Horticultural News and Research Important to American Gardeners

USDA CLARIFIES RULES FOR OVERSEAS SEED AND PLANT SALES

After a lengthy investigation into the thousands of reports from people who received unsolicited seed packages in the mail last year, the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS) is providing additional guidance for online sellers and buyers to comply with U.S. laws when importing seed or live plants from foreign countries. Found on the APHIS website (www.aphis.usda.gov/aphis/ourfocus/planthealth/import-information/permits/plants-and-plant-products-permits/plants-for-planting/buying-selling-plants-seeds-online/buying-selling-plants-seeds-online), the updated guidance includes buyer and seller responsibilities, required documents, plant species with additional requirements, and clarifies which plants and seeds are not allowed to be imported.

Most of the seed shipments APHIS investigated were illegal because they entered the U.S. without a permit or phytosanitary certificate. The agency has found no evidence of intentional harm to agriculture because of the shipments, however, and considers the seed packages to be part of an internet “brushing scam.”

NEW STUDY REVEALS THE DANCE OF ROOTS

Researchers at Duke University in North Carolina, led by biologist Philip Benfey’s lab, are studying how plant roots burrow into soil. After placing rice seeds in clear gel, they took photos every 15 minutes following germination. Once the team played back the time-lapse footage, they observed that roots use a corkscrewlike motion to twirl down into soil.

However, not all roots behave the same. They discovered a mutation that causes some roots to grow straight down instead of circling. With the aid of robot technology and further experiments, collaborators from Georgia Tech and University of California, Santa Barbra, learned that the winding motions of roots help them navigate obstacles in soil to find the best path to nutrients and water. Auxin, a plant growth hormone, is responsible for coordinating a root tip’s corkscrew pattern and researchers think auxin may move around the tip of a growing root in a wavelike pattern. Auxin buildup on one side of the root causes those cells to elongate less than those on the other side, which leads the root tip to bend in that direction.

This study furthers our understanding of how roots grow in hard, compacted soils. More information at https://today.duke.edu/2021/02/time-lapse-reveals-hidden-dance-roots.

CAVENDER NAMED DIRECTOR AT THE HUNTINGTON

The Huntington Library, Art Museum, and Botanical Gardens in San Marino, California, has appointed Nicole Cavender as the Telleen/Jorgensen Director of the Botanical Gardens, where she replaces the recently retired Jim Folsom. Cavender previously served as the Vice President of Science and Conservation at the Morton Arboretum in Lisle, Illinois. She holds a B.S. in environmental and plant biology from Ohio University and a Ph.D from Ohio State University in horticulture and crop science.

Before moving to Morton, she served as Chief Programmatic Officer at the Wilds, a 10,000-acre wildlife conservation center in southeastern Ohio. “I am overjoyed by this opportunity—to work at the world-class Huntington, among amazing colleagues and with a vast collection, where I can bring to bear my love of plants, my devotion to the study of biodiversity, and my desire to improve the human connection to and appreciation of nature,” says Cavender. “This is a dream job at a critical point in time, especially for those of us who think and care deeply about conservation and sustainability, climate change, and the role botanical gardens have to play in this work.”

LEWIS GINTER NAMES NEW PRESIDENT & CEO

Brian Trader, Ph.D, has been selected as the new President & CEO of Lewis Ginter Botanical Garden in Richmond, Virginia. Trader’s background includes leadership management at premier public gardens, horticultural expertise, and a commitment to community. Most recently, he was deputy executive director at Delaware Botanic Gardens, and prior to that was director of Domestic and International Studies at Longwood Gardens. He earned his doctorate, master’s, and bachelor’s degrees from Virginia Tech and has been on faculty at Virginia Tech, Mississippi State University, and the University of Delaware.

QUARRYHILL BOTANICAL GARDEN GETS NEW NAME AND EXPANDED FOCUS

The 67-acre Quarryhill Botanical Garden in Glen Ellen, California, world-renowned among horticulturists for its collection of rare Asian plants gathered from seed in the wild, has been renamed Sonoma Botanical Garden. The garden also announced it is expanding its mission to highlight California native plants in addition to its existing collections. The garden will be expanded to include California plants, opening up
parts of the property to reflect existing California oak woodland and chaparral plant communities.

The garden was laid out and planted more than 30 years ago. Its original name, Quarryhill, paid tribute to the former sandstone quarry on the upland portion of the site. The garden is known for its rare magnolias, rhododendrons, maples, and other species, many of which were collected on expeditions to China, Japan, and Korea by its former executive director, Bill McNamara.

MORRISON IS 2021 SCOTT AWARD WINNER
Darrel Morrison, a landscape architect and professor, has been selected to receive the 2021 Scott Garden and Horticulture Award from the Scott Arboretum of Swarthmore College in Pennsylvania. Morrison will accept the award during a ceremony scheduled for October 10 in Swarthmore. The award includes a medal and $15,000.

“Through a lifetime of teaching, publishing, advocacy, conservation, and design practice, Darrel Morrison has made a powerful and lasting impact on public and private landscapes across America and on the science and art of American gardening generally,” says Robin Karson, executive director of the Library of American Landscape History in Amherst, Massachusetts, who forwarded his nomination to the selection committee.

Morrison has influenced thousands of students over the course of his career. He was on faculty for many years at the University of Wisconsin and at the University of Georgia and has also taught at Columbia University, Rutgers University, the University of Michigan, the Conway School of Landscape Design, and the New York Botanical Garden. He has also designed dozens of important landscapes around the country, including native plant gardens at the University of Wisconsin–Madison Arboretum; the Lady Bird Johnson Wildflower Center in Austin, Texas; the Utah Botanical Center in Kaysville; and the Brooklyn Botanic Garden in New York.

His numerous awards include the American Horticultural Society’s Landscape Design Award (2006) and Teaching Award (1998); the American Society of Landscape Architects (ASLA) Award of Merit in Design (1996); and the Chicago Horticultural Society’s Hutchinson Medal for Lifetime Achievements in Horticulture and Design award (1998). He is also an ASLA Fellow.

Written by Associate Editor Heather Prince.
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GREAT PLANTS FOR YOUR REGION

Each year, organizations across the country sponsor plant award programs that recognize outstanding plant choices for our homes and gardens. Here’s a sampling of plant awards announced for 2021.

THE GARDEN CLUB OF AMERICA (GCA)

Each year, the GCA’s Montine McDaniel Freeman Horticulture Award is given to an American native plant that may be little known but is in the judges’ view deserving of preservation, propagation, and promotion. For 2021, the award goes to Cephalanthus occidentalis (buttonbush), a shrub native to much of eastern and central North America. Adaptable to wet soils, it has globular white summer flowers that are visited by a variety of pollinators, and its seeds feed 24 species of birds.

PENNSYLVANIA HORTICULTURAL SOCIETY GOLD MEDAL PLANTS

The Pennsylvania Horticultural Society’s Gold Medal Plant Program celebrates quality plant selections for the Mid-Atlantic region that are easy to grow, readily available, and have wildlife value, weather tolerance, and pest resistance. The 2021 awarded plants are:

- ‘Appalachian Red’ eastern redbud (Cercis canadensis)—a selection of the beloved native understory tree with brilliant rose-pink flowers.
- ‘American Gold Rush’ black-eyed Susan (Rudbeckia)—a compact 24-inch plant with silver foliage and top-notch disease resistance.
- Dixie wood fern (Dryopteris australis)—a semi-evergreen native fern with bright green, glossy, upright habit.
- Bobo® hydrangea (Hydrangea paniculata)—a charming 3-foot-tall selection with masses of conical white flowers that age to soft rose.
- ‘Bartzella’ peony (Paeonia)—a hybrid between a herbaceous and a tree peony featuring fragrant, 8-inch, semi-double, sulfur-yellow flowers.
- Exclamation!™ London planetree (Platanus acerifolia ‘Morton Circle’)—a superior sycamore with an upright pyramidal habit, beautiful exfoliating bark, disease resistance, and light fruiting.
- ‘Fragrant Valley’ sweetbox (Sarcococca hookeriana)—an elegant evergreen spreading shrub with miniscule fragrant flowers that can serve as a groundcover in dry shade.

THEODORE KLEIN PLANT AWARDS

The Theodore Klein Plant Awards select outstanding ornamental woody and perennial plants for Kentucky landscapes. Chosen and evaluated by a host of professional horticulturists, the 2021 award winners are:

- Shantung maple (Acer truncatum)—an adaptable small maple with fiery fall color.
- ‘Millennium’ ornamental onion (Allium sp.)—bred by allium expert Mark McDonough, this tough, drought-tolerant perennial features shiny, strappy leaves and globes of purple flowers that bloom for a month in summer.
- ‘Aphrodite’ sweetshrub (Calycanthus sp.)—a selection of this large shade-tolerant shrub with showy red, fragrant, long-blooming flowers.
- Magical® Moonlight buttonbush (Cephalanthus occidentalis ‘Kolmoon’) – a smaller, garden-friendly sized cultivar of a wet-soil-tolerant native shrub.
- ‘Gold Standard’ tall tickseed (Coreopsis tripteris)—a Mt. Cuba Center selection with 6- to 7-foot stems and masses of bright yellow flowers from June to frost.
- American beech (Fagus grandifolia)—a large native shade tree that supports more than 100 species of moths and butterflies and features distinctive pale, smooth bark.

—Heather Prince, Associate Editor

PLANT SELECT®

Plant Select®, a nonprofit collaboration between Colorado State University, Denver Botanic Gardens, and professional horticulturists, evaluates plants for the High Plains and Intermountain regions. For 2021, they have selected:

- SteppeSuns® hokubetsi (Helichrysum trinodum ‘P021S’)—an extremely drought-tolerant, dense, round shrub with fuzzy silver foliage and stems, as well as bright yellow strawflowers.
- Drew’s Folly™ hardy snapdragon (Antirrhinum sempervirens ‘P020S’)—a low-maintenance, short, pink-blooming variety that is densely covered in flowers for almost two months.
- Blanca Peak® Rocky Mountain beardtongue (Penstemon strictus ‘PW-WG06S’)—a long-lived perennial native to high elevations that offers white, tubular flowers on tall stems for pollinators.
UNIVERSITY OF WISCONSIN–MADISON ARBORETUM NAMED NATIONAL HISTORIC LANDMARK

The National Park Service has designated the University of Wisconsin–Madison Arboretum a National Historic Landmark due to its commitment to conservationist Aldo Leopold’s land ethic, its pioneering work in restoration ecology, and its prominent place in the history of ecological conservation. Established as an outdoor laboratory to study how to restore degraded natural landscapes, the Arboretum hosted Leopold in 1934 at its dedication. In his speech, the noted writer and conservationist stressed that it would be “a reconstructed sample of old Wisconsin, to serve as a benchmark, a starting point, in the long and laborious job of building a permanent and mutually beneficial relationship” between people and the landscape.

Early research and experiments at the Arboretum with local ecosystems have made significant contributions to the development of effective management and restoration practices as well as helped define the field of ecological restoration. “The National Historic Landmark designation provides important recognition of the need for restoration ecology to consider the past, present and future, since protecting ecosystems requires ongoing vigilance,” says Karen Oberhauser, the Arboretum’s director. “Home gardeners can create habitat and provide ecological benefits in their own yards by using plants native to their area and sustainable practices.”

DEPRESSION-ERA BEGINNINGS

The landmark designation is based upon the period between 1933 and 1966, when the Arboretum conducted notable experiments on fire ecology and the use of prescribed fire, as well as restoration of prairie, savanna, and marsh communities. The final year coincided with the retirement of G. William Longenecker, the first executive director, and the death of Henry Greene, botany department instructor and collection curator of the now Wisconsin State Herbarium. During this influential time period, Curtis Prairie was begun as experimental plots in 1935 and is regarded as the oldest restored prairie in the world. Greene Prairie was hand-planted by Henry Greene over the course of 20 years beginning in 1943. It is considered one of the finest restored prairie examples in the U.S. The landmark designation provides recognition of the importance of the role of ecological restoration to protect ecosystems against invasive species, habitat loss, climate change, and environmental pollutants. The long, uninterrupted period of restoration activities at the Arboretum has allowed for continuous study of the plant and animal communities on the site. Currently, the University of Wisconsin has shared knowledge gained by the program through scientific publications, conferences, and training many students in the ecological, conservation, and restoration fields.

AN EDUCATIONAL RESOURCE

As part of its programming, the Arboretum also offers opportunities for homeowners and the community to learn about stewardship, native plants, restoration, pollinator conservation, and ecological relationships through its Wisconsin Native Plant Garden. “Like the Arboretum itself, the Native Plant Garden represents southern Wisconsin’s prairie, savanna, woodland, and wetland communities and demonstrates how gardeners and landowners can foster native plants at home,” says Susan Carpenter, the native plant gardener. “We share sustainable gardening practices, based in restoration principles, to manage native gardens that support plants, food webs, pollinators, and urban wildlife.” The garden, designed by landscape architect Darrel Morrison (see page 45 for more on Morrison), was established in 2002. Its four acres include 15 gardens and hundreds of native plant species. It is designed to serve as an introduction to ecological restoration and to demonstrate how to use native plants in the home landscape. In past years, free garden tours are offered April through October, culminating in a native gardening conference in the fall. For more information about current hours and events, visit https://arboretum.wisc.edu.

—Heather Prince, Associate Editor