years as the plant propagator. He propagates roughly 300,000 trees and shrubs annually, and estimates he has grown over five million plants in the nursery's greenhouses.

LANDSCAPE DESIGN AWARD

Given to an individual whose work has demonstrated and promoted the values of sound horticultural practices in the field of landscape architecture.

Carol R. Johnson, founder and chairman emeritus of Carol R. Johnson Associates



in Boston, Massachusetts, has been a landscape architect for more than 50 years. Among her notable projects are the redesign of the Mystic River Reservation in Massachusetts and the creation of

urban parks such as John Marshall Park in Washington, D.C. Johnson taught landscape architecture at her alma mater, Harvard University Graduate School of Design, and has lectured at other universities in the United States and abroad. She is a trustee for the Hubbard Educational Trust, founded to further education in landscape architecture throughout the United States.

MERITORIOUS SERVICE AWARD

Recognizes a past Board member or friend of the American Horticultural Society for outstanding service in support of the Society's goals, mission, and activities.

Leslie S. Ariail was a member of the AHS Board of Directors from 2001 to 2015, serving



in various capacities from secretary to vice chair. She also played leadership roles on various Board committees and the AHS's annual fundraising gala. A longtime resident of Alexandria, Virginia, she was a founding

member of Act for Alexandria, which has helped raise money for local charities, and currently serves as president of the Washington Forrest Foundation, a charitable organization headquartered in Arlington, Virginia. A lifelong gardener and award-winning flower arranger, Ariail is a member of the Garden Club of Alexandria.

B.Y. MORRISON COMMUNICATION AWARD

Recognizes effective and inspirational communication—through print, radio, television, and/or online media—that advances public interest and participation in horticulture.

A resident of Anchorage, Alaska, **Jeff Lowenfels** has been sharing gardening advice



through a wide range of media for nearly 40 years. Over that period, he has continuously published a weekly gardening column in the *Anchorage Daily News*, hosted a popular public TV show about

gardening in Alaska, written three critically acclaimed gardening books, and hosted a long-running radio show. An active member and former president of the Garden Writers Association (GWA), he was inducted into the organization's hall of fame in 2004. His book *Teaming with Microbes* received the 2011 GWA Gold Awards for best talent, book writing, and product.

FRANCES JONES POETKER AWARD

Recognizes significant contributions to floral design in publications, on the platform, and to the public.

MaryEllen J. M. O'Brien of Sheffield, Massachusetts, is an inspirational floral



designer who has competed in and served as a judge for numerous flower shows across the country. Currently she creates *Flower Show Flowers*, an online publication for amateur floral

designers. Prior to that, she was the editor and graphic designer for *By DESIGN*, a Garden Club of America (GCA) periodical focused on flower arranging. Also for the GCA, she created a floral design course that affiliate clubs use to teach the art to their members. Her own innovative designs have garnered numerous awards from the GCA and other organizations.

PROFESSIONAL AWARD

Given to a public garden administrator whose achievements during the course of his or her career have cultivated widespread interest in horticulture.

As the executive director of the Chanticleer Foundation, **R. William Thomas** oversees the acclaimed Chanticleer garden in Wayne, Pennsylvania. He also coordinates the distribution of the foundation's grants, which have helped fund worthy garden projects around the country. Prior to joining Chanticleer in 2003, Thomas worked at Longwood Gardens in Kennett Square, Pennsylvania, for more than 25 years in a variety of roles. A popular speaker, Thomas has given horticultural presentations at public gardens and botanical institutions from coast to coast. He has written five gardening books, the most recent of which, *The Art of Gardening* (Timber Press, 2015), received a 2016 AHS Book Award (see opposite page).



JANE L. TAYLOR AWARD
Given to an individual, organization, or program that has inspired and nurtured future horticulturists through efforts in children's and youth gardening.

JANE L. TAYLOR AWARD

Given to an individual, organization, or program that has inspired and nurtured future horticulturists through efforts in children's and youth gardening.

Lee and Kathy Sapp Lovett began their careers 50 years ago as educators in the Hall County school system in Gainesville, Georgia. Kathy has since retired from teaching middle and high school, while Lee now serves as deputy superintendent. Together they have combined their love for gardening and education to create Gardens on Green. This edu-



cational garden next to the Hall County Education Building introduces children to "the miracles in a garden" as Kathy puts it. Gardens on Green is a teaching and learning space complete with conifer, vegetable, and pollinator gardens, as well as a compost center. More recently, a nutrition center has been added to teach kids about healthy eating habits. For many students, the garden is an influential first introduction to the joys of gardening.

TEACHING AWARD

Given to an individual whose ability to share his or her horticultural knowledge with others has contributed to a better public understanding of the plant world and its important influence on society.

Terry L. Ferriss is professor emerita of horticulture in the Plant and Earth Science Department at the University of Wisconsin–River Falls. Along with teaching horticulture courses there from 1979 to 2015, she advised between 30 and 70 undergraduate horticulture students



and a handful of graduate-level students each year. Starting in 1994, she served as director of the Internship Program for the College of Agriculture, Food, and Environmental Sciences. Toward the end of her long tenure, she also served as chair of her department. Ferriss has received several accolades for teaching, research, and overall contributions to horticulture, including the Outstanding Educator Award from the Perennial Plant Association and the Alex Laurie Award for Research and Education from the Society of American Florists, both in 2015.

CATHERINE H. SWEENEY AWARD

Recognizes extraordinary and dedicated philanthropic efforts in support of the field of horticulture.

Tom and Kitty Stoner of Annapolis, Maryland, are co-founders of the TKF Foundation, which focuses on creating and supporting public green spaces as places of sanctuary and solace. Through



this foundation, the Stoners have partnered in the creation of more than 130 such projects—called Open Spaces, Sacred Places—in the greater Washington D.C. and Baltimore region over the last 20 years. The Foundation has also supplied \$4.5 million for the Nature Sacred Award initiative, a national program that supports research projects designed to scientifically prove the inherent value and need for nearby, open access to urban nature. Based on results from this research, the Stoners hope to encourage further investments in urban greening.

URBAN BEAUTIFICATION AWARD

Given to an individual, institution, or company for significant contributions to urban horticulture and the beautification of American cities.

Timothy M. Kant has served the city of Fairhope, Alabama, for more than 30



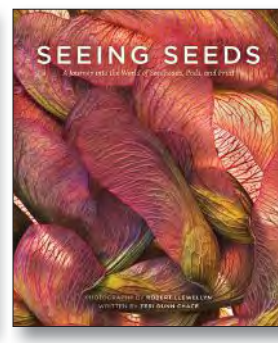
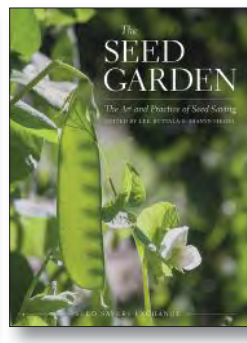
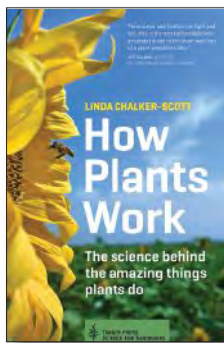
years. He began as a city horticulturist in 1983 and has been mayor since 2000. Kant's focus on civic pride and quality of life is reflected in the city's blooming success. Under his leadership, the city has placed first in its population category in the America in Bloom urban beautification award program, and third in the world in Nations in Bloom, an award that recognizes cities for environmental stewardship and innovative practices. Among the many awards Kant has received is the Norman J. Walton, Sr. Regional Award—Outstanding Member Government, the highest award given by the South Alabama Regional Planning Commission.

2016 AHS Book Award Winners



Each year, the American Horticultural Society recognizes outstanding gardening books published in North America with its annual Book Award. Nominated books are judged by the AHS Book Award Committee on qualities such as writing style, authority, accuracy, and physical quality. This year's recipients, selected from books published in 2015, are listed below.

The 2016 Book Award Committee members were: **Jeff Cox**, a garden communicator and designer in Sonoma County, California; **Rita Hassert**, a botanical librarian at the Morton Arboretum in Lisle, Illinois; **Susan Hines**, a garden communicator in Hyattsville, Maryland; **Jim Long**, garden communicator and owner of Long Creek Nursery in Blue Eye, Missouri; **Mary Ann Newcomer**, a garden communicator in Boise, Idaho; **Doug Oster**, Home & Garden editor for the *Pittsburgh Tribune-Review* and radio personality based in Pennsylvania; and **Anne Marie Van Nest**, a garden communicator and horticulturist in the Niagara Falls area of New York.



The Art of Gardening

by the Chanticleer Gardeners and R. William Thomas. Timber Press.

■ “What could have been a 300-page advertisement for Chanticleer is, instead, a loving memoir packed with extraordinary ideas and simply a pure celebration of gardening,” says Doug Oster, adding that “Rob Cardillo’s photography elevates the book from magnificent to masterpiece.” Susan Hines notes that “this refreshing book allows readers to meet the ‘artists’ as well as explore their work, which holds numerous takeaways for home gardeners everywhere.”

How Plants Work

by Linda Chalker-Scott. Timber Press.

■ “This book will make anyone a better gardener because it wonderfully explains the science behind what is happening in the garden,” says Anne Marie Van Nest. “Linda Chalker-Scott has a gift for relating complex horticultural science with very understandable and useful language for the average gardener,” agrees Mary Ann Newcomer.

Planting in a Post-Wild World

by Thomas Rainer and Claudia West. Timber Press.

■ Filled with “inspiring photographs, design ideas, and well explained examples,” Van Nest finds this to be a “trailblazing

book that moves away from the traditional and into a design for the future that uses naturally occurring plant communities.” Jeff Cox notes that, “although we can’t reconnect to the climax ecologies that have been uprooted by human activity, we can plant landscapes in a way that reconnects people to nature. This is an outstanding book about how to do that.”

The Seed Garden

by Micaela Colley and Jared Zystro. Seed Savers Exchange.

■ “This is the only book people will need to grow plants and save their seed,” says Cox. Rita Hassert praised it for providing “critical information packaged in an attractive way.” Oster agrees, calling it “an indispensable, brilliantly written, and beautifully illustrated resource.”

Seeing Seeds

by Robert Llewellyn and Teri Dunn Chace. Timber Press.

■ “A powerful book,” says Hassert, that provides a “fresh, enticing look at seeds.” While the lavish photographs show “seeds in all their glory,” says Van Nest, the book also includes “informative discussions that explain the journey that each seed takes.” Cox notes that, “when it comes to the plant world, seeds really are the source of everything. And when we look closely at them like this book does, we can see why and it is thrilling.”



The vivid blooms of *Dianthus superbus* 'Crimsonia' pair well with the deeper hue of 'Hopi Red Dye' amaranth, behind.



give Pinks *a* Chance

The fragrant, colorful flowers of perennial *Dianthus* enthrall pollinators and gardeners alike.

BY RAND B. LEE

WHEN I FIRST moved to Santa Fe in the 1980s, I hacked a cottage garden out of the heavy alkaline clay of my rented yard. After I had dug in lots of compost and fine gravel to improve drainage, I ordered seeds of a bunch of fragrant plants, including pinks. The pinks thrived and perfumed my garden with the beguiling, sweet scent of their blooms year after year. Thus began my obsession with these plants and my quest to track down as many varieties as I could get my hands on.

Cousins to the carnation (*Dianthus caryophyllus*) and sweet William (*D. barbatus*), perennial pinks once were a mainstay of American gardens. They traditionally adorned the edges of garden paths, borders, and containers, where they could receive the quick drainage they require. Nowadays, the pinks usually found in garden centers are the annual spawn of the China pink (*D. chinensis*).

This is a pity because the flowers of these annuals are largely scentless, whereas the blooms of many perennial pinks

are deliciously perfumed. Fortunately, a number of mail-order and online catalogs still carry an abundance of exciting varieties, both new and old, worth trying in your garden.

Blooming from late spring through early summer and sometimes beyond, these fragrant beauties delight the eyes and noses of gardeners, as well as attract bees, butterflies, hummingbirds, and other beneficial pollinators. And as James Baggett, editor of *Country Gardens* magazine, points out, they are also “deer resistant, drought tolerant,

A compact yet floriferous hybrid cultivar, ‘Neon Star’ produces fluorescent-pink, fragrant blossoms from late spring into summer.



The flowers of 'Dad's Favourite', an old-fashioned selection that has been grown since the 18th century, make up for their mild fragrance with striking, red-laced white petals.

self-sowing, have handsome blue-green foliage, and make excellent cut flowers: What more could a gardener ask for?"

A COLORFUL GENUS

Among the 350 or so species in the genus *Dianthus*, the scented perennial species include sand pink (*D. arenarius*), Cheddar pink (*D. gratianopolitanus*), cottage pink (*D. plumarius*), and superb pink (*D. superbus*). The closely related species cross-pollinate easily, giving rise to a multitude of hybrids. Most of these plants make low, spreading mounds of thin, stiff, pointed, bluish to grayish-green leaves that can remain appealing well into winter, or even evergreen in milder regions. They are generally hardy from USDA Zones 3 or 4 through 9 or 10 and heat tolerant in American Horticultural Society Heat Zones 9 through 3.

Comely as their foliage is, the blossoms of pinks are the main attraction. The common name is not a reference to bloom color. Although many do

sport flowers in shades of pink, they also bloom in a wide spectrum of solid colors from white to pale yellow and pale pink to burgundy, or a mix of these colors with "eyes," streaks, or edgings of contrasting hues. "Pink" more likely refers to the fact that the petal edges appear as if someone has taken pinking shears to them, or may be derived from the Dutch or German word for Pentecost, the time of year these plants typically bloom.

Hailing from Europe and Asia, pinks demand excellent drainage—anything less and they will sulk and languish. When plants appear less hardy than they are rated, it is often excessive winter moisture rather than low temperatures that curtails their longevity, notes Richard Hawke, plant evaluation manager for the Chicago Botanic Garden. When he tried growing perennial pinks at the garden, most did not thrive.

"Our alternating winter freezes and thaws tend to keep local soil too moist," Hawke says. "The wetness doesn't drain

away quickly enough for many perennial dianthus to survive. Even summer wetness here can contribute to a weaker plant." Because of this, Hawke says he tells local gardeners they are generally short-lived plants. (Despite the less-than-ideal conditions for them, a few varieties did show promise for Hawke. To learn more see the box on page 23.)

OLD-FASHIONED PINKS

Among my favorite pinks are the heirlooms, such as 'Mrs. Sinkins'. This classic variety with the Dickensian-sounding name was originally bred around 1868. 'Mrs. Sinkins' produces large, white, exceptionally fragrant, double flowers in early summer over gray-green mats that grow 10 to 12 inches tall.

Even older, from around the 1720s or '30s, is 'Musgrave's Pink', also known as 'Charles Musgrave' and 'Green Eyes'. Its early-summer, single, white flowers feature overlapping, fringed petals and pale-green central zones. Their scent is often described as intense, powerful, and spicy.

One of the best performers in my Santa Fe cottage garden was 'Rose de Mai', widely misspelled as 'Rose du Mai'. This variety dates to the 1820s and bears deliciously-scented, double, cool-pink blossoms, on plants about a foot tall. Despite its name, which means "rose of May," it blooms in June and July—rather late for an old-fash-



'Charles Musgrave' features pure-white serrated petals with a pale green eye.



D. arenarius forma *nanus* 'Little Maiden'



D. gratianopolitanus 'Grandiflorus'



D. 'Laced Romeo'

MORE RECOMMENDED FRAGRANT PERENNIAL DIANTHUS

Name	Height/Spread (inches)	Flower Form, Color, and Season of Bloom	USDA Hardiness Zones, AHS Heat Zones
<i>Dianthus xallwoodii</i> 'Agatha'	8-10/10-15	Semi-double, purplish-pink flowers with ruby eyes from late spring to early summer	4-8, 8-1
<i>D. arenarius</i> forma <i>nanus</i> 'Little Maiden'	4/6	Single, white petals with frilly edges from mid- to late summer	3-8, 8-1
<i>D.</i> 'Bridal Veil'	12/12	Double, heavily fringed, white blossoms with reddish-mauve at base in summer	5-9, 9-1
<i>D. gratianopolitanus</i> 'Bewitched'	6-8/8	Single, pale pink flowers with white centers ringed in magenta from late spring to early summer	5-8, 8-1
<i>D. gratianopolitanus</i> 'Grandiflorus'	12/18-24	Single, large, rose-pink flowers with darker pink eyes in spring with summer rebloom	4-9, 9-1
<i>D.</i> 'ItSaul White'	6-8/12-18	Semi-double, white, fringed flowers in late spring into summer	3-9, 9-1
<i>D.</i> 'Laced Romeo'	12-15/12-15	Double, red-and-white blossoms from mid-spring to early summer	3-8, 8-1
<i>D.</i> 'Old Vermont'	12/12	Semi-double, lavender pink, fringed flowers from spring into summer	4-9, 9-1
<i>D.</i> 'Pheasant's Ear'	9-12/15	Semi-double, white flowers with wine-red centers and markings that set off an unusual central tuft from early to midsummer	5-9, 9-1
<i>D. plumarius</i> 'Sweetness'	4-6/10-12	Single, fringed flowers in a mix of white and various shades of pink, some with darker centers, from late spring to early summer	4-8, 8-1

ioned pink. 'Dad's Favourite' is a similarly late- and long-flowering cottage pink heirloom, bearing semi-double, softly-fragrant, pearly-white blossoms laced ruby-red with a purple zone. Possibly of Scottish origin, this one dates back to the late 1700s.

NEWER-FANGLED VARIETIES

Wonderful as these older pinks are, modern breeders have developed new varieties

that offer longer bloom times, better hardiness, and a kaleidoscopic array of flower colors. A good many of the perennial pinks on the retail market these days are branded hybrids. For example, Walters Gardens in Michigan offers the Fruit Punch series; Whetman Pinks, a well-known British dianthus breeder, has developed several series including Desert, Early Bird, Scent First, and Star.

Bill Boonstra, president of Bluestone Perennials in Madison, Ohio, is particularly fond of 'Candy Floss', a Whetman Pinks variety in the Scent First series. This cultivar grows into 10-inch-tall mounds that sport sweetly-perfumed, serrated, double flowers in an exquisite shade of soft, cotton-candy pink, each petal touched with darker pink at the base. "I particularly love its beautiful silvery leaves," says Boonstra.

Sources

Annie's Annuals and Perennials, Richmond, CA. www.anniesannuals.com.

Bluestone Perennials, Madison, OH. www.bluestoneperennials.com.

Digging Dog Nursery, Albion, CA. www.diggingdog.com.

Goodwin Creek Gardens, Williams, OR. www.goodwincreekgardens.com.

Jelitto Perennial Seeds, Louisville, KY. www.jelitto.com.

Nature Hills Nursery, Omaha, NE. www.naturehills.com.

Roots and Rhizomes, Randolph, WI. www.rootsrhizomes.com.

Select Seeds, Union, CT. www.selectseeds.com.

Resources

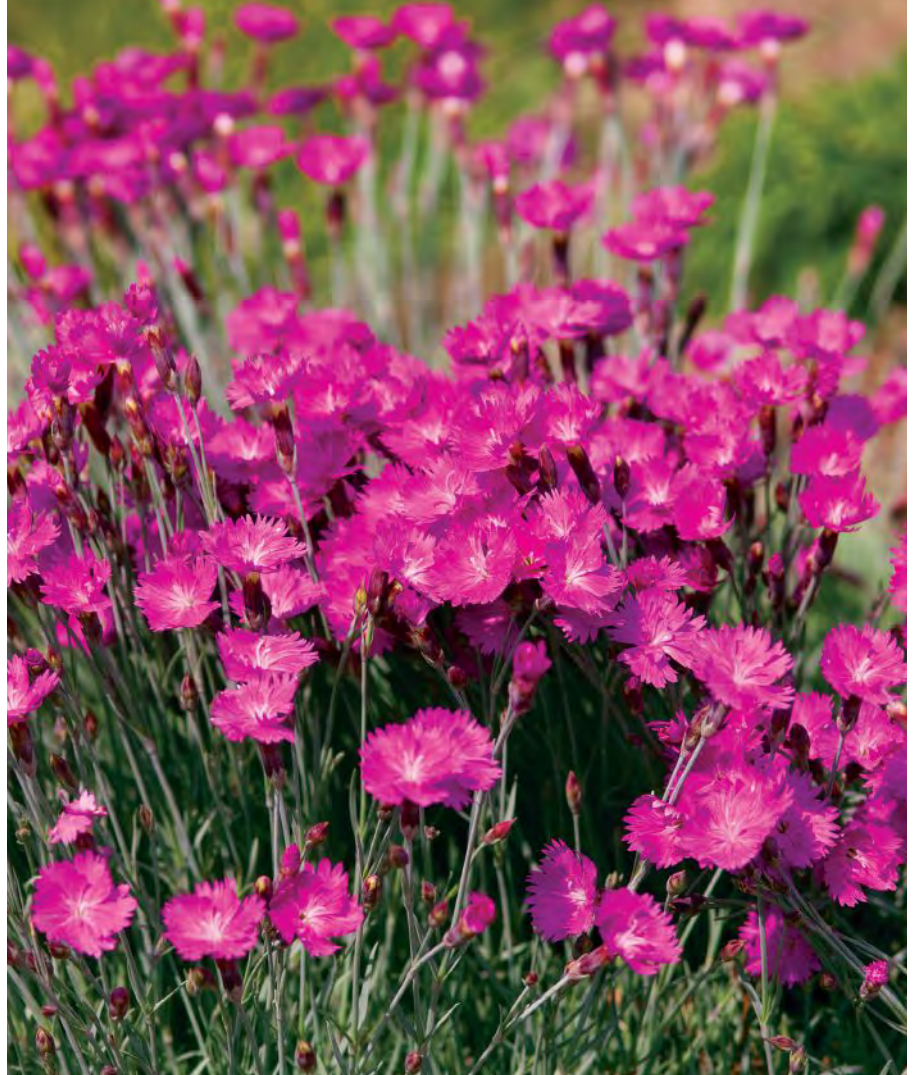
Essential Perennials by Ruth Rogers Clausen and Thomas Christopher. Timber Press, Portland, OR, 2014.

Perennial Plant Association, Hilliard, OH. www.perennialplants.org.

Another Whetman cultivar that has enchanted Boonstra is 'Rosebud'. It forms compact, blue-green mounds up to six inches tall, and bears fragrant, fully double blossoms that some growers describe as deep salmon and Boonstra calls "the richest rosy pink." The foliage, which Boonstra describes as a blue "with a bit of silver frost," contrasts vividly with the color of the flowers. "Visitors spot it from across the greenhouse and ask, 'What is that beautiful plant?'" he says.

The Fruit Punch series, introduced in 2008 by Walters Gardens, offers plenty more gorgeous double-flowered options. These include the bi-colored 'Coconut Punch' and 'Apple Slice', and several more recent varieties like cherry red 'Maraschino' and magenta 'Cranberry Cocktail' released under the Proven Winners brand.

Annie Hayes, founder of Annie's Annuals and Perennials in California, offers two cultivars discovered at her nursery: *Dianthus plumarius* 'Hercules' and 'Thea Mary'. The former makes dense, silvery-blue mounds up to 20 inches across, covered from spring to the end of fall with very fragrant, single white, serrated flowers centered with ruby-red. The latter sprang from a seed mix Hayes purchased from Jelitto, a perennial seed company



Top: 'Feuerhexe' Cheddar pink sports bright-pink, clove-scented blossoms over a long period of time. Above: 'Hercules' cottage pink makes a splash in a mixed bed at the Annie's Annuals and Perennials nursery in California, where it was discovered.

headquartered in Germany. Named for Hayes's favorite aunt, 'Thea Mary' makes low, dense, blue-green mats to 18 inches across. In spring these mats put up six- to eight-inch-tall stems topped with sweetly scented, two-inch-wide, single pink flowers with vivid, cherry-colored centers.

Perhaps the most popular pink in this country is *D. gratianopolitanus* 'Feuerhexe', often labeled with the English translation of its name, Firewitch. This Cheddar pink variety, which originated in a German nursery in 1957, forms a compact, foot-wide, silvery mat three to four inches tall that makes a striking foil for its profusion of single, bright magenta, clove-scented blossoms. It will bloom from May to June and further into the summer if deadheaded.

For its good looks and easy-going nature, 'Feuerhexe' has received a Plants of Merit designation from the Missouri Botanical Garden, and was selected as Perennial Plant of the Year in 2006 by the Perennial Plant Association. Jenny Peterson, of J. Peterson Garden Design in Austin, Texas, likes to plant them eight inches apart, so the edges touch and they form a



The stems of Fruit Punch 'Apple Slice' blossoms are long enough to make them good cut flowers.

cohesive mass. "When in bloom, it's like a pink carpet," she says.

For more recommended varieties, see the chart on page 21.

GROWING TIPS

Pinks prefer neutral to alkaline soil, so if your soil is acidic, it helps to mix some horticultural lime into it. And though pinks are not particularly heavy feeders, it never hurts to dig in well-rotted, finely sifted manure or compost and powdered rock phosphate before planting them. Mulch your pinks with gravel or stones rather than organic matter, and water the plants weekly in dry weather. Fertilize them lightly twice a year with a phosphorus-rich organic plant food and shear them back after blooming to ensure the best floral show.

A full sun location is optimal, but the key to success with these plants is to give them excellent drainage. If your soil is on the heavy side, try them in raised beds or planted around the edges of containers. And be certain to avoid planting your pinks under roof driplines and other places where wetness accumulates, particularly in winter; otherwise, the plants may quickly waste away.

Perennial pinks make wonderful path and flowerbed edgers, where their scent can be conveniently appreciated. Try tucking them into nooks and crannies of your rock garden, in pots on your patio, or any sunny spot where you might enjoy the sweet, be-spangled joy of their blooms.

Founder of the now defunct American Dianthus Society, Rand B. Lee lives in Santa Fe, New Mexico.

TOP PERFORMERS AT CHICAGO BOTANIC GARDEN

In recent years Chicago Botanic Garden's Plant Evaluation Manager Richard Hawke has conducted an informal trial of several newer *Dianthus* varieties. A few survived three or four years without special care, while also offering an outstanding floral display.

One of Hawke's favorites is 'Coconut Punch'. Introduced in 2008 by Walters Gardens as part of its Fruit Punch series, 'Coconut Punch' bears fragrant, double, white-spotted burgundy blossoms summer to fall if deadheaded. Some growers report that near the start of the bloom season, the burgundy in the petals predominates, but that by early fall the flowers have shifted to a white ground with burgundy spots, hence the emphasis on coconut in its name.



Fruit Punch 'Coconut Punch'

In early summer, and again in fall if deadheaded, the plants produce single, deep burgundy, sweetly-scented, serrated flowers, spotted and picotee in pink. —R.B.L.

'Neon Star', a cultivar in Whetman's Star series, made a "nice tufted plant that always looked good for us—no issues at all," notes Hawke. Its single, clove-scented blossoms, which are a vibrant magenta, bloom most heavily in spring, but can appear well into summer if deadheaded.

Hawke also likes 'Firecracker' "for its color and its strong vertical flower stems."



Gaining Stature *with* Style

LYNNE HARRISON

Elevate the beauty of your landscape with formal, rustic, and whimsical supports for garden vines.

BY RITA PELCZAR

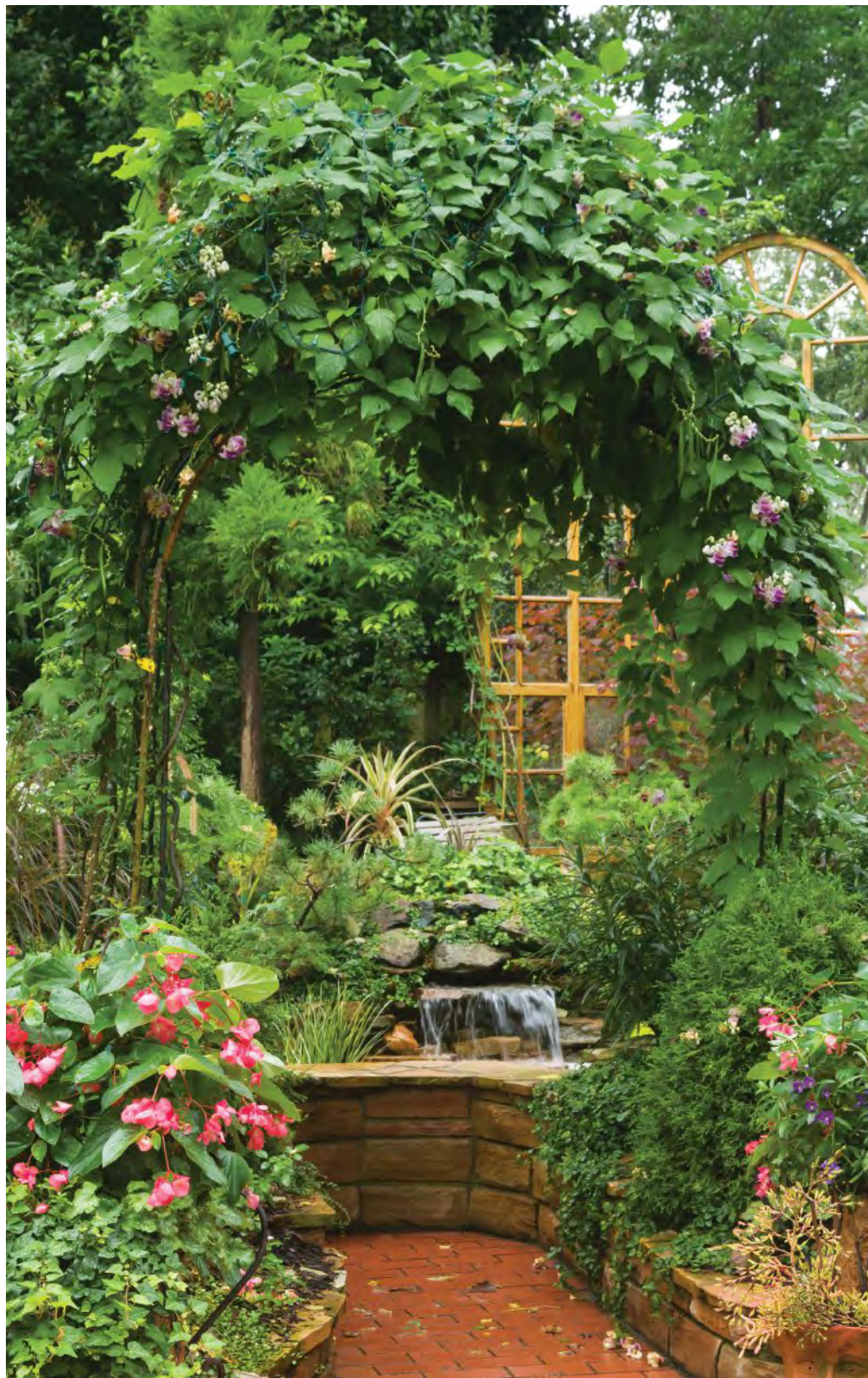
YOU MIGHT SAY that vines have no backbone. Their inability to hold themselves upright is the habit that distinguishes them from other garden plants. Left to themselves, vines flop over the ground until they find a purchase to climb, so they can rise above the garden floor and gain some stature.

This lax attitude presents vine growers with the opportunity to fashion distinctive living displays. The challenge goes beyond selecting the right vine, it involves understanding its particular mechanisms for climbing (see “Types of Climbing Apparatus for Vines,” page 26), then finding or creating a support system that accommodates those mechanisms and adds just the right touch—shape, size, color, and attitude—to the garden.

CONSIDERATIONS

Select a vine and support that will accomplish your purpose within the available space. Is the intent a screen for privacy or a camouflage for an eyesore, or a vertical accent for a bed or container? Perhaps you want to soften the edges of a garage or frame a view. Each purpose will suggest different options both for the type of vine and its support.

Sturdiness is another important consideration. While a lightweight trellis or suspended twine might serve for an annual vine, a woody or perennial vine requires a support that will last for many years. Upkeep



Above: Fast-growing corkscrew vine (*Vigna caracalla*) easily twines up and over an arbor framing a small waterfall. The fragrant clusters of summer flowers open white and age to purple-pink.

Opposite page: The pickets of this fence are too wide for the long, thin petioles of clematis to encircle, but by wrapping its petioles around its own stems, the clematis has succeeded in weaving its way through the support.



The deep green foliage of *Thuja occidentalis* 'Holmstrup' creates a monochromatic backdrop that perfectly sets off the scarlet summer blooms of flame nasturtium (*Tropaeolum speciosum*), whose roots appreciate the shade provided by the evergreen.

TYPES OF CLIMBING APPARATUS FOR VINES

Although botanists have identified 30 or so types of climbing techniques employed by different vines, the primary concern for gardeners is how they relate to requirements for support. With that in mind, vines can be grouped into four main categories according to their mechanisms of ascent:

Twiners wrap their entire stems around a support and grow in a spiral fashion. Some twiners may need a little assistance getting started. Examples of twining vines include: moonflower (*Ipomoea alba*), mandevilla (*Mandevilla* spp.), cup-and-saucer vine (*Coabea scandens*) and hops (*Humulus lupulus*).

Graspers have developed specialized appendages to coil around their support. Passionflowers (*Passiflora* spp.) and sweetpeas (*Lathyrus* spp.) are among the vines that use tendrils—a thin modified leaf or stem—to grasp a support.



Cup-and-saucer vine (*Coabea scandens*) climbs by twining its stems around nearby objects.

Clematis (*Clematis* spp.) and canary flower (*Tropaeolum perigrinum*) grasp with an elongated petiole—leaf stalk—that coils much like a tendril. Supports for graspers need to have struts that are small enough for the tendril or petiole to wrap around.

Clingers are surface climbers. They attach themselves using aerial roots or adhesive tips that grow on specialized roots or tendrils. Such vines often climb trees but also grow happily on brick or stone walls. Examples include Boston ivy (*Parthenocissus tricuspidata*) and Virginia creeper (*P. quinquefolia*).

Clamberers drape themselves on or through other plants or objects; they may need to be tied to their support to achieve a good appearance. Some clamberers have a weak twining habit.

Clambering vines include golden trumpet (*Allamanda cathartica*) and bougainvillea (*Bougainvillea* spp.). —R.P.

should be taken into account: annual vines or perennials that die back to the ground are the best choices for a fence, arbor, or railing that requires periodic painting.

Finally, your support should complement the style of your house and landscape. A rustic wooden trellis reflects the casual charm of a country home while a scrolled metal obelisk or a Victorian arbor better suits a more formal garden.

BORROWED SUPPORTS

Most landscapes have at least one potential support just waiting for the per-

fect vine. A stone or brick wall is a good candidate for Boston ivy (*Parthenocissus tricuspidata*), which clings and climbs with aerial roots. Clambering vines such as ornamental sweet potato (*Ipomoea batatas*) and golden trumpet (*Allamanda cathartica*) are good subjects for the edge of a retaining wall, where stems cascade downward in response to gravity.

Mailbox posts, lamp posts, gazebo and porch railings, and fences make excellent hosts for twiners, and by selecting vines that reflect the colors used in nearby beds, these structures are integrated into



the landscape. Using two complementary vines on a single post can magnify the flower show. A good option for a porch railing is to plant both morning glories and moonflowers; the result is a round-the-clock summer flower display.

Trees or shrubs offer more options for vine support. This arrangement may provide colorful flowering vines with a stunning background of bark or foliage—think of a pale pink clematis growing on a purple smoke tree or ninebark—and it could yield a double flowering season, one for the tree or shrub, another for the vine.

DEDICATED SUPPORTS

Arbors, trellises, arches, and obelisks designed for the purpose of supporting vines add dramatic vertical accents to the

Top: Hyacinth bean (*Lablab purpurea*) is a fast-growing annual that forms a dense, seasonal screen by quickly covering a trellis. Its purple-pink flowers are followed by dark purple pods.


Left: Mandevilla, grown on a bamboo support, adds a colorful vertical accent to this container garden, which includes *Plectranthus argentatus* and *Tradescantia pallida*.

Top right: Though delicate in appearance, the tenacious tendrils of annual sweetpeas (*Lathyrus odoratus*) support the blossom-laden vine by attaching themselves to a framed mesh support, creating a colorful background for this mixed flower border.

Bottom right: A metal rim from an old carriage wheel supports a black-eyed Susan vine (*Thunbergia alata*) on the author's porch, providing a bit of shade and framing the view to the garden beyond.

landscape. These can be purchased in a wide variety of sizes and styles or you can build one to suit your specific requirements. The Internet is loaded with plans.

Repurposed objects can find new life as vine supports, and often add a whimsical touch to the garden. An old bicycle, shutter, wheel rim, or wooden stepladder can be transformed into a delightful scaffold for climbing sweetpeas (*Lathyrus* spp.) or corkscrew vine (*Vigna caracalla*). A window or door frame decked with cup-and-saucer vine (*Cobaea scandens*) or clock vine (*Thunbergia grandiflora*) can define garden spaces or frame a view. A more natural accent can be achieved with a strategically placed piece of driftwood; Mexican flame vine (*Senecio confusus*) or black-eyed Susan vine (*Thunbergia alata*) show off well against the smooth, weathered branches. If you have a bamboo stand, a few stout poles can easily be fashioned into suitable supports as well.

When it comes to a vine and its support, I agree with Aristotle: The whole is greater than the sum of its parts. So get inspired by the examples shown here, then let your creativity loose as you provide a leg up for your favorite garden vine. Onward and upward! 

Rita Pelczar is a contributing editor for The American Gardener.



the joy of competitive Vegetable Gardening

BY JODI TORPEY



If you've never considered growing vegetables for show, this gardener's experience might just tempt you to try.

ONE OF the highlights of summer for this city kid was an annual trip to the Colorado State Fair. While my friends spent their time at the midway, I wandered the Creative Arts building admiring the blue ribbons attached to the quilts, hand-painted china, and jars of soldier-straight green beans. I really wanted one of those beautiful ribbons for myself.

All photographs by Ryan Donnell except for the photo to the left by John Pendleton from *Blue Ribbon Gardening* by Jodi Torpey. Used with permission of Storey Publishing.

Right: The Schnicker family of Mt. Pleasant, Iowa, grows giant vegetables, such as this cabbage, each year for the Iowa State Fair.

Previous page, top right: The author's weirdly-shaped tomatoes received a blue ribbon in the novelty vegetable category.

Previous page, left: Assorted vegetable entries await judging.

The first time I won a blue ribbon for some of my homegrown veggies, I had an unexpected emotional response. I had precontest butterflies, hoping that one of my entries might catch the judges' attention—and felt sheer delight when my sweet basil, hot peppers, and cherry tomatoes all gained a top prize. I remember that day like it was yesterday.

That's because it practically was. After vegetable gardening for more than 30 years, I entered my first horticulture competition in 2012. Thanks to beginner's luck, I came home with three satin blue ribbons. My exuberance caused one of the fair clerks to say, "Next year you can enter more."

That's what I'm still afraid of. I've heard about home gardeners entering a



This article is an adapted excerpt from *Blue Ribbon Vegetable Gardening: The Secrets of Growing the Biggest and Best Prizewinning Produce* by Jodi Torpey. Storey Publishing, North Adams, Massachusetts, 2015. Used with permission of the publisher.

competition one year "just for the fun it" and then becoming obsessed with growing bigger and better the following year. An enjoyable hobby can become a year-round preoccupation to unlock gardening's secrets and fine-tune every part of the growing process. As one gardener said after his initial success, "I haven't had a holiday since."

In spite of this, you'll find that growing vegetables for competition injects new joy into your gardening efforts that makes it all worthwhile.

WHY NOT GIVE IT A GO?

While some may think experienced gardeners have an edge on beginners, the simple act of gardening levels the field.

All gardeners have to cope with quirky weather, hungry insects, and diseases that may cause their tomatoes to drop their blossoms or cucumbers to grow crooked.

If you're going to plant a vegetable garden anyway, you might as well take a shot at winning a prize. While many gardeners plan ahead for what they'll plant, grow, and show at the fair, others just wait to see what looks good in the garden on the day entries are due. Either strategy works.

A FIRST TIME FOR EVERYONE

Beginners can start by competing in small community garden contests or at county fairs to gain experience showing their vegetables. Some fairs include a special division for first-time exhibitors.



Judges evaluate green sweet bell peppers at the Iowa State Fair.



Vegetable contests are annual events and an important part of state and county fairs. Contests are usually scheduled at about the same time every year, typically during harvest time from July through October. To find a fair near you, check with your county and state fair offices, regional agricultural associations, or the International Association of Fairs and Expositions.

STUDY THE SHOW BOOK

After finding the contest you want to enter, obtain a copy of the show book, or competitor's exhibition guide. It contains key information such as the competition schedule, rules, fees, deadlines, and judging details. It also provides specifics about the divisions, numbers, and classes (categories) of vegetables for open (adult)

and junior (usually 18 and under) exhibits. Some competitions include specialty classes such as jumbo (largest or longest), novelty (oddities such as eggplants with noses), and heirloom.

PLANNING FOR SUCCESS

Growing a beautifully matched set of vegetables that will be at their peak of perfection on show day is a challenge, so control as much as you can before you buy or plant a seed.

■ **Do your research.** Look for varieties with descriptors that signal potential prizewinners: reliable, consistent, prolific, dependable, huge yields, delicious, flavorful, and good performer. Also check for regional information to help you find plants especially suited for your area.

■ **Select for reliability.** Plant breeders spend years tinkering with vegetables to improve adaptability and productivity. Plants labeled as F1, a first-generation hybrid that's the result of crossing two pure plant lines, are often good bets for competitions. Popular examples of such hybrids include 'Premium Crop' broccoli, 'Straight Eight' cucumbers, and 'Better Boy' tomatoes.

■ **Pick a winner.** Note the winning varieties at different contests. Plant names may also offer clues—such as 'Prizetaker' leeks, 'Contender' bush beans, and 'Nonna's Prize' tomatoes.

In a crowded field, unusual varieties might offer a better chance for success. At one county fair's hot pepper competition, I won a blue ribbon for entering a new pepper called 'Cayennetta'. I'm sure



my two fire-engine-red peppers stood out from the plates of green pepper varieties entered by other gardeners.

SCHEDULE PLANTING DATES

Before the season starts, review the seed and plant descriptions on the seed packet. Here are five tips for determining your prime planting dates:

■ **Note days to maturity.** Look for the number of days required from planting seeds to harvesting the mature fruit or vegetable, sometimes listed as from transplanting to maturity. Remember these dates are approximations.

■ **Confirm competition dates.** Check the show book for the first day of the fair or the day of judging for all the fairs you plan on entering. Most events are held

in late summer or early autumn and at about the same time each year.

■ **Count backward.** Start with the contest date and count back the number of days needed to grow each vegetable to maturity. This will give you an idea of your prime planting date.

■ **Select additional dates.** Mark at least two additional planting dates—one a week or so earlier and one a week later—in case your crop ripens faster or slower than expected. This helps ensure you'll have enough ripe vegetables at contest time, regardless of the weather. For leafy greens and herbs, plant seeds on a staggered schedule.

■ **Plant more than you need.** Grow extra of each kind of vegetable so you'll have your choice of perfect specimens to take to the show.

Above: Longtime Iowa State Fair contestants Ginger and Chuck Werner check on the growth of the tomato crop on their 320-acre farm in Chelsea, Iowa.

JUST HAVE FUN

Competitive gardening is like other competitive sports. Medals, ribbons, and prize money are nice, but gardeners enter their vegetables in contests for the pleasure of seeing how their skill stacks up against the competition. I promise you'll have a bit of fun, meet interesting folks, and gain a new appreciation for the traditions of our country's rich agricultural heritage. 🌿

Jodi Torpey is a garden communicator who lives in Denver, Colorado.



Ancient Trees *for contemporary gardens*

New selections of deciduous conifers—living relicts of the first trees that clothed the earth—bring drama, majesty, color, and texture to more gardens than before. BY CARL HAHN

LIKE DINOSAURS, deciduous conifers belong to a land before recorded time. Marked by attributes such as gorgeous autumn foliage, strikingly bare silhouettes during the winter, and, in one case, edible seeds the size of a bird's egg, they run counter to our perceptions of a typical conifer. Often regarded as little more than botanical curiosities, they have been simmering on horticulture's back burner for some time now.

Yet these majestic, awe-inspiring, vulnerable, and little-understood trees have survived climate changes, geological upheavals, human deforestation, and all manner of other perils. In the process, they outlasted the dinosaurs that once fed on them. Today, they are prized as sources of food, herbal medicine, and timber, and provide discerning gardeners with some of the finest ornamental trees available.

GINKGO

Of all the deciduous conifers, none looks less coniferous than the ginkgo or maidenhair tree (*Ginkgo biloba*, USDA Hardiness Zones 5–9, AHS Heat Zones 9–5). Its unique, fan-shaped leaves are usually notched or irregularly serrated along the rounded apex and have delicate veins that are best seen when the leaves are backlit. These leathery leaves are clustered in groups of three to five atop stubby spurs and also form singly along the branches.

Although relatively slow growing—just under a foot a year under ideal conditions—ginkgos will reach 50 to 80 feet or more in height and about half as much in



Ginkgos such as the narrow, upright selection 'Princeton Sentry', above, are easily identified by their iconic fan-shaped leaves, top.

diameter over time. They typically have a pyramidal habit in youth, but tend to take on a more spreading habit with age.

Planted on a site with plenty of room to accommodate their size, ginkgos can be a stellar object of garden art, particularly where the sky serves as a backdrop to branches and foliage. The leaves, bright green in spring and summer, dance on the breeze like miniature fans. In autumn, the foliage turns a rich, uniform yellow of incredible intensity. When ginkgo leaves drop, usually all at once, they often form a golden carpet on the ground beneath.

Ginkgos are dioecious—that is, there are separate male and female trees. Only female trees bear the plumlike fruits that form in late summer. These are composed of hard, edible seeds garbed in a thin, fleshy coating. This outer coating becomes horribly malodorous when the seeds ripen, drop to the ground, and begin to decay, so for garden purposes it's best to plant vegetatively propagated male trees.

Ginkgos are tough and durable trees that can be grown throughout most of the United States. They do best in full sun but are not fussy about soil types and have no significant disease or insect problems. Because they tolerate air pollution, male clones are sometimes used as street trees.

The sole living representative of the ginkgo family (Ginkgoaceae), ginkgos are believed to be the oldest living genus of

seed-bearing plants, with a lineage that can be traced back more than 220 million years through the fossil record. In the wild, they are now restricted to isolated stands in mountainous areas of southeastern China. But they have been cultivated in China for centuries, and some of the oldest specimens—found on the grounds of monasteries, Buddhist temples, and royal palaces—are more than 1,000 years old.

In Asia, ginkgos are important not only for their ornamental virtues, but as a source of food and medicine. Roasted ginkgo seeds are a delicacy in China and are often served at feasts and weddings. Traditional herbal medicine in China and Japan employs ginkgo to treat kidney, heart, and lung ailments. Extracts from the leaves have also been used for the treat-

ment of high blood pressure, respiratory ailments, and memory loss.

Because ginkgos have been in cultivation for so long, numerous selections have been developed over the years. The most appealing and useful cultivars for landscape and garden use are male cultivars with narrow growth habits. ‘Autumn Gold’ combines reliable fall color with compact growth and a broadly pyramidal and symmetrical habit. It matures at about 50 feet high and 30 feet wide. Another good choice is ‘Fairmount’, a fast-growing cultivar that reaches 75 feet by 30 feet with a narrow pyramidal habit. ‘Princeton Sentry’, which matures at 60 feet by 25 feet, has a narrow conical shape and good yellow fall color. ‘Saratoga’ grows 25 feet to 40 feet tall, but has a more rounded shape.

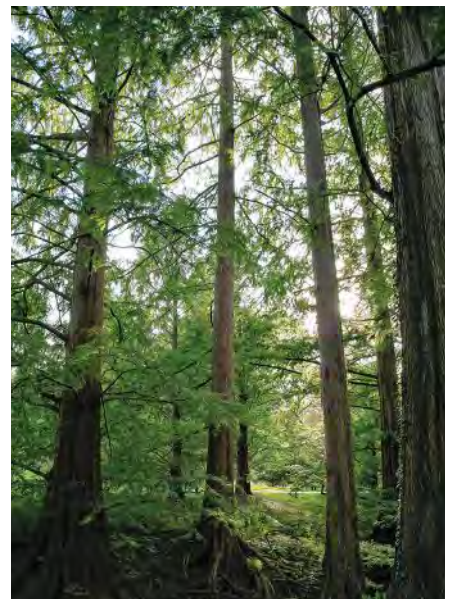


Often called living fossils, dawn redwoods have a dramatic presence whether used as specimens, such as the selection ‘Ogon’, above, or grouped in a naturalistic setting, above right.

Those who crave a ginkgo but have a small garden can try lower-growing cultivars such as ‘Jade Butterflies’, which has dark green, deeply lobed and scalloped leaves and grows to 15 feet tall and 10 feet wide, or ‘Mariken’, which has a dense, bushy habit and grows only about six feet tall and wide. Goldspire™ (‘Blagon’) grows to 16 feet tall and six feet wide with a very narrow habit.

DAWN REDWOOD

A little further up the evolutionary ladder from ginkgo is the dawn redwood (*Metasequoia glyptostroboides*, Zones 5–9, 9–5). Its history in fossil records goes back some 100 million years, and the trees around today are little changed from their ancestors. As “living fossils” go, this tree is very much a recent dis-



covery; indeed, in an amazing coincidence, the first fossil evidence of dawn redwoods was identified earlier in the same year that living trees were first found in central China. Since that discovery in 1941 and the tree’s subsequent rescue from near extinction in the wild (see the web special, “Living Fossils” linked with this article at www.ahs.org), dawn redwood has quickly become a valued ornamental in cultivated landscapes.

Like the evergreen redwoods (*Sequoia* spp.) of western North America to which they are related, dawn redwoods are large trees that grow to at least 100 feet tall and 25 feet in diameter with a pyramidal or conical habit that sometimes broadens with age. Their sturdy trunks, often muscularly buttressed and fluted at the base

before tapering upward, are usually single and arrow-straight. These are covered in reddish brown bark that becomes grayish and exfoliates with age. The soft and lacy needlelike leaves are arranged densely opposite one another on three-inch-long branchlets. The bright green foliage turns a rich orange-brown to red-brown in the fall before dropping.

Solitary, drooping cones form in mid-summer on long stalks. Round and bluish green when they first develop, they turn egg-shaped and dark brown and up to an inch in diameter at maturity.

This tree can be stately and stunning in the landscape, and it makes its presence felt in short order. Young trees can grow at a rate of two to four feet per year—reaching over 100 feet tall in 30 years—slowing with age.

Dawn redwoods are quite hardy and heat tolerant, but grow best in areas with warm summers. They also thrive in sites where they get full sun and regular moisture. They establish quickly and are relatively pest- and disease-free, although

Japanese beetles may nibble the leaves, and some trees can be affected by canker.

An outstanding selection called ‘Ogon’, or golden dawn redwood, has newly emerging foliage that is bright yellow, turning chartreuse as the season progresses. The overall effect is a layering of yellow and chartreuse suffused with a metallic sheen. ‘Ogon’ grows to 20 to 25 feet in about 10 years. Because the tips of the leaves are prone to burning in full sun, especially in dry environments, it is best to site this selection where it will receive some shade and provide supplemental watering as needed. This cultivar, developed through the irradiation of seeds by a Japanese paper company, was brought to the United States in the early 1990s. It is sometimes sold under the trade name ‘Gold Rush’.

‘Waesland’, which grows to 15 feet in 10 years, has a narrow pyramidal profile and the added attraction of dark brown bark that makes it visually striking in winter when its leaves have fallen.

For smaller gardens, many dwarf cultivars are available, including ‘Northlight’

(‘Schirrmann’s Nordlicht’), which has cream-and-green variegated foliage and a rounded habit, growing three to five feet tall in 10 years. ‘Bonsai’ grows about six feet tall in 10 years with blue-green foliage; suitable for a container, it can be trained upright as a small tree or down as a weeping specimen. ‘Silhouette’ grows to eight feet and has cream-and-green variegated foliage.

BALD CYPRESS

Sometimes confused with dawn redwoods, bald cypresses (*Taxodium distichum*, Zones 5–11, 12–5) are characteristic denizens of swamplands in the southeastern and south central United States, with branches draped by Spanish moss and knobby “knees” projecting upward from around the trunk like stalagmites. Bald cypresses can grow to 100 feet or more with a spread of about 30 feet. They are also long-lived; there are several trees in the United States thought to be more than 1,000 years old.

Though naturally found in wet soils, bald cypresses are very adaptable and



Bald cypresses will tolerate a wide range of garden settings, including placement at the edge of ponds, left. For smaller gardens, columnar dwarf selections like ‘Peve Minaret’, above, are available.

Sources

Broken Arrow Nursery, Hamden, CT. (203) 288-1026. www.brokenarrownursery.com.

Dragonfly Farms Nursery, Kingston, WA. <http://dragonflyfarmsnursery.com>.

Forestfarm at Pacifica, Williams, OR. (541) 846-7269. www.forestfarm.com.

Klehm's Song Sparrow Farm and Nursery, Avalon, WI. (608) 883-2356. www.songsparrow.com.

RareFind Nursery, Jackson, NJ. (732) 833-0613. www.rarefindnursery.com.

Wayside Gardens, Hodges, SC. (800) 845-1124. www.waysidegardens.com.

Resources

American Conifer Society, www.conifersociety.org.

Ginkgo by Peter Crane. Yale University Press, New Haven and London, 2013.

will thrive in ordinary acidic garden soils. Nor should they be considered only for the south. They are surprisingly hardy and have been grown successfully as far north as southeastern Canada and southern Minnesota. They are also very heat tolerant, thriving in coastal Texas and parts of Oklahoma, as well as on the West Coast where sufficient moisture is available.

Bald cypresses are well adapted to planting in open upland areas or near ponds. Strongly anchored, they are extremely resistant to uprooting in windstorms. And, not surprisingly, these trees are practically immune to damage from flooding.

Possibly the tree's most distinguishing feature is its knees—cone-shaped structures up to two feet in height that grow vertically from the roots. How these structures benefit the tree is not clear, but possibly they provide additional anchoring and support. The “knees” develop only on trees growing in, or very near, water.

Bald cypresses have horizontal branches and straight trunks that flare at the base. Their symmetrical silhouettes and shaggy, reddish bark are striking in winter. The soft needlelike leaves, densely clustered in a spiral arrangement on the branchlets, start out bright green in spring, fade to grayish green in summer, then turn a soft brown to orange-brown in fall before dropping. Roundish, two-inch,

green to purple cones form in summer and later turn brown.

These stately trees are best used where ample space allows the planting of a single tree in a prominent position. But they can also be used to good effect in a grove, especially along the edge of a pond. Expect fairly rapid growth of a foot or more per year.

Several selections are worth considering. ‘Shawnee Brave’ is narrowly pyramidal

with ascending branches, growing to 75 feet tall and 20 feet in diameter. ‘Secret’ is a slow-growing shrubby dwarf selection with reddish gold fall foliage. ‘Crazy Horse’ features contorted stems. ‘Pevé Minaret’ is a columnar dwarf growing to six feet tall in 10 years. ‘Pevé Yellow’ has light yellow foliage.

POND CYPRESS

Pond cypress (*Taxodium ascendens*, Zones 5–II, 12–5) is kissing kin to bald cypress and is similar in terms of growing requirements and use in the landscape. But pond cypress has a more columnar habit than bald cypress—growing only to 20 feet in diameter—and the way its small, bright green leaves are held tightly along upright branchlets give it a very different appearance.

This is a tree that captures attention in the garden. The combination of form, fine-textured foliage, and vivid leaf color, and the appealing way the leaves are held are truly unique. ‘Prairie Sentinel’ is an even more columnar selection, growing to only about 10 feet wide.

GOLDEN LARCH

One of the most striking deciduous conifers is the golden larch (*Pseudolarix amabilis*, Zones 5–8, 8–4), which has light green needlelike leaves that contrast wonderfully with the medium and darker greens of many other trees.

This tree is a multi-season eye-catcher with graceful,

Pond cypresses, like this specimen growing at the U.S. National Arboretum in Washington, D.C., generally have a much narrower silhouette than bald cypresses.

wide-spreading branches studded with pale green leaves. Arranged in whorls, these are about two inches long and turn buttery yellow in the fall. The tree is further enhanced by conspicuous two- to three-inch-long green to purple cones that form upright on branches in summer.

Native to upland forests of eastern China, golden larch grows 50 to 60 feet tall and spreads 30 to 40 feet with a broadly pyrami-





The bright yellow fall foliage of the Japanese larch 'Diana' provides an eye-catching focal point in this garden in Spokane, Washington.

dal habit, sometimes becoming open with age. Most sources call it a slow grower, but growth rates of more than a foot per year in young plants have been reported. It grows best in well-drained, slightly acidic soil and full sun. No significant insect or disease problems are known.

The only drawbacks to golden larch are its lack of heat tolerance and its scarcity in the trade. It is well worth the search, however, for its year-round interest.

LARCHES

The larches constitute the largest genus of deciduous conifers with about 10 recognized species, mostly native to the colder regions of the Northern Hemisphere. A few are suitable for landscape and garden use.

Perhaps the best of them is the Japanese larch (*Larix kaempferi*, Zones 5–7, 7–4), a large and beautiful tree with blue-green foliage that turns yellow in the fall. Having a pyramidal habit, it grows to about 80 feet with a spread of about half the height. The lateral branches commonly sweep downward. It is generally considered the

fastest-growing larch, putting on a foot or two of growth per year in youth if given a site in full sun with moist soil. 'Diana' is an eye-catching cultivar with contorted branches. It grows to about 20 feet tall and seven feet wide at maturity.

Eastern larch or tamarack (*L. laricina*, Zones 2–6, 6–1) is beautiful in the wild in its native Canada, New England, and the upper Midwest but is little cultivated. In garden settings, it grows 30 to 60 feet tall and up to 20 feet in diameter with a pyramidal to open habit and drooping branches. It has pale bluish green foliage that turns bright yellow in fall. It grows best in sunny sites with moist, acidic soil. 'Blue Sparkler' is a semi-dwarf cultivar with a rounded habit that grows to five feet tall in 10 years.

European larch (*L. decidua*, Zones 3–7, 7–1) is native to northern and central Europe. It grows taller than tamarack and is slightly more heat tolerant. A variety of cultivars—including weeping, dwarf, and columnar forms—are available.

GRANDEUR IN THE GARDEN

Because many deciduous conifers become

very large trees, they have not always been widely considered for home gardens. That is changing now, thanks to the efforts of breeders who have been developing more dwarf and compact selections.

Unlike their more static evergreen cousins, deciduous conifers introduce a seasonal rhythm to the landscape, with fall color and striking winter silhouettes followed by new spring growth. They combine the look of evergreen conifers with some of the attributes of deciduous hardwoods. Moreover, many deciduous conifers have remarkable insect and disease resistance, legendary longevity, pollution resistance, and rapid rates of growth. These qualities, combined with gorgeous foliage and form, make them worthy additions to the horticultural palette. ♪

Formerly chief of the Natural Resources division of the Maryland–National Capital Park and Planning Commission, Carl Hahn lives in Clarksville, Maryland. This is an updated version of an article that was originally published in the November/December 2001 issue of The American Gardener.



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benefits of companion planting

Fact *or* Folklore?

The practice of pairing different plants because of perceived pest-repelling qualities dates back centuries. But how well do these ostensibly beneficial bedfellows hold up to scientific scrutiny?

BY KRIS WETHERBEE

THE PRACTICE OF pairing two or more kinds of plants for mutual benefit, commonly known as companion planting, has been going on for centuries. In many cases, these pairings were based on anecdotal evidence and have been passed along from one generation to the next. Despite the popularity of companion planting—you can find lists of plant combinations in many books and through Internet searches—there’s plenty of skepticism about its efficacy for controlling pests.

“I tried companion planting when [the concept] became popular in North-

ern California in the ’70s,” says Rosalind Creasy, a garden writer, photographer, and landscape designer. “Frankly, without having a huge field trial, I don’t think you could tell if it made any difference.”

Large trials also may not yield any conclusive results unless repeated in multiple locations around the country. “One of the flaws in the concept of companion planting is that it assumes that specific plant combinations will work in every area of the country,” says Robert Kourik, a California-based horticulturist and author who specializes in edible garden design. “But a gardener in

Missouri clearly faces very different conditions than a gardener in California.”

According to Linda Chalker-Scott, an Extension horticulturist and associate professor at Washington State University’s Puyallup Research and Extension Center, most “so-called lists of companion plants are based on wishful thinking rather than research.” In a bulletin titled “The Myth of Companion Plantings,” Chalker-Scott writes that she prefers to use one of several “alternate phrases or terms with precise definitions that can be used in lieu of companion planting.” Among these

In companion planting, aromatic plants such as mints and petunias are often planted around vegetables with the hope they will repel potential pests.

are intercropping and polyculture, which she notes “are commonly used to describe agricultural production methods using mutually beneficial species.”

“Ecologists use ‘plant associations’ to define natural relationships among plants in non-agricultural situations. This latter phrase is my own choice for discussing the science behind plant interactions,” she says.

TYPES OF PLANT ASSOCIATIONS

By adopting the concept of plant associations, it is possible to assign many of

the plants commonly labeled “companion plants” to categories that more accurately reflect their function. These groupings include plants that attract beneficial insects, those that fix nitrogen or foster symbiotic root fungi termed mycorrhizae, those that draw pests away from desirable plants, and those that are allelopathic, secreting chemicals that are toxic to other plants.

Plants that Protect The efficacy of a few companion plants has been scientifically substantiated, although the reason

they work doesn’t always match their perceived benefits.

Marigolds, for instance, have been long recommended for helping reduce pest populations in vegetable gardens. Research indicates that both French marigolds (*Tagetes patula*) and African marigolds (*T. erecta*) contain a chemical called thiopene in their roots and flowers. Thiopene is toxic to certain types of soil-dwelling nematodes—wormlike microorganisms—that can plague tomatoes, melons, strawberries, and some other vegetables.

In an agricultural study, marigolds effectively controlled nematodes when planted throughout an infested field and then tilled into the soil at the end of the season. “Marigolds are best planted as a green manure one or more seasons before planting the susceptible crop. Intercropping has little effect,” says Kourik, who recommends cultivars such as ‘Nemagold’, ‘Nema-Gone’, ‘Queen Sophia’, and ‘Tangerine’.

Members of the onion family also have shown some promise in deterring pests. In one study, rows of spring onions planted between rows of broccoli were found to help protect broccoli from certain pests.

Plants that Nurture the Soil All plants need nitrogen to thrive. One way to add nitrogen to the soil is to grow legumes such as lupines (*Lupinus* spp.), clovers (*Trifolium* spp.), peas (*Pisum sativum*), or beans (*Phaseolus vulgaris*). These plants form affiliations with bacteria that can convert nitrogen from the air into a plant-friendly form that benefits nearby plants. In the vegetable garden, legumes should be moved to a different area each year as part of a standard crop rotation. Legumes also can be grown as fall or winter cover crops and then tilled into the soil, or cut and used as a “green” mulch, in early spring.

In the practice of permaculture, certain deep-rooted plants are termed “dynamic accumulators” for their perceived ability to draw vital nutrients and trace minerals from deep in the soil and bring them nearer to the soil surface where shallow-rooted plants can access them. Theoretically, plants with deep and extensive root systems also loosen up and aerate the subsoil, which would benefit neighboring plants. Among the plants long recommended for this use is Russian comfrey (*Symphy-*



Research indicates that broccoli may benefit from being interplanted with spring onions.

Resources

Attracting Beneficial Bugs to Your Garden

by Jessica Walliser. Timber Press, Portland, OR, 2014.

Companion Planting and Insect Control

by Joyce E. Parker, William E. Snyder, George C. Hamilton, and Cesar Rodriguez-Saona. InTech. 2013. (Available from www.intechopen.com/books/weed-and-pest-control-conventional-and-new-challenges/companion-planting-and-insect-pest-control.)

Designing and Maintaining Your Edible Landscape Naturally

by Robert Kourik. Metamorphic Press, Santa Rosa, CA, 1986.

Understanding Roots by Robert Kourik, Metamorphic Press, Santa Rosa, CA, 2015.

Washington State University Plant Bulletin:

<http://puyallup.wsu.edu/wp-content/uploads/sites/403/2015/03/companion-plantings.pdf>.

tum xuplandicum), which is also highly regarded as a nectar source for pollinators and as a “green” mulch.

Not everyone is sold on comfrey, however. In his book *Understanding Roots*, Kourik reprints two illustrations of excavated comfrey roots showing they reach only about two feet deep. He also presents the results of a laboratory analysis of the nutrient content of various forage crops, which shows that lamb’s quarters (*Chenopodium album*) and nettles (*Urtica dioica*) contain comparable or higher levels of potassium, calcium, and phosphorus than does comfrey. Deep roots, Kourik argues, may not necessarily be an indicator of a plant’s ability to extract nutrients from soil. “I suggest that the roots accumulate more of these minerals nearer to the surface than is often thought,” he says.

Any discussion of comfrey requires a major caveat: Comfrey is large, aggressive, long-lived, and regenerates from even tiny pieces of its rhizomatous roots, so it can be difficult to remove once planted. To avoid self-sowing, ‘Bocking 14’, a sterile selection, is recommended.

Insectary Plants Many organic farmers and gardeners interplant vegetables with

insectary plants—flowering plants that attract insect predators to feed on pests. For example, farmers in California use sweet alyssum (*Lobularia maritima*) in lettuce fields to attract adult hoverflies, which feed on the flower’s pollen and nectar. The goal is to get the hoverflies to lay eggs, because their larvae prey on the aphids that are a notorious pest of lettuces. USDA horticulturist Eric Brennan, who works at the Agricultural Research Station in Salinas, California, has been studying different systems for planting alyssum in lettuce fields. He found that randomly interspersing alyssum plants throughout all the lettuce rows could minimize competition between lettuce and alyssum and encourage adult hoverflies to forage more evenly throughout the field.

Undesirable Companions While the research on beneficial companion plants is sketchy, there’s solid evidence that plants use chemical warfare to repress other plants. Certain plants are allelopathic, which means they contain chemicals that inhibit the growth of other plants. The best known example is black walnut (*Juglans nigra*), which produces a chemical called juglone that kills or stunts a wide variety of plants, including tomatoes, peppers, apples, and azaleas. Lists of plants tolerant of growing under or near black walnuts are available online from various state Extension services.

Other allelopathic plants include black cherry (*Prunus serotina*), junipers (*Juniperus* spp.), and the invasive garlic mustard (*Allyria petiolata*). For more on allelopathy,



Leguminous plants such as fava beans that add nitrogen to soil are often grown as cover crops and then chopped up and used as “green” mulch.




In farming, sweet alyssum is interplanted with lettuces to attract predators of aphids that damage the lettuces.

read “Plant Wars and Turf Defense,” in the July/August 2011 issue of this magazine.

HOME GARDEN TRIALS

The objective part of me acknowledges that there’s little scientific evidence companion plants work—or at least work in the way people think they do—but my subjective side still relishes the notion that plants can work together. Over the last 10 years, I’ve tried many companion combinations in my home garden. From personal observation, some combinations that have seemed to do well include peas with corn, pansies with lettuce, and peppers with basil.

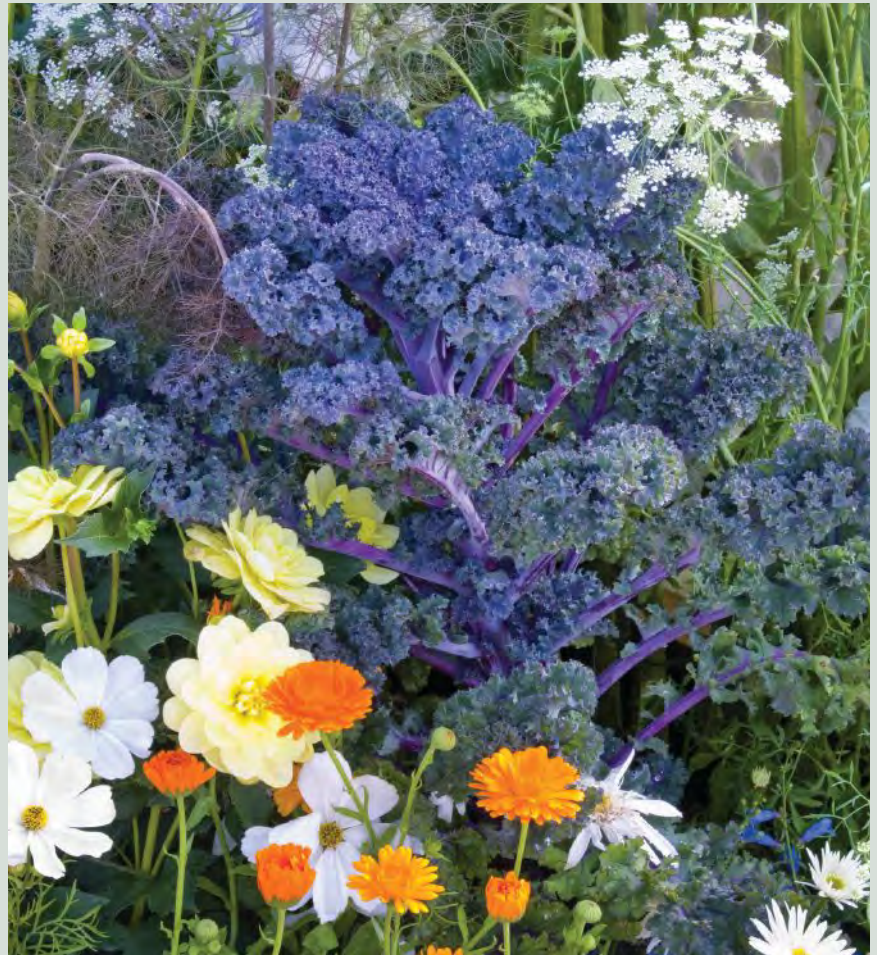
One thing is for sure. Even if the specific benefits attributed to some companion plants are overstated, you can’t go wrong by increasing the diversity of plants growing in your garden (see sidebar on this page). Keep in mind that many factors come into play, including individual plant varieties, soil types, microclimates, and regional differences in pest and disease problems. As such, what may be successful in one garden may not be a winning combination in your own. But then, that’s part of the adventure of gardening. 

Kris Wetherbee is a freelance writer based in Oakland, Oregon.

DIVERSE PLANTINGS PAY OFF

The merits of individual companion plants are debatable, but research indicates that there is great benefit to be derived from growing a wide variety of plants in your garden. Perhaps the most effective form of companion planting is to create enough diversity in your garden to attract beneficial insects such as lady beetles, lacewings, hoverflies, and parasitic wasps that prey on pests. These insatiable creatures gobble up aphids, cucumber beetles, caterpillars, and other bugs that wreak havoc on our gardens.

While both adult beneficials and their larvae feed on insects, the adults also need flowers rich in pollen and nectar in order to survive. This is accomplished by growing



There’s beauty in diversity. Here, ‘Redbor’ kale grows companionably with flowering annuals such as calendula, bishop’s flower, and cosmos.

a variety of season-long flowering plants that provides the food and shelter they seek.

In particular, plant yarrow, dill, parsley, and other flowering members of the umbel family; sunflowers, zinnias, coreopsis, and other members of the composite, or daisy, family; flowering members of the mint family, such as beebalm (*Monarda* spp.) and thyme. A few lettuces, radishes, and other vegetables allowed to flower will also provide a haven for these beneficials—and you can collect the resulting seeds for future use.

Prevailing wisdom is to integrate plants that attract beneficial insects alongside fruits and vegetables, but horticulturist Robert Kourik, author of *Understanding Roots*, says this causes crowding and competition for precious resources. “Beneficial insects can travel hundreds of feet,” he says, “so when I design edible landscapes, I tend to cluster the different components—fruit trees in one area, vegetables in one area, and plants that attract beneficial insects in another area.”

—K.W.

Asparagus—Plant Now for a Perennial Harvest

by Margene Whitler Hucek

I GREW UP on a small farm in Illinois, and while we always had an asparagus patch in the vegetable garden, my sisters and I enjoyed walking down our country road on early spring mornings in search of wild asparagus that grew in the ditches. Wild asparagus, I later learned, was simply garden asparagus (*Asparagus officinalis*) that escaped cultivation. Today I have my own asparagus patch to ensure a regular and accessible harvest of delicious spears.

Native to the Mediterranean region, asparagus is a perennial vegetable grown for its nutritious shoots, which emerge in spring. The fernlike green foliage that follows harvest season adds ornamental interest to the vegetable garden and beyond.

GROWING GUIDELINES

Asparagus can be grown successfully in USDA Hardiness Zones 3 to 8, AHS Heat Zones 8 to 3. A sunny, well-drained location is essential. If you site your patch within a vegetable garden, place it on the west or north side so that the foliage, which can reach four to seven feet, will not shade other vegetables.

An asparagus plant will remain productive for 10 to 20 years, so take the time to enrich the soil with compost prior to planting. To ensure the near neutral pH of 6.5 to 7.5 that is ideal for asparagus, test your soil prior to planting and amend as necessary. Weeds significantly reduce yields, so eradicate them from the planting site and apply mulch to inhibit future weed growth.

Asparagus seeds are available, but growing plants from seeds is a tedious and time-consuming task. Instead, plant one-year-old crowns—the dormant roots—in early spring when the soil temperature is at least 50 degrees Fahrenheit.

Some guidelines suggest planting asparagus crowns 12 to 18 inches deep, but new research shows that a furrow no deeper than five to six inches results



Asparagus spears begin to appear in spring and may be harvested for several weeks.

in a higher yield. Space crowns one foot apart. If you are planting more than one row, space rows five feet apart.

The recommendation to backfill asparagus a few inches at a time over a period of weeks has also been discredited. You

can fill the furrow to its original soil level immediately after planting, then water well. Fertilize established plants in early spring before growth begins and again after harvest with a balanced organic fertilizer or composted manure.

There are two schools of thought as to when to cut down the plants at the end of the season. Some recommend cutting immediately after leaves and stems turn brown to reduce asparagus beetle infestations, while others suggest leaving the foliage to catch snow for moisture over the winter months. The old growth also keeps the soil approximately five degrees cooler, which delays the emergence of shoots until the weather is more consistent, thus lessening the danger of frost-damaged spears. I garden in central Virginia, and since my aspar-

PLANTING BASICS

Getting Started Plant one-year-old crowns in early spring when the soil temperature is at least 50°F.

Spacing Dig a furrow five to six inches deep. Plant crowns one foot apart. Space rows five feet apart.

Days to Maturity Harvest one year after planting, once spears begin to appear in early spring.

agus has never been invaded by asparagus beetles, I leave the old growth over winter. It's important, however, to remove the old growth in early spring so it will not impede the emerging sprouts.

PESTS AND DISEASES

Pests are seldom a problem with asparagus, but if you see foliage dieback, check for asparagus beetles. The common asparagus beetle is black with a metallic blue head. Its wings have metallic yellow spots. The spotted asparagus beetle is orange with black spots.

Deal with a small infestation by hand-picking the beetles early in the morning and wiping the thin dark brown eggs off the stems with a wet cloth. If you do have an infestation, remove the old growth in late fall.

Avoid fungal diseases such as rust and fusarium by selecting resistant cultivars.

RECOMMENDED VARIETIES

Asparagus plants can be male or female. Because males don't bear fruit, they are usually more productive for culinary use. **'Jersey Knight'** is a very hardy male hybrid that produces heavy crops of high quality spears. It has good disease resistance.

'Millennium' is another high-yielding male selection with resistance to rust. It is a good choice for heavy soils.

'Purple Passion' produces exceptional-



WHITE ASPARAGUS

There is no cultivar of white asparagus; rather, any asparagus that is blanched—grown in the absence of light—will develop white spears. To blanch your crop, continuously mound soil or mulch around emerging spears.

—M.W.H.

ly tender, sweet, dark purple spears from male and female plants. Use them raw if you want to retain the purple color, which fades when cooked.

'UC 157' is a good choice for warm regions with mild winters. Although it is an open-pollinated variety with both male

and female plants, it provides excellent yields as well as disease resistance.

ENJOYING THE HARVEST

Asparagus can be picked when stalks are six to eight inches high. Once production starts, plan to pick daily. Expect to harvest a half pound per plant from an established bed.

Don't harvest any stalks the first year; this allows the plants to become well established. Some references suggest waiting two to three years before beginning to pick asparagus, but recent studies have shown that it does not hurt the plants to begin harvesting spears the first year after planting. Harvest five- to seven-inch-long spears over a three-week period the first year after planting. In the second year, harvest spears for a period of four to six weeks. By the

Sources

Johnny's Selected Seeds,
Albion, ME. (877) 564-6697.
www.johnnyseeds.com.

Peaceful Valley, Grass Valley, CA.
(888) 784-1722.
www.groworganic.com.

Seeds of Change, Spicer, MN. (888)
762-7333. www.seedsofchange.com.

Territorial Seed Company, Cottage
Grove, OR. (800) 626-0866.
www.territorialseed.com.



In summer, the feathery foliage of asparagus makes energy for next year's crop, so it's important to let it grow in the garden at least until it dies back in fall or winter.

third year, you can harvest for six to eight weeks. The length of harvest depends upon growing conditions. Stop harvesting when the majority of the spears are thinner than a pencil. To harvest, simply snap or cut the spear at or just above the soil level.

Asparagus is best when eaten the day of harvest, but will keep in the refrigerator for up to a week. Prevent spears from dehydrating by wrapping the cut ends in a moist paper towel before placing in the crisper.

Packed with potassium, thiamine, folic acid, and vitamins A, B6, and C, asparagus can be enjoyed raw or steamed for two to three minutes until tender-crisp. I like to roast spears to bring out their earthy notes; simply toss them with olive oil, salt, and pepper to taste, and place in a 400-degree oven for 10 minutes.

Margene Whitler Hucek is a garden writer based in Keswick, Virginia.

Natural and Homemade Remedies for Plant Diseases

by Scott Aker

DISEASES CAN appear overnight in the right weather conditions and do a great deal of damage to plants in a short time. The key to managing them is prevention—controls must be in place *before* a disease infects plants, and must be applied frequently while conditions are right for disease development. Because most synthetic pesticides and fungicides come with some degree of environmental or health concern, it's not hard to explain the appeal of natural and homemade remedies. But do they work?

The answer is: Sometimes and maybe. Many homemade disease fighters can't be rigorously tested using scientific methods because the substances used are generally not uniform or standardized, so their effectiveness is largely anecdotal.

COMPOST TEA

Compost tea—the solution derived from steeping compost in water—is a good example. It has become a big business, with many companies touting electrically operated brewing equipment that produces large-volume batches. Some gardeners swear by its effectiveness as a disease suppressant when it is sprayed on plants, while others claim it confers little to no benefit.

The concept behind compost tea would appear sound: Compost is full of hungry microorganisms. Apply them to a plant threatened by a fungal or bacterial pathogen, and they will consume the pathogens as well as deprive them of the space they need to grow. There's also good evidence that some microorganisms in compost tea release compounds that may even jump-start the plant's own defenses against diseases.

However, gardeners can't expect consistent results from using compost tea because there are as many recipes for it as there are gardeners, and some have better microbes than others. Preparation and handling have major impacts on the final



Powdery mildew, shown here on the leaves of a butternut squash, is one of the few plant diseases that can be controlled by a variety of water-based remedies.

product. If you prepare compost tea from tap water, the result might be very different than if you use well water, due to the chlorine and high pH of municipal water sources. Unless the tea is applied immediately, storage conditions—particularly lack of oxygen and exposure to heat and light—may kill off many of the beneficial microorganisms in it.

Researchers have tried to isolate and cultivate good fungi and bacteria so they can be grown and applied to plants to achieve more uniform results. Look at the fine print on the label of many garden products and you will find *Bacillus subtilis*, *Trichoderma harzianum*, *Gliocladium virens*, and other microbes that are commonly found in soil and compost. Since these microbes can be grown and standardized, products containing them have been scientifically evaluated. While they often reduce disease severity, noticeable damage to plants is still observed, particularly where conditions are ideal for

disease development. Perhaps it is the ecology and complex interactions of many different organisms that lead to successes some gardeners report with compost tea.

If you want to use compost tea, start with well-aged compost that has reached at least 140 degrees Fahrenheit during the decay process. The heat will ensure that pathogens have been killed and several weeks of aging will allow a greater diversity of microorganisms to replace the heat-loving decay organisms. Use non-chlorinated water to brew it and use it all as soon as it is ready because its effective properties degrade rapidly. Some proponents of compost tea suggest that aeration, or introducing oxygen, with an air pump while it is brewing will help the living broth thrive and produce better results.

PLANT-DERIVED COMPOUNDS

Another broad category of home remedies consists of extracts from plants such as

Gardening Q&A with Scott Aker

GETTING A WAX PLANT TO BLOOM

Can you give me some tips for coaxing my wax plant into bloom? I've had it for five years and keep it in a north-facing windowsill.

Wax plant (*Hoya carnosa*), a vining succulent member of the milkweed family, won't bloom unless it has enough light, so you will need to move your plant to a sunnier location. The indirect light found a foot or two away from a south-facing window is usually enough to stimulate flowering. In the wild, wax plants grow in subtropical areas of Asia with a seasonal cool, dry period followed by warmer, wetter weather. They flower in response to increasing light and moisture. To simulate these conditions indoors, allow your plant to dry out for longer periods in fall and winter and keep it as cool as you can. As the days get longer in spring, increase watering to encourage flowering.

EASY-TO-GROW PLANTS FOR SMALL SPACES

I have a deck with full sun and would like to do some gardening with the kids. Any suggestions for vegetables or fruits that are easy to grow in pots?

Start this spring with greens. Lettuce makes colorful plants quickly, and your kids would enjoy supplying the salad course for a meal at harvest time. I've had great luck with Swiss chard and spinach, too. Blueberries might provide a good harvest; choose a short variety such as 'Sunshine Blue', 'Top Hat', or 'Patriot'. Use a large container and add peat moss or coir to the potting soil to make it acidic. Strawberries provide a more immediate harvest; pick day-neutral varieties such as 'Tribute' or 'Tristar'. For summer, sweet cherry tomatoes make great healthy snacks for kids. 'Sungold' is a favorite, and currant tomato (*Solanum pimpinellifolium*) produces delicious marble-sized fruits by the hundred in a large pot. —S.A.

Send your gardening questions to Scott Aker at saker@ahs.org (please include your city and state with submissions).

garlic, hot peppers, and thyme. While the effectiveness of compounds isolated from these plants can be demonstrated in petri dish cultures in laboratories, the results in the real world have been mixed. It's hard to achieve the concentration needed to diminish the growth of diseases in the garden since many of these compounds evaporate easily or are degraded rapidly in sunlight. Some plant-derived compounds may kill beneficial organisms and carry acute health risks of their own when concentrated.

Neem oil from the fruits and seeds of the neem tree (*Azadirachta indica*) is commonly used to control insect pests, but it has also been shown to be effective against some diseases, such as mildew and black spot. The downside is that some formulations have a pronounced odor similar to that of rotting onions.

POWDERS AND OILS

Some of the best remedies for disease are those that have been around the longest.



Oil from the fruit and seeds of the neem tree, shown, is effective against black spot.

The Greeks knew that applications of powdered sulfur to wheat fields controlled wheat rust. Copper has been used against fungi and bacteria for centuries. Horticultural oil

derived from petroleum is effective against powdery mildew. Baking soda—sodium bicarbonate—has appeared in many home recipes for disease control, and now you can buy potassium bicarbonate or ammonium bicarbonate that do the same thing without the potential for toxic buildup of sodium. All of these chemically change the environment on the plant surface, making it unfavorable to disease organisms. For that reason, they are generally quite effective when applied as a preventive measure. They may also cause damage to plant cells, and care must be taken not to exceed the labeled rate or apply them too often.

Similarly, oils of various types coat plant surfaces, serving as a physical barrier and perhaps blocking the cues that disease spores use to determine if they are on a suitable host. Sulfur interacts with oil to cause toxicity to plants, so they must not be used together or whenever a residue of the other might still be on the plant.

GARDEN USES FOR HOUSEHOLD PRODUCTS

People will try almost anything to combat garden diseases, and household products such as vinegar, mouthwash, milk, baby shampoo, and molasses appear in remedies from time to time. With the exception of cow's milk, few of these have been shown to have much effect on diseases. It is thought that some components in milk may limit the populations of aphids and other vectors that spread viruses, therefore reducing their spread.

Not surprisingly, nearly all remedies claim to control powdery mildew. The spores are killed by water present on the leaf surface, and all these remedies are applied in water solution.

Like any disease control, these remedies are best used along with planting of resistant varieties, fostering environmental conditions that discourage diseases, and rotating annual crops to prevent disease buildup. Don't expect too much. These remedies don't do a great job against the worst diseases such as black spot on roses or late blight on tomatoes. There may be some reduction of disease severity, but often it is not enough to prevent damage in areas where weather conditions strongly favor diseases.

Scott Aker is the head of horticulture and education at the U.S. National Arboretum in Washington, D.C.

Hatcher Garden and Woodland Preserve

by Uziel Crescenzi



LOCATED IN Spartanburg, 30 miles from Greenville in north-west South Carolina, Hatcher Garden and Woodland Preserve is a shining example of what can result from collaboration between generous benefactors and a civic-minded community. In 1969, Harold and Josephine Hatcher moved five minutes from downtown Spartanburg to be closer to their daughter, Alice. In their search for a place to retire, the couple purchased an eroded cotton field for their new home. Over time, the Hatchers recognized the potential of the site as a community green space and began restoring the woodland and enhancing the landscape. Over 10,000 trees and shrubs were planted, gullies were filled, paths were laid, and additional land procured.

By the 1980s, the property had attracted the attention of the entire community. Civic groups like the Spartanburg Men's Garden Club, the Spartanburg Garden Club Council, Spartanburg Community College, and the Unitarian Universalist Church volunteered to help with the

planting and maintenance to create a green haven for all to enjoy.

In 1987, the Hatcher family donated the land to the Spartanburg County Foundation. There was no formal opening to the garden, but with the conversion to non-



Top: The nationally-recognized Conifer Collection in winter. Hellebores, above, and edgeworthia, right, are among the late-winter bloomers in the gardens at Hatcher.

profit status and establishment of a board of directors, Hatcher officially became part of the public fabric of Spartanburg.

GROWING WITH THE COMMUNITY

The 12.1 acre garden and preserve transition seamlessly from each other. Throughout the woodland area, "garden rooms" offer a variety of landscapes, including a wildflower hillside, a waterwise demonstration garden, a 20-foot, man-made waterfall and stream, a healing garden, gift shop and nursery, and notable conifer and hosta collections.

The garden's **Conifer Collection** is one of 15 in the Southeast recognized by the American Conifer Society as a reference garden. It includes 200 specimens representing more than 40 conifer species and 16 different genera. Although shade-loving hostas can be found growing throughout the garden, the **Robert Lawrence Odom Hosta Friendship Garden** features more than 250 different selections showcasing the genus's incredible range of size, leaf color and patterning, and flower color.





The waterfall in the woodland preserve is a favorite visitor destination.

Robin Vollmer, Hatcher's executive director, describes the garden and preserve as a "photographer's paradise" because something is always in bloom. In winter, hellebores and camellias take center stage. In spring, visitors enjoy displays of native ephemerals such as trout lilies (*Erythronium* spp.), mayapples (*Podophyllum peltatum*), and trilliums. In late summer the brilliant blossoms in the butterfly garden draw a diverse array of pollinators. With the arrival of fall, the garden's forested backdrop provides one last burst of color before things begin to wind down.

"We want garden visitors of all ages to experience a sense of wonder in the woods as they discover fragrant flowers, seek out hidden birds and wildlife, and listen to the rushing water of the creeks and waterfall," says Vollmer.

EDUCATION, ACCESSIBILITY, AND HEALING

Each year, some 40,000 visitors enjoy the scenic landscape at Hatcher, which is maintained by two full-time staff members and a roster of active, dedicated volunteers. Vollmer says the biggest challenge lies in "continuing to build and maintain the gardens the same way the Hatchers envisioned."

To this end, Hatcher hosts a variety of educational programs throughout the year for children and adults such as first-graders learning about how seeds germinate, or local community college students getting hands-on instruction in plant care. Popular annual events include spring and fall plant sales (April 15 and 16 and September 30 to October 1 this year), along with an early summer "Twilight in the Garden" fundraiser that includes a dinner and auction.

There also has been an ongoing effort to make the garden more accessible to visitors with physical limitations and challenges. To this end, the garden features two quarter-mile paved paths wide enough for two wheel chairs side by side. A fairly recent milestone was the opening in 2011 of the **Garden of Hope and Healing**. The garden came about through substantial community involvement, including *pro bono* work by two local landscape architecture firms. "The healing garden provides a conveniently located escape for hospice and cancer patients, their caregivers, and others in the community in need of solace, inspiration, and renewal," says Vollmer.

Additional Information

Hatcher Garden and Woodland Preserve, 820 John B. White Sr. Blvd, Spartanburg, SC 29306. (864) 574-7724. www.hatchergarden.org.

- Open year round, dusk till dawn
- Admission: Free
- Hatcher Garden and Woodland Preserve participates in the AHS Reciprocal Admissions Program. AHS members with a current membership card receive a discount in the gift shop and plant nursery.

Other nearby sites to explore:

Falls Park on the Reedy, Greenville, SC.

www.fallspark.com/167/Falls-Park.

Greenville Zoo, Greenville, SC.

www.greenvillezoo.com.

Milliken Arboretum, Spartanburg, SC.

www.milliken.com/en-us/ourcompany/visitors/Pages/milliken-arboretum.aspx.

Josephine and Harold Hatcher died in 1999 and 2003 respectively, but their legacy lives on both through the garden and through their daughter Alice Hatcher Henderson, who is an active board member and garden volunteer. Given her family's involvement with the garden, it's not surprising that she particularly enjoys giving tours and sharing the garden's history with its visitors. 🌿

Uziel Crescenzi is an editorial intern with The American Gardener.

Recommendations for Your Gardening Library

Plants With Style: A Plantsman's Choices For A Vibrant, 21st-Century Garden

Kelly Norris. Timber Press, Portland, Oregon, 2015. 268 pages. Publisher's price, softcover: \$24.95.

PLANTS WITH STYLE is Kelly Norris's paean to ecology-conscious, biodiversity-rich gardening with panache. Stylish gardening, according to Norris, an accomplished horticulturist, requires not only focusing upon how a garden looks, but also its suitability to local climate, and its impact upon the local environment. Thus, this book spotlights a variety of ornamental plants that Norris has observed and cultivated in various North American climates and soil conditions.

Written more like an extended essay than a plant encyclopedia, *Plants With Style* includes scores of exquisite plants—some familiar to me, many not. Norris enthusiastically explains the pragmatic and artistic concerns behind his recommendations.

In hot dry areas, for example, he suggests juxtaposing scarlet California fuchsia (*Zauschneria californica*) and cool Mexican blue sage (*Salvia chamaedryoides*); pairing in Deep South gardens the familiar southern magnolia (*Magnolia grandiflora*) with winter-blooming Japanese apricot (*Prunus mume*); and combining flowering shrubs like spicebush (*Lindera benzoin*) with shrublike sweetfern (*Comptonia peregrina*) in Northeast and Great Lakes gardens.

The book is divided into five main sections: "Environment" promotes the use of locally adapted ornamentals; "Structure" explores elegant options for providing framework in a garden; "Emblems" extols the pleasures of winter, spring, summer, and autumn and those plants that shine as each season progresses; and "Vignettes" urges readers, when designing their gardens, to be sensitive to color, contrast, foliage, and late-season changes to these characteristics. Finally, there is my favorite section, "Essential Kitsch," that asserts, "Every garden needs at least one [plant] that's going to turn heads, stop traffic, and inspire conversation."

Norris's prose is sophisticated, sensual, vivid, and instructive. My only complaints about this book are the type, which is small and dense, and the muted color of some of the photographs. Also, the genus *Dianthus*, to which I am addicted, is never mentioned.

These quibbles aside, Norris is an engaging and erudite author, and *Plants With Style* is a richly inspiring addition to the gardener's bookshelf.

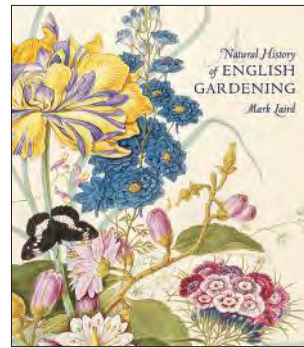
—Rand B. Lee

Rand B. Lee is a garden writer living in Santa Fe, New Mexico.

A Natural History of English Gardening

Mark Laird. Yale University Press, New Haven, Connecticut, 2015. 440 pages. Publisher's price, hardcover: \$75.

AS GARDENERS and garden aficionados in 2016, we witness and experience a host of challenges that impact our horticultural endeavors. It is much more difficult and uncertain to divine the factors that influenced horticulturists centuries ago. This momentous tome, encompassing the Early Modern period between 1650 and 1800, reveals how a pantheon of English horticultural luminaries dealt with climatic challenges, a changing world, and the interconnectedness of all life.



A Natural History of English Gardening takes inspiration from English naturalist Gilbert White's *The Natural History of Selborne*—a record of the natural as well as cultural forces affecting an English village that was published in 1789. Mark Laird, a noted historic landscape consultant and garden conservator, presents a similarly comprehensive view of English landscape gardens. Using detailed records of weather, plants, and pests, and many other resources, Laird places Early Modern English gardening in an appropriate cultural and ecological context. Major themes emerging from this scholarship include the important contributions of women such as 17th-century artist-naturalist Maria Sibylla Merian to gardening and natural history, and the significant role of the amateur "in relationship to the increasingly professionalized, male-dominated sciences."

This book is filled with sumptuous botanical illustrations by prominent naturalists and artists of the era. Among them are Mary Delany's intricate flower collages created with pieces of colored paper in the late 1700s, and watercolors by her contemporary, Georg Dionysius Ehret, drawing teacher to the aristocracy. Historic garden sketches, plans, maps, journal entries, and correspondence supplement the fascinating narrative.

This significant contribution to horticultural history presents an environmentally holistic analysis of the various factors that shaped the English landscape garden over a period of 150 years. Meticulously researched and insightful, this book belongs on the shelf of any serious gardener.

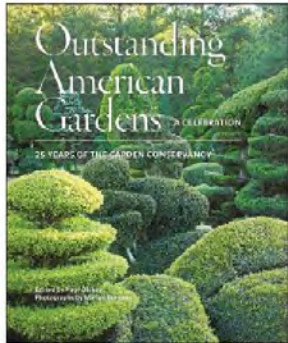
—Rita M. Hassert

Rita M. Hassert is library collections manager for the Sterling Morton Library at the Morton Arboretum in Lisle, Illinois.

Outstanding American Gardens: A Celebration

Edited by Page Dickey with photographs by Marion Brenner. Stewart, Tabori & Chang, New York, New York, 2015. 272 pages. Publisher's price, hardcover: \$50.

MANY OF THE most culturally significant gardens in the United States would not be open to the public today without the efforts of the Garden Conservancy. Founded by Frank and Anne Cabot, the Conservancy has "helped to preserve some one hundred private American gardens." This book celebrates 25 years of the organization's work by spotlighting eight of them, including the Ruth Bancroft Garden in Walnut Creek, California, with its extraordinary collection of succulents.



This garden was the impetus for the organization's formation and its first preservation project.

Among the other featured preservation gardens are the Japanese Stroll Garden in Mill Neck, New York, which is one of the few traditional Japanese gardens in the East; and the gardens of Alcatraz in San Francisco, transformed by prisoners from barren landscape to a lush preserve.

The Garden Conservancy is also known for its annual Open Days program, when exceptional private gardens across the country are opened to the public one or two days a year. The book gives readers a glimpse of 42 of these gardens to illustrate the horticultural and artistic achievements of gardeners in all parts of the United States. For each garden, a few descriptive paragraphs provide an *amuse-bouche* to the visual feast provided by the stunning photographs by Marion Brenner.

One of these, Duck Hill in New York's countryside, belongs to garden designer Page Dickey, who is the book's editor. Previously a dairy farm, the property now boasts a "series of hedged-in gardens that are formal in outline, rather prim, but containing an exuberant mixture of plantings." Another is Grey Gulls in Marblehead, Massachusetts, on a promontory overlooking the Atlantic Ocean. Despite being subjected to harsh winter winds, a weeping Camperdown elm withstands the weather just fine, along with artichokes, roses, and a variety of colorful perennials.

Out west, renowned landscape architect Steve Martino designed the Stiteler's garden in Phoenix, Arizona, to blend in with the surrounding desert landscape. In Santa Monica, California, Wirtz International and local designer Lisa Zeder replaced an English-style garden at the Kayne property with serene green terraces for a more modernist look.

This big, beautiful book provides a wonderful overview of the Garden Conservancy's work so far. As it showcases some of America's most outstanding gardens, no doubt you'll gain inspiration for your own garden.

—Jane Berger

Jane Berger is a landscape designer and garden communicator who blogs on www.gardendesignonline.com.

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Horticultural News and Research Important to American Gardeners

GARDEN CLUB OF AMERICA'S PLANT OF THE YEAR

The Garden Club of America (GCA) has selected 'Raydon's Favorite', a compact cultivar of aromatic aster (*Symphoricarpos oblongifolium* var. *angustatus*) as the 2016 recipient of its McDaniel Freeman Medal for Plant of the Year. 'Raydon's Favorite' grows two to three feet tall with a slightly larger spread. Kentucky horticulturist Allen Bush named the selection in honor of Raydon Alexander, a plantsman from San Antonio, Texas, who first introduced the plant to Bush.

Aromatic aster is native to scattered areas throughout the eastern and central United States. Its common name refers to the mint-like scent of its fine, linear leaves, which is released when touched. Clusters of starlike, lavender-colored flowers with yellow centers bloom in late summer to fall, providing pollen and nectar for many insects. This low-maintenance, drought-tolerant perennial will grow in USDA Hardiness Zones 3 to 9 and AHS Heat Zones 9 to 1.

Based on votes from GCA members, great white trillium (*Trillium grandiflorum*), a woodland ephemeral that blooms in spring, and yellow pitcher plant (*Sarracenia flava*), a carnivorous bog dweller, received honorable mentions. Special recognition went to Arkansas bluestar (*Amsonia hubrichtii*), a tough, shrublike plant that offers multi-season interest.

Since 1995, the GCA has spotlighted a native herbaceous or woody plant each year with its Freeman Medal. The goal of this program is "to draw attention to select native plants to encourage their use in the landscape and make them familiar to gardeners and more available in nurseries," says GCA Horticulture Committee Member Lucy Rhame.

For more information, visit www.gcamerica.org.

To gather meals more efficiently, Venus flytraps appear to count how many times their "traps" are touched by an external source.



'Raydon's Favorite' aster blooms prolifically in late summer to autumn.

CARNIVOROUS PLANTS CAN COUNT

Venus flytraps (*Dionaea muscipula*) can do a form of counting, according to a study published in the journal *Current Biology* last November. Scientists at the University of Würzburg in Germany found that the plants respond in a certain sequence to a series of triggers, or "action potentials."

Upon the first trigger that simulated insects landing on the traps, the scientists observed the plants reacted by entering a "ready to go" mode. Plants only began to close traps if a second trigger occurred within 30 seconds or so. Once a third trigger was detected, the traps closed tightly to form a "green stomach." The fourth trigger caused biochemical changes in the plant associated with nutrient uptake. Five or more triggers signaled glands on the inside of the trap to secrete digestive enzymes.

By having a sequence of up to five unique responses to each action potential, the Venus flytrap appears to manage its resources more efficiently. "Carnivorous plants that depend on animal food should compensate or even exceed the cost of their carnivorous life cycle," the researchers explain in their paper. "Activating the glands to produce and secrete nitrogen-rich digestive enzymes is inherently costly; thus, this process appears to be closely controlled." So rather than using up its precious resources in response to a false alarm—such as a piece of debris hitting the trap—or in the event its prey escapes, the plant requires multiple triggers before investing energy on a sufficient payoff.



CORN ANCESTOR OFFERS CLUES ABOUT CLIMATE-CHANGE EFFECTS ON PLANTS

Modern-day corn or maize originated from a plant known as teosinte (*Zea mays* ssp. *parviglumis*), which still grows wild in parts of Mexico. When looking at the two plants today, however, they bear so little resemblance to each other that researchers have puzzled over why early farmers chose to domesticate teosinte rather than other grain plants. A study published last year in the journal *Quaternary International* provides a possible explanation: Environmental conditions can drastically affect the way plants of the same species will grow.

Dolores Piperno, an archaeobotanist with the Smithsonian Tropical Research Institute in Panama and one of the coauthors of the study, decided to see what would happen to teosinte when grown in conditions that simulated the climate of 10,000 years ago, when fossil records indicate that agriculture began.

Then, the average temperature was several degrees colder and ambient carbon dioxide was less than half of what is found in today's atmosphere. Under those simulated conditions, plants grew one taller primary stem with exposed ears that ripened at the same time. By contrast, when Piperno grew teosinte under today's con-

ditions, the plants produced many lateral shoots with smaller, tightly-covered ears along them that ripened sequentially.

These results indicate that ancestral teosinte grew in a way that made it more viable as a food crop than its modern incarnation. "Because the maizelike plants had visible and highly desirable traits with obvious advantages," note the researchers in their paper, "it is reasonable to expect they would have gained the attention of early collectors and then cultivators."

As scientists unravel the origins of agriculture, this research offers new insight into the domestication not only of corn, but of other important food crops like wheat, barley, and rice. The researchers also suggest that this work will help inform further studies that will "be important for assessing the effects of global environmental change." For more information, visit www.nature.com/naturejournal/v528/n7583/full/nature16441.html.



Teosinte plants, when grown in conditions similar to those 10,000 years ago, more closely resemble modern-day corn.

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PEOPLE and PLACES in the NEWS

DEATH VALLEY COMES ALIVE WITH SUPER BLOOM

Death Valley National Park in California is one of the driest and hottest places on earth. Once every 10 years or so, it receives more than its average of two inches of



Spring wildflowers burst into bloom in Death Valley.

rainfall a year, usually coinciding with El Niño weather patterns, which are currently prevailing. The area received three inches of rain in October alone. Millions of dormant wildflower seeds germinated as a result, spurring a super bloom.

Beginning in mid-February, these wildflowers have carpeted Death Valley's parched landscape with streaks of color from horizon to horizon. The diversity of the area's flora—over 1,000

plant species are found here—is surprising considering the harsh environmental conditions. For updates on the super bloom's progress, visit www.nps.gov.

IT'S A ZOO FOR THE CENTER FOR PLANT CONSERVATION

The Center for Plant Conservation (CPC) and San Diego Zoo Global have formed a new partnership to protect endangered plant species endemic to North America. As part of this collaboration, the CPC has relocated to the zoo from its former headquarters at the Missouri Botanical Garden in order to pool resources more efficiently. The CPC comprises a network of 40 botanical gardens throughout North America that have worked to conserve endangered plant species for more than 30 years.

John Clark, president of the CPC, is now also the director of plant conservation for the zoo. As such he will continue to lead the CPC's work to save endangered plants from extinction through partnering botanical institutions, as well as through the zoo's own extensive plant collection and its team of conservation scientists. Visit www.centerforplantconservation.org for more information.

RENOWNED GARDEN WRITER ALLEN LACY DIES

Allen Lacy, one of the most admired voices in American garden writing, passed away in late December 2015 at the age of 80. He began writing about his gardening experiences in a column for the *Wall Street Journal* in 1979, and then for the *New York Times* for the next several years.



Allen Lacy

In a collection of these columns and other essays, titled *The Gardener's Eye* (1992), he wrote, "I believe that gardening has intellectual underpinnings, that it always goes beyond technical and practical questions of when to and how to." For his skillful efforts to describe what he called "the philosophical foundations of the horticultural enterprise," he received the AHS's Horticultural Writing Award in 1985. Among his best-loved books is *Home Ground* (1984), which the American Horticultural Society

(AHS) named in 1997 as one of 75 Great American Garden Books.

In addition to his writing, Lacy's legacy includes the Linwood Arboretum in Linwood, New Jersey. He served as a founding curator for this one-acre space starting in 2007, helping to fill it with unusual or rare small trees and shrubs.

NEW BOTANICAL POSTAGE STAMPS

Philatelists with a penchant for plants will particularly appreciate the new "Botanical Art Forever" stamps from the United States Postal Service that celebrate a piece of horticultural Americana. The set includes 10 colorful images



of flowers such as roses, tulips, dahlias, and daffodils. Each one is a detail from illustrations by unknown artists appearing in American nursery catalogs printed between 1891 and 1912. These catalogs, housed at the New York Botanical Garden, provide an invaluable historical record of this country's horticultural and botanical heritage, now commemorated by these stamps. For more details, visit www.usps.com/stamps/botanical-art.htm.

MORTON ARBORETUM JOINS NEW AFFORDABLE ADMISSION INITIATIVE

This January, the Morton Arboretum in Lisle, Illinois, became the first public garden in the United States to participate in Museums for All, a program that offers low-income people more affordable or free admission. This initiative, launched last November by the Institute of Museum and Library Services together with the Association of Children's Museums, spotlights the museum community's commitment to inclusiveness and accessibility to a greater range of patrons.

Qualifying visitors to the Morton Arboretum will receive general admission at the price of one dollar. By participating in this new program, the Morton Arboretum hopes to expose a wider audience to nature. According to its website, this 1,700-acre outdoor museum of trees hopes to "inspire even more people to love trees and advocate for a greener, healthier, and more beautiful world."

To learn more about the initiative, visit www.museums4all.org.

News written by Editorial Intern Uziel Crescenzi and Associate Editor Viveka Neveln.

Measuring Up for the New Garden Year

by Rita Pelczar

WITH THE approach of spring, we gardeners have a lot of questions. When is the best time to plant peas? Does the lawn need lime this year? Do the flowerbeds need watering? Is the compost hot enough to kill weed seeds? Luckily, tools are available to provide answers with precision.

SOIL TESTING

It's important to test your soil at least every three to five years to evaluate its fertility. Both private and state-run soil test labs (the latter are usually associated with



Eight-Inch Soil Probe

the state's land grant university) conduct analytical soil tests. The accuracy of the results however, depends on the quality of the sample submitted. A tool that makes it easy to collect a good sample is the **Eight-Inch Soil Probe** from Rittenhouse Garden Tools. Use this

soil augur to collect narrow cores to eight inches deep from several spots in the garden. Place the soil cores in a clean, sturdy bucket and mix them well to provide a representative sample for testing.

Soil acidity can be altered by amendments incorporated into the soil, and it has a strong influence on the availability



Rapitest® Soil pH Meter



Before transplanting seedlings into the garden, be sure you have optimal growing conditions.

of essential plant nutrients, so I like to check the pH in my gardens every year. You can monitor this important soil variable without performing an entire soil test with the **Rapitest® Soil pH Meter**, analog meter available from Lee Valley Tools, or the **Rapitest® Digital Soil pH Meter**, available from Planet Natural. Both meters register pH levels between 3.5 and 9.0. Just insert the probe into wet soil and take your reading. Test several locations within a bed for an accurate indication of pH levels.

CHECKING THE TEMPERATURE

The temperature of your soil is a critical factor when it comes to planting seeds or transplants. According to Oregon State University vegetable researcher Annie Chozinski, "Soil temperature is the best indicator of when to plant each type of vegetable, no matter what climate zone you live in." (A chart indicating the minimum, maximum,

and optimum range of temperatures for germinating vegetable seeds, compiled by the Department of Vegetable Crops, University of California at Davis, can be accessed at http://extension.oregonstate.edu/deschutes/sites/default/files/Horticulture/documents/soil_temps.pdf.) The battery-operated **Rap-**



Rapitest® Digital Soil Thermometer

itest® Digital Soil Thermometer from Gardener's Edge measures soil temperature quickly and accurately; just push the probe two to three inches into the soil, and wait about 60 seconds for your reading to be displayed.

Sources

Gardener's Edge,
www.gardenersedge.com.
Lee Valley Tools,
www.leevalley.com.
Planet Natural,
www.planetnatural.com.
Rittenhouse Garden Tools,
www.mkrittenhouse.com.

Another important temperature to monitor is that of your compost pile.



Temperatures between 140 and 160 degrees Fahrenheit for about two weeks will kill most pathogens, pests, and weed seeds; temperatures above 165 degrees kill beneficial organisms, so should be avoided. To monitor compost temperatures, Gardener's Edge offers a **Backyard Compost Thermometer** manufactured by Reotemp Instruments. Its 20-inch probe reaches deep into the pile to show you how hot things are getting. Turning the pile thoroughly several times during the two-week "hot period" adds oxygen—needed by the beneficial microbes—and evens out temperatures throughout the pile.

KEEPING TABS ON PESTS

If white flies, flea beetles, thrips, or other flying pests cause problems in your garden or greenhouse, Planet Natural's **Yellow Sticky Traps** can help you monitor their populations to determine if or when a pesticide or other control measure is needed. Just hang the cards two to three inches above the plant canopy and check them frequently. Placed horizontally just above the soil surface, they effectively control fungus gnats on indoor plants.

ACCURATE MIXING

Whether you are diluting liquid fertilizer to feed your plants, an anti-transpirant to reduce moisture loss, or an insecti-



cidal soap to combat aphids and whiteflies, it's a good idea to have a dedicated tool for such tasks. I like the **One Liter Measuring Container** from Rittenhouse Garden Tools. This plastic measuring container is clearly calibrated in liters and milliliters and has both spout and handle for easy pouring into your sprayer or other application container.

MONITORING MOISTURE

Watering requirements of indoor plants vary with the type of plant and with seasonal changes in light, temperature, and humidity. Designed for indoor plants, the **Rapitest® Moisture Meter** from Lee Valley Tools features a 4.25-inch metal probe that is inserted in the soil to measure the moisture level, which is displayed on the instrument's gauge. The meter comes with a guide that lists the water needs for 170 plants to help you determine if you




need to give your plants a drink. For large containers, I find that inserting the probe into multiple locations provides a more accurate indication of the moisture level.

Tracking rainfall from week to week helps you determine when it's time to supplement your outdoor garden with irrigation. Even during winter, precipitation has an impact on plant health.

There are many low-tech rain gauges that work well as long as they are placed in an unobstructed location—and only when temperatures are not likely to freeze and cause the collecting tube to break. A more high-tech option that can take precise measurements at any temperature is the **Torrent™ Imperial Rain Gauge**



from Lee Valley. This digital, wireless rain gauge records precipitation—within 0.001 inch—that falls into its egg-shaped funnel. Because the unit is self-emptying, it can measure rainfall for whatever period of time you wish—daily, weekly, monthly—you simply press a button to reset it to zero. There's no danger of it cracking from freezing water, so it's useful year-round. To ensure an accurate reading, the gauge must be mounted on a level surface.

With all these tools at your disposal, you will be able to gather valuable information and take some of the guesswork out of gardening, helping you to achieve better results. 

Rita Pelczar is a contributing editor for The American Gardener.



REGIONAL HAPPENINGS

Horticultural Events from Around the Country

NORTHEAST

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

RAP MAR. 31 & APR. 7. **Designing Winning Plant Combinations.** Class. New York Botanical Garden. Bronx, New York. (718) 817-8700. www.nybg.org.

RAP APR. 4. **The Battenkill Valley: Reading the Natural Landscape.** Workshop. Hildene. Manchester, Vermont. (802) 362-1788. www.hildene.org.

RAP APR. 16. **Extraordinary Edibles: Develop a Sensational Seed Order.** Lecture. Coastal Maine Botanical Gardens. Boothbay, Maine. (207) 633-8000. www.mainebotanicalgardens.org.

RAP APR. 30. **Spring Soil Health.** Class. Queens Botanical Garden. Flushing, New York. (718) 886-3800. www.queensbotanical.org.

MAY 6 & 7. **Plant Sale.** Teatown Lake Reservation. Ossining, New York. (914) 762-2912. www.teatown.org.

MAY 14. **Native Plant Sale.** Bartlett Arboretum. Stamford, Connecticut. (203) 322-6971. www.bartlettarboretum.org.

MID-ATLANTIC

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

RAP MAR. 26. **To Repot or Not.** Workshop. Hillwood Estate, Museum & Gardens. Washington, D.C. (202) 686-5807. www.hillwoodmuseum.org.

MAR. 28. **The Astonishing World of Ant-Plant Symbioses.** Lecture. Virginia Native Plant Society. Roanoke, Virginia. (540) 837-1600. www.vnps.org.

MAR. 31. **Get Your Gardens Ready for the Wilmington City Garden Contest.** Lecture. Mt. Cuba Center. Hockessin, Delaware. (302) 239-4244. www.mtcubacenter.org.

APR. 8. **Green Matters Symposium.** Brookside Gardens. Wheaton, Maryland. (301) 962-1400. www.brooksidegreen.org.

APR. 8. **Production Green House Insider Tour.** Longwood Gardens. Kennett Square, Pennsylvania. (610) 388-1000. www.longwoodgardens.org.

Botanical gardens and arboreta that participate in AHS's Reciprocal Admissions Program are identified with the RAP symbol. AHS members showing a valid membership card are eligible for free admission to the garden or other benefits. Special events may not be included; contact the host site for details or visit www.ahs.org/rap. The AHS website also lists additional regional events.

RAP APR. 8 & 9. **Spring Garden Market.** Plant sale. River Farm, American Horticultural Society. Alexandria, Virginia. (703) 768-5700. www.ahs.org.

RAP APR. 30. **AG Day 2016.** Festival. University of Delaware. Newark, Delaware. (302) 831-0153. www.ag.udel.edu.

MAY 7. **Garden Festival.** Ladew Topiary Gardens. Monkton, Maryland. (410) 557-9570. www.ladewgardens.com.

SOUTHEAST

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

MAR. 31-APR. 3. **The Savannah Tour of Homes & Gardens.** Savannah, Georgia. (912) 234-8054. www.savannahourofhomes.org.

APR. 2 & 3. **Wonderful World of Orchids.** Jacksonville Orchid Society Show and Sale. Garden Club of Jacksonville. Jacksonville, Florida. (904) 355-4224. www.gardenclubofjacksonville.org.

RAP APR. 7. **The Biochemistry of Plant Fragrance.** Lecture. North Carolina Botanical Garden. Chapel Hill, North Carolina. (919) 962-0522. <http://ncbg.unc.edu>.

APR. 7-10. **Art in Bloom.** Exhibit. North Carolina Museum of Art. Raleigh, North Carolina. (919) 839-6262. www.ncartmuseum.org.

RAP APR. 15-17. **Spring Plant Sale.** Birmingham Botanical Gardens. Birmingham, Alabama. (205) 414-3950. www.bbgbgardens.org.

RAP APR. 16 & 17. **Garden Festival and Bonsai Show.** Flamingo Gardens. Davie, Florida. (954) 473-2955. www.flamingogardens.org.

APR. 22-24. **Flower and Garden Show.** Cumberland County Master Gardeners. Crossville, Tennessee. (931) 787-4558. www.ccmga.org.

RAP APR. 30. **Plant Sale.** Western Kentucky Botanical Garden. Owensboro, Kentucky. (270) 852-8925. www.wkbg.org.

NORTH CENTRAL

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

RAP APR. 2. **Maple Syrup Day.** Festival. Iowa Arboretum. Madrid, Iowa. (515) 795-3216. www.iowaarboretum.org.

RAP APR. 2 & 9. **Apple Grafting/Apple School.** Workshop. Seed Savers Exchange. Decorah, Iowa. (563) 382-5990. www.seedsavers.org.

APR. 7. **The Brother Gardeners.** Lecture. Loveland Garden Club. Lauritzen Gardens. Omaha, Nebraska. (402) 346-4002. www.lauritzengardens.org.

RAP APR. 9. **Gourd Festival.** Wisconsin Gourd Society. Olbrich Botanical Gardens. Madison, Wisconsin. (608) 246-4550. www.olbrich.org.

APR. 13-17. **Cincinnati Flower Show.** Yeatman's Cove Park. Cincinnati, Ohio. (513) 677-2799. www.cincinnatihorticulturalsociety.com. (AHS members receive free admission.)

RAP APR. 15-17. **Antiques, Garden and Design Show.** Chicago Botanic Garden. Glencoe, Illinois. (847) 835-5440. www.chicagobotanic.org.

RAP APR. 30. **Arbor Day Festival.** The Dawes Arboretum. Newark, Ohio. (740) 323-2355. www.dawesarb.org.

MAY 5. **For the Love of Peppers.** Lecture. The Herb Society of America-Wisconsin Unit. Ozaukee County Fairgrounds. Cedarburg, Wisconsin. (440) 256-0514. www.herb-society-wisconsin.org.

RAP MAY 5-7. **Spring Plant Sale.** Friends of Fellows Riverside Gardens Mill Creek MetroParks. Youngstown, Ohio. (330) 740-7116. www.millcreekmetro parks.org.

Must-See Spring Plant Sales



Left: Unique garden art at Hortlandia in Portland, Oregon. Above: Plants at the Spring Affair at the Nebraska Statewide Arboretum.

FOR GARDENERS EVERYWHERE, plant sales are eagerly anticipated rites of spring. They may range from modest affairs focused on a particular type of plant such as native species, to multi-day, festival-like events, but they provide important fundraising for the gardening organizations that host them as well as valuable community outreach. Here are three examples of well established annual events in different regions that have become can't-miss destinations for locals and farther-flung visitors alike.

■ In Portland, Oregon, the Hardy Plant Society of Oregon will host **Hortlandia**, one of the largest plant sales in the Pacific Northwest, on April 9 and 10. Shoppers have access to a wealth of plants offered by nurseries from across the region, as well as specialty garden art vendors displaying one-of-a-kind hand-crafted works made from a variety of materials. Hortlandia is also hosting the 2nd Annual Quilt Challenge, an homage to horticulture. Quilt makers from all over the Northwest compete to make a quilt that best exemplifies the theme, "In the Northwest Garden." For more information, call (503) 224-5718 or visit www.hardyplantsociety.org/hortlandia.

■ On April 23, the Nebraska Statewide Arboretum in Lincoln is hosting its **30th Annual Spring Affair**. This event will feature hundreds of perennial plant and grass varieties, hard-to-find trees and shrubs, locally raised seeds, and gardening products and crafts for sale. Plant talks and workshops on a variety of topics also will be offered. The Preview Party on April 22 includes live music, a buffet, and a cash bar, in addition to access to the vendors. "It's a plant sale with a big party," says Christina Hoyt, executive director of the Arboretum. For more information, visit <http://arboretum.unl.edu/spring-affair> or call (402) 472-2971.

■ The Massachusetts Horticultural Society will host its annual **Gardeners' Fair** on May 14 at its Elm Bank Reservation headquarters in Wellesley, in partnership with the New England Unit of the Herb Society of America. A wide variety of plants will be offered by regional nurseries, farms, and plant societies. Live music, family-friendly workshops, lectures, and garden tours round out the event. For more information, visit www.masshort.org or call (617) 933-4900.

—Uziel Crescenzi, Editorial Intern

SOUTH CENTRAL

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

RAP MAR. 25. **Composting Made Simple.** Walk and talk. Myriad Botanical Gardens. Oklahoma City, Oklahoma. (405) 445-7080. www.oklahomacitybotanicalgardens.com.

RAP APR. 2. **Spring Birds.** Walk. Dallas Arboretum and Botanical Garden. Dallas, Texas. (214) 515-6615. www.dallasarboretum.org.

RAP APR. 8–10. **Native Plant Sale.** Lady Bird Johnson Wildflower Center. Austin, Texas. (512) 232-0200. www.wildflower.org.

RAP APR. 9. **East Baton Rouge Master Gardener Plant Sale.** LSU AgCenter Botanic Gardens at Burden. Baton Rouge, Louisiana. (225) 763-3990. www.burdenhorticulturesociety.com.

RAP APR. 16. **Roses, Roses, Roses! Show.** Corpus Christie Rose Society. South Texas Botanical Gardens & Nature Center. Corpus Christi, Texas. (361) 852-2100. www.stxbot.org.

RAP APR. 22 & 23. **Spring Plant Sale.** The Crosby Arboretum. Picayune, Mississippi. (601) 799-2311. www.crosbyarboretum.msstate.edu.

SOUTHWEST

AZ, NM, CO, UT

RAP MAR. 31. **Winter Photography Workshop.** Betty Ford Alpine Garden. Vail, Colorado. (970) 476-0103. www.bettyfordalpinegardens.org.

RAP APR. 2. **Plants for the Santa Fe Area.** Class. Santa Fe Botanical Garden. Santa Fe, New Mexico. (505) 471-9103. www.santafebotanicalgarden.org.

RAP APR. 9. **Educational Rose Symposium.** Denver Botanic Gardens. Denver, Colorado.

(720) 865-3501. www.botanicgardens.org.

APR. 16. **Waterwise Trees and Shrubs.** Lecture. Conservation Garden Park. West Jordan, Utah. (801) 256-4400. www.conservationsgardenpark.org.

APR. 20. **Backyard Bird Tour.** Tucson Botanical Gardens. Tucson, Arizona. (520) 326-9686. www.tucsonbotanical.org.

NORTHWEST

AK, ID, MT, OR, WA, WY

RAP APR. 16. **Medicinal Herbs Walk.** Mount Pisgah Arboretum. Eugene, Oregon. (541) 747-3817. www.mountpisgaharboretum.org.

RAP APR. 16. **Rock and Crevice Gardening.** Lecture. Cheyenne Botanic Gardens. Cheyenne, Wyoming. (307) 637-6349. www.botanic.org.

RAP APR. 29. **Spring Plant Sale.** Lake Wilderness Arboretum. Maple Valley, Washington. (425) 413-2572. www.lakewildernessarboretum.org.

APR. 30. **Native Plant Sale and Environmental Festival.** Washington Native Plant Society. Bellevue Botanical Garden.

Bellevue, Washington. (425) 452-2750. www.wnps.org.

RAP MAY 4. **Local Wildflower Class.** Alaska Botanical Garden. Anchorage, Alaska. (907) 770-3692. www.alaskabg.org.

MAY 14. **Blue Poppy Day—Art in Bloom.** Display. Rhododendron Species Botanical Garden. Federal Way, Washington. (253) 838-4646. www.rhodygarden.org.

WEST COAST

CA, NV, HI

RAP APR. 2. **Upgrade to Water-Smart Landscaping.** Class. Springs Preserve. Las Vegas, Nevada. (702) 822-7700. www.springspreserve.org.

RAP APR. 6. **Plant Information.** Class. Los Angeles County Arboretum and Botanic Garden. Arcadia, California. (626) 821-3222. www.arboretum.org.

RAP APR. 7. **Staghorn Ferns.** Class. Sherman Library & Gardens. Corona Del Mar, California. (949) 673-2261. www.slgardens.org.

RAP APR. 11 & 12. **The Magic of Light.**

Photography workshop. Santa Barbara Botanic Garden. Santa Barbara, California. (805) 682-4726. www.sbbg.org.

RAP MAY 7 & 8. **39th Annual John Druecker Memorial Rhododendron Show.** Mendocino Coast Botanical Gardens. Fort Bragg, California. (707) 964-4352. www.gardenbythesea.org.

RAP MAY 14 & 15. **Rose Festival.** Descanso Gardens. La Cañada Flintridge, California. (818) 949-4200. www.descansogardens.org.

MAY 14 & 15. **Sunset Celebration Weekend.** *Sunset* magazine. Cornerstone Sonoma, Sonoma, California. (707) 933-3010. www.sunset.com/cw.

CANADA

APR. 16. **BC Fuchsia & Begonia Society Plant, Bake and Craft Sale.** VanDusen Botanical Garden. Vancouver, British Columbia. (604) 336-3251. www.vandusengarden.org.

RAP MAY 14 & 15. **Spring Plant Sale.** Toronto Botanical Garden. Toronto, Ontario. (416) 397-1340. www.torontobotanicalgarden.ca.



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PRONUNCIATIONS AND PLANTING ZONES

Most of the cultivated plants described in this issue are listed here with their pronunciations, USDA Plant Hardiness Zones, and AHS Plant Heat Zones. These zones suggest a range of locations where temperatures are appropriate—both in winter and summer—for growing each plant. USDA Zones listed are still aligned with the 1990 version of the USDA's map.

While the zones are a good place to start in determining plant adaptability in your region, factors such as exposure, moisture, snow cover, and humidity also play an important role in plant survival. The zones tend to be conservative; plants may grow outside the ranges indicated. A USDA zone rating of 0–0 means that the plant is a true annual and completes its life cycle in a year or less.

A–L

- Allamanda cathartica** al-luh-MAN-duh kuh-THAR-tih-kuh (USDA Hardiness Zones 9–11, AHS Heat Zones 12–7)
- Amsonia hubrichtii** am-SO-nee-uh hew-BRIK-tee-eye (4–9, 9–5)
- Asparagus officinalis** as-PAIR-uh-gus oh-fiss-ih-NAL-iss (4–9, 9–3)
- Chenopodium album** cheh-no-PO-dee-um AL-bum (0–0, 10–1)
- Cobaea scandens** ko-BEE-yuh SKAN-denz (11–11, 12–4)
- Comptonia peregrina** comp-TOH-nee-uh pair-eh-GRY-nuh (2–8, 8–3)
- Corydalis cheilanthifolia** kuh-RID-uh-liss kee-lan-thi-FO-lee-uh (4–8, 8–3)
- Dianthus arenarius** dy-AN-thus ar-en-AIR-ee-us (3–8, 8–1)
- D. barbatus** D. bar-BAY-tus (3–8, 9–1)
- D. caryophyllus** D. kair-ee-o-FIL-lus (7–10, 10–7)
- D. chinensis** D. chy-NEN-sis (9–11, 12–1)
- D. gratianopolitanus** D. grat-ee-ay-no-pol-ih-TAN-us (4–8, 8–1)
- D. plumarius** D. ploo-MAIR-ee-us (4–8, 8–1)
- D. superbus** D. soo-PUR-bus (3–8, 8–1)
- Dionaea muscipula** dy-o-NEE-uh mus-KIP-yew-luh (8–11, 12–1)
- Fagopyrum esculentum** fay-go-PY-rum es-kyew-LEN-tum (0–0, 10–1)
- Ginkgo biloba** GINK-go by-LO-buh (5–9, 9–5)
- Humulus lupulus** HEW-mew-lus LEW-pew-lus (4–8, 8–1)
- Ipomoea alba** ih-po-ME-uh AL-buh (10–11, 12–5)
- I. batatas** I. buh-TAH-tus (11–11, 12–1)
- Juglans nigra** JOO-glanz NY-gruh (5–9, 9–5)
- Larix decidua** LAY-riks deh-SID-yew-uh (3–7, 7–1)
- L. kaempferi** L. kemp-FAIR-eye (5–7, 7–4)
- L. laricina** L. lah-rih-SY-nuh (2–6, 6–1)
- Lathyrus odoratus** LATH-ih-rus o-doh-RAY-tus (9–10, 8–1)
- Lindera benzoin** lin-DAIR-uh BEN-zo-in (4–9, 8–1)
- Lobularia maritima** lob-yew-LAIR-ee-uh muh-RIT-ih-muh (10–11, 12–1)

M–Z

- Magnolia grandiflora** mag-NOLE-yuh gran-dih-FLOR-uh (6–9, 9–6)
- Metasequoia glyptostroboides** met-uh-suh-KWOY-uh glip-toh-stro-BOY-deez (5–9, 9–5)
- Parthenocissus quinquefolia** par-then-o-SISS-us kwinn-kweh-FO-lee-uh (4–9, 9–1)
- P. tricuspidata** P. try-kuss-pih-DAY-tuh (4–8, 8–1)
- Phaseolus vulgaris** fas-see-O-luss vul-GAIR-iss (0–0, 11–1)
- Pisum sativum** PY-zum sah-TY-vum (0–0, 8–1)
- Podophyllum peltatum** pah-doh-FIL-lum pel-TAY-tum (4–8, 8–2)
- Prunus mume** PREW-nus MOO-may (6–8, 8–6)
- P. serotina** P. sair-OAT-ih-nuh (4–8, 8–1)
- Pseudolarix amabilis** soo-doh-LAY-riks uh-MAB-uh-liss (5–8, 8–4)
- Salvia chamaedryoides** SAL-vee-uh kam-ee-dree-OY-deez (7–11, 12–7)
- Sarracenia flava** sar-uh-SEE-nee-uh FLAY-vuh (7–10, 10–7)
- Senecio confusus** seh-NEE-see-o kon-FEW-suss (10–11, 12–7)
- Symphotrichum oblongifolium var. angustatus** sim-fy-o-TRY-kum ob-lon-jih-FO-lee-um var. an-gus-TAY-tuss (4–9, 9–4)
- Symphytum xuplandicum** sim-FY-tum up-LAN-dih-kum (5–9, 9–4)
- Tagetes erecta** tah-JEE-teez eh-REK-tuh (0–0, 10–1)
- T. patula** T. PAT-yew-luh (0–0, 10–1)
- Taxodium ascendens** taks-O-dee-um uh-SEN-denz (5–11, 12–5)
- T. distichum** T. DIS-tih-kum (5–11, 12–5)
- Thunbergia alata** thun-BUR-jee-uh ah-LAY-tuh (11, 12–1)
- T. grandiflora** T. gran-dih-FLOR-uh (10–11, 12–5)
- Trillium grandiflorum** TRIL-ee-um gran-dih-FLOR-um (4–7, 7–3)
- Tropaeolum peregrinum** tro-PEE-o-lum pair-eh-GRY-num (9–10, 10–5)
- Vigna caracalla** VIG-nuh kuh-RAY-kul-uh (10–11, 12–7)

GARDEN MARKET

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Fernleaf Corydalis

by Patricia A. Taylor



Although it looks delicate, fernleaf corydalis can thrive for years with minimal care.

FERNLEAF corydalis is a wonderful, little-known semi-evergreen perennial that resembles a fern but is covered in bright yellow tubular flowers in spring. It has been a carefree presence in my Princeton, New Jersey, garden, basking in part sun to full shade since 1988. Slugs, deer, and rabbits leave it alone.

With such shining qualities, I wondered why fernleaf corydalis (*C. cheilanthifolia*, USDA Hardiness Zones 4–8, AHS Heat Zones 8–3) is not more popular. I discovered one answer last year when a friend pointed out a fernleaf corydalis in her garden. This plant had foliage resembling that on most corydalises—glaucous, smooth, almost shiny—as opposed to that of my plants, which is warm green and fernlike. As Tony Avent of Plants Delights nursery in Raleigh, North Carolina, noted in his catalog years ago, fernleaf corydalis is hopelessly confused with other corydalises in the trade.

WINTERTHUR CONNECTION

The plant has been rare in cultivation for nearly a century. In 1933, as noted in Liberty Hyde Bailey’s *Standard Cyclopaedia of Horticulture*, fernleaf corydalis was “probably unknown in the U.S.”

Obviously Bailey was not acquainted with Henry Francis du Pont, who built the Winterthur estate just outside Wilmington, Delaware. Du Pont acquired fernleaf corydalis from central China in 1931. He placed specimens on a rocky

Sources

Lazy S’S Farm Nursery, Barboursville, VA. (540) 832-2334.
www.lazyssfarm.com.

Sandy Mush Herb Nursery, Leicester, NC. (828) 683-2014.
www.sandymushherbs.com.

slope abutting a quarry and then shifted his focus to other parts of his estate.

Du Pont turned his attention back to the site in 1961 when developing what is now the Quarry Garden. There he found fernleaf corydalis still happily growing among the rocks and boulders on the slope.

And it continues to flourish there today. It seems remarkable that an attractive flowering perennial has survived on its own for decades at Winterthur and a quarter century in my borders, yet is unknown to most gardeners.

WELL-BEHAVED SELF-SEEDER

In my garden, individual plants last no more than two or three years. So it seems the tenacity of fernleaf corydalis is due to self-sowing rather than longevity.

While prolific self-sowing is often a sign of invasiveness, this plant demands excellent drainage, so it is particular about where it grows. In my borders, fernleaf corydalis pops up next to stepping stones and near or among stone walls. And in that growing condition, it is unaffected by humidity, heavy rains, and winter snow. It is very easy to remove unwanted seedlings by hand.

While many references indicate fernleaf corydalis reaches a foot tall, plants max out at six to 10 inches tall in my garden. The taller the plant, the greater the spread—up to 18 inches for my most exuberant one.

Fernleaf corydalis is a charming companion to spring bulbs and ephemerals and is super when paired with hostas and other broadleaved plants. The often-evergreen foliage is frequently tinged with bronze in autumn and glistens when tipped with winter frost.

Although few nurseries carry this lovely plant, you won’t be sorry if you make the effort to track it down. 🌱

Patricia A. Taylor is a garden writer based in Princeton, New Jersey.

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