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On the Cover:

The Arnold Arboretum of Harvard University, America’s first public arboretum, is growing a photo database of its plants. On the cover, we’re featuring the fruits (with persistent red calyces) of Hiptiscodium miconioides, the seven son flower, backlit by the sun on a late afternoon in October, 2015. Discovered in China by Ernest Henry Wilson in 1907 while collecting on behalf of the Arnold Arboretum, this species would not be introduced to the West until the historic 1980 Sino-American Botanical Expedition. Six of the original plants grown from those seeds still grace the grounds of the Arnold Arboretum. For a spectacular photo of an oriental oak acorn and a link to the database, see Photosynthesis on pages 16-17.
Greetings, Public Garden Readers,

The year 2015 was a momentous one for the Association! We could not be more thankful for all of the wonderful things we accomplished in our 75th anniversary year: three successful symposia and a spectacular conference, along with a complete refresh of Association branding—not to mention a dynamic benchmarking platform!

As a continuation of our rebranding strategy, this issue unveils Public Garden magazine’s polished new look. The enhanced format provides a better platform on which our gardens, their programs, and all our members can shine. Let it be another tangible reminder of our unwavering commitment to you, and all our members.

The past year also meant a great deal to us. By rebranding the Association, its programs, and communications, we adopt more inclusive, cohesive messaging designed to increase public understanding—enabling us to better support our members and causes. Member service is further enhanced by the new Association website. Check it out! You’ll find a searchable garden map, Plant Collections Network database, new member portal, and upgraded discussion groups, just to name a few features. Our website now reflects our values—to connect our gardens and garden professionals, and protect the plants and places we hold dear, all while effectively championing the great things our members do for the world at large.

Looking ahead toward the next stages of our 2015-2020 Strategic Plan, we are now set to continue fulfilling its goals regarding advocacy and leadership, awareness, and organizational excellence. We will also increase professional development, while never forgetting member value and engagement. We are proud to say that in 2016 the state of American Public Gardens Association has never been better! In this issue you will find an Annual Membership Report from the Association that provides a full overview of where we are as an institution.

For all the critical new changes we’re making, our vision and mission do not waver—we will never stop creating a world where public gardens are indispensable. By supporting our members in being exceptional gardens and garden stewards, we advance public gardens and horticulture—elevating everyone within our industry to become leaders, innovators, and advocates. With each strategic goal we realize, the Association continues to thrive and grow, setting the stage for our bright future, and yours.

Yours,

D. Casey Sclar
Executive Director
American Public Gardens Association
WEBINAR SUCCESS:
CROSS-INSTITUTIONAL COLLABORATION
THE 2015 PLANT COLLECTIONS PROFESSIONAL SECTION’S “COLLECTIONS CLARITY” SERIES

Ben Stormes, Emily Detrick, Sara Helm Wallace, and Jason Veil

INTRODUCTION
Web-based delivery for professional development has become a popular and powerful means of reaching a wide audience with minimal cost. American Public Gardens Association’s Professional Sections in Technology and Innovation, Development and Membership, and Emerging Professionals have all successfully delivered web-based programs in the past. The goal of this article is to share the experience of the recent Plant Collections Professional Section webinar series in the hopes of answering some of the basic questions facing others in the public garden community considering web-based programming.

During the Association’s 2014 Annual Conference in Denver, Colorado, Plant Collections Professional Section members expressed a need for resources that address basic aspects of effective living collections curation. In response, a committee of graduate students within the Plant Collections Professional Section designed and executed the three-part webinar series “Collections Clarity.” The webinars featured American and Canadian presenters with varied experiences in the public garden field speaking on topics such as: what constitutes a plant collection, why documentation matters, the tools and personnel involved in records curation, and the key policies providing the foundation for best practices. While the subject matter was designed for emerging gardens, organizations of various sizes, ages, and scopes participated in this dialogue.

ORGANIZATION AND PLANNING
Following the appointment of a volunteer lead for the webinar project during the Association’s 2014 annual conference, four Plant Collections Professional Section graduate students who shared an interest in curation began collaborating on the project in October 2014. With the approval and guidance of the section leadership team and the Association’s section liaison Pam Allenstein, the planning process unfolded over the following months. Decisions were made on the webinar platform, source for technical support, target audience, content, potential presenters, layout, promotion, and the eventual online hosting, storage, and accessibility of the finished product.

The primary target audience was identified as collections staff at gardens that were in the early stages of developing and/or implementing curatorial documents and procedures. Additionally, the group sought to reach gardens that may not have staff representation at the annual conferences or the periodic Association-sponsored symposia. The content was also intended to be useful in communicating to non-collections staff the importance of sound collections curation. Webinar content was developed with these themes in mind.
MATERIALS, METHODS, AND MARKETING

The series, composed of three one-hour sessions held three weeks apart, used Adobe Connect web-conferencing software, which allowed for a high level of audience participation and the ability to record and archive sessions for future viewing. This platform also seemed a natural fit as the group had ready access to expert technical support for this software option. Presenter selection was guided by a goal of engaging professionals having varying experiences and approaches to plant collections management at a wide range of organization types, sizes, and locations. This facilitated the sharing of diverse perspectives, but coordinating speakers across multiple time zones posed a challenge. Each webinar session had three presenters address a predetermined topic and capitalized on each speaker’s unique perspective. Presenters were provided with a standardized instructional document outlining the roles and responsibilities of all participants, key dates, suggested talking points, technical resources, and an Association-branded PowerPoint template to ensure a uniform presentation format. Presenters were asked to provide a pertinent “poll question” to accompany their presentations in an effort to solicit audience engagement and better understand the audience profile. One week prior to each live session, a mandatory “mock” webinar was conducted to familiarize presenters and moderators with the scheduled format. Each speaker was assigned fifteen minutes, while all introductory, transitional, and concluding information was moderated by a webinar team member. During each live broadcast, the audience participated via a “chat box,” enabling them to post questions and comments to the presenters and share ideas amongst themselves. The posted questions were compiled by the webinar team in a second “chat box” visible to only the moderator, presenters, and webinar team. The questions were addressed by the moderator and appropriate presenter(s) at the end of each webinar.
The first webinar was “soft launched” to the Plant Collections Professional Section and the leadership of other professional sections, and was marketed via direct emails and Plant Collections Professional Section message board postings. The soft launch provided a safety net in case of major glitches; since the webinar was recorded, the Plant Collections Section had control over the decision to later release it to a wider audience. A follow-up survey was distributed at the conclusion of the first webinar to gauge participant satisfaction and obtain critical feedback. This feedback helped guide some aspects of the following sessions, which were open to all Association members and were marketed through Association emails and message board postings by the webinar team. A similar follow-up survey was distributed at the conclusion of the third webinar to all who participated in any of the three webinars. Each webinar was recorded and archived for public viewing on the Association’s website.

RESULTS AND FINDINGS
According to the post-series survey, participants believe having staff across all departments and at various levels understand the value of quality plant collections is important in communicating their institutions’ mission to the public. To this end, it is encouraging that 84 percent of respondents considered sharing recorded webinars with non-collections-based staff. As 85 percent of respondents indicated that they learned of the series through direct emails, wider distribution of promotions to non-collections focused individuals may increase audience diversity.

AUDIENCE PROFILE:
- 72 participating institutions from 31 states and 3 countries
- 19 participants (26 percent of participants) attended all 3 webinars
- Participants demonstrated a wide spectrum of familiarity with plant collections

Our team found that the key for a successful series is having an engaging topic that meets an expressed need and can be supported by substantive content matter. To help with efficiency and clarity, we found it immensely helpful to have a standard document that clearly outlined roles, responsibilities, and deadlines. Weekly conference calls between the organizing members was also important, and regularly scheduled verbal communication helped resolve the confusion that can build up in written correspondence. To further ensure clarity in communications, we recommend designating a single member of the organizing team to be the contact person for all presenters. We failed to do this, and found that despite our best efforts, our message was not always consistent to our presenters, presenters were not always sure who to direct questions to, and some information simply fell through the cracks. Similarly, a single person from the organizing group is best designated to handle all the marketing and external communications regarding the series.

Our team could not have delivered the webinars without expert technical support, and we strongly recommend including a member with these skills. Establishing a partnership early in the planning stages and seeking input from a technical expert will help identify potential technological obstacles. We also found the mandatory “mock” webinars held prior to the live broadcast to be extremely helpful in orienting our presenters to our chosen platform, and addressing any content/technical problems that arose.

KEY RECOMMENDATIONS
- Identify engaging content.
- Develop a standard document detailing the roles and responsibilities of all involved.
- Schedule weekly conference calls for the organizing committee.
- Designate a single organizer to act as the contact point for all marketing to ensure clarity and consistency of communication.
- Conduct a mandatory “mock” webinar prior to going live.
- Seek a technology expert to train and support organizers and presenters.
- To enable future access, ensure the hosting software has recording capability.

The authors wish to thank Susan Caldwell, Instructional Designer at Longwood Gardens, for her technical assistance in hosting the webinar series.

To access the recorded webinars, go to
http://publicgardens.org/resources/collections-clarity-webinar-series

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Jason Veil is the Director of Horticulture for the Trustees of Reservations in Leominster, Massachusetts. Jason, a recent graduate of the University of Delaware’s MS program in plant curation, was previously sales manager at Foxborough Nursery, Inc., in Street, Maryland. He may be reached at jveil@thetrustees.org.
My path to the public garden world has been circuitous and colorful, beginning with the study of mortuary science and eventually leading to the role of curator of the Kaul Wildflower Garden at Birmingham Botanical Gardens in Alabama. There have been many exciting adventures along the way—and a few pitfalls; however, I have few regrets.

A friend once told me that I am a poster child for anyone who thinks it’s too late to change careers. It wasn’t until age thirty-two that I decided to get serious about a career, so I became a registered nurse, the work I did for the next fifteen years.

After becoming progressively disillusioned with the medical industry, I realized that my passion was for plants. I believe the seeds for this passion were sown while growing up in rural, upstate New York where I was raised by a father who was a forester and a mother who enjoyed growing flowers and vegetables.

While pursuing my knowledge about plants, a friend suggested that I get a degree in horticulture, which I proceeded to do at The State University of New York at Cobleskill. During that period, my most influential mentor was my advisor Chris Cash who recognized and nurtured my passion. To finish my degree, I was required to complete a three-month internship. Wanting a more substantive experience, I instead selected to do a year-long curatorial internship at the Scott Arboretum of Swarthmore College under the tutelage of Andrew Bunting. My time spent at the Scott remains a pivotal experience in my career, and solidified my goal of being a curator at a public garden. I learned much about collections development and management, and public garden administration from both Andrew and the Arboretum’s director Claire Sawyers.

As my time at the Scott neared its end, I applied for and was selected to receive a full fellowship to earn a graduate degree at Cornell University in public garden leadership, which also required an internship. For this one, I interned at the Royal Botanic Garden Edinburgh in Scotland.

I then worked at a variety of public gardens, including Mount Auburn Cemetery, Coastal Maine Botanical Gardens, Bailey Arboretum, and the Atlanta History Center. All of these experiences provided me with a broad perspective.

This past fall at Birmingham Botanical Gardens, we held our three-day Central South Native Plant Conference, which we present every two years. It’s a series of workshops, talks, field trips, and plant/book sales. This is the third conference that I have programmed, and this time we had 174 attendees from nine states. Eight of our presenters had authored books.

There are so many positive aspects of working in the public garden field. For me the foremost is being able to inform and inspire people about the countless attributes of plants, gardens, and natural areas.

Nominated by Shari Edelson, Director of Horticulture and Curator, The Arboretum at Penn State
GARDEN LIFE IN AND AROUND THE FEDERAL DISTRICT

The District of Columbia, the seat of the United States federal government, has few rivals in terms of economic and cultural amplitude. With five public gardens and arboreta within its greater urban core, not to mention Smithsonian Gardens, and the numerous nationally significant historic estates within its orbit, the District is a veritable treasure trove for public garden visitors. Funding for these institutions is similarly diverse. Predictably, some are 100 percent federally funded. Others mix substantial municipal funding with limited enterprise revenue. Fundraising is prolific at several institutions. The region has a pressing need for open space conservation. The area’s gardens and parks fill an important role across a cityscape that spans as many as sixty miles in some locations.

CHARTING THE FUTURE OF OPEN SPACE

In 1959 a group of citizens concerned about urban sprawl formed the Northern Virginia Regional Park Authority. Land acquisitions followed, parks opened, and a small staff emerged. Funding was a challenge. Today the Authority, now known as NOVA Parks, manages nearly eleven thousand acres spanning six jurisdictions and offers over thirty diverse parks from rowing facilities, a Civil War battle field, and an interpretive farm to nature centers, campgrounds, golf courses, a forty-five-mile, multiuse rail-to-trail system, and a public garden. No official tax mandate exists; some parks make considerable income, while others run annual deficits. Until recently Meadowlark Botanical Gardens fell neatly into the latter group. Through a unique combination of entrepreneurship, strategic planning, detailed budget analysis, and limited jurisdictional support, NOVA Parks are now 85 percent self-funded, placing it in an exclusive category nationally.

In 1980, while development was consuming the region, Gardener Means, an economist, and Caroline Ware, a social historian, donated their farm to NOVA Parks with the simple wish to create an arboretum or a public garden. There was no endowment or obvious source of funding beyond the park system and occasional bond referendums for facilities development. Some donor support materialized. From an unkempt farm in the Piedmont region of Virginia, Meadowlark Botanical Gardens began to emerge, and opened officially in 1987. An initial master plan focused on large ornamental collections. In the late nineties botanically-focused native plant collections were added. While programmatic and institutional relevance flourished, a large annual deficit remained.

THE EVENT VENUE: THE LURE OF LIFETIME EVENTS IN THE GARDEN

Summer 1998 marked the opening of the Atrium, a smartly designed, lushly planted event space that can seat 270. It immediately became a top garden event venue in the region. Weekends booked solid. This pace kept up through every...
season but winter (apart from during the holiday season). The diplomatic community took an early liking to the space and held several events. The multicultural fraternity of greater Washington makes for a very diverse clientele. Atrium staff carefully cultivated several high-end, specialty caterers. A close working relationship developed. The Gardens rapidly achieved annual earnings of a half-million dollars. But the building was expensive to run and maintain; more events meant more maintenance and horticultural upkeep. Revenue covered operational costs but made only a minor impact on the Gardens’ collective deficit. Many events are booked a year in advance. Stewarding these clients requires detailed event planning, contract negotiation, and staff time. Negotiations can be complex depending on cultural expectations; keen interpersonal skills combined with cultural sensitivity are crucial. Client focus, event details, and dedicated customer service are essential when tens of thousands of dollars are changing hands and guests are arriving from around the world. A specific payment schedule has to be clearly defined and adhered to. Weddings constitute 90 percent of events in the Atrium.

INTERNAL CATERING: BIG REVENUE POTENTIAL AND OPERATIONAL COMPLEXITY

In 2008 the concept of a wholly internal catering operation emerged. It was greeted with initial reservations by garden event staff who expressed concerns about quality, staffing, and the physical plant. After several code-mandated kitchen upgrades, the internal program launched in 2009. Predictably, several regular caterers at the Atrium were sorely disappointed, revealing the need for new operational standards. A larger staff with specific catering experience was hired. Several set menus have gained in popularity, but custom meals are also offered. The option to use an external caterer still exists, but it entails a substantial fee. All alcohol is handled exclusively by internal catering. Tastings are popular, frequently resulting in full bookings. Currently 95 percent of events use internal catering. An executive chef was added to ensure high culinary standards and operational efficiency. Within two years catering operations produced earnings of several hundred thousand dollars and many satisfied customers. Merging the rental and catering process is an attractive option for clients seeking a full-service garden venue.

THE HOLIDAY LIGHT SHOW

Holiday light shows are well-established traditions at many public gardens. However, the initial launch of such a show is a huge endeavor. At Meadowlark the planning process took nearly two years. Consultants, including electrical engineers and high tree contractors, provided important design and installation services. Market research revealed a quality show would produce considerable earnings, tapping the region’s robust economy and attraction to holiday events at cultural institutions. The Smithsonian’s National Zoo and Brookside Gardens, both of which are located within thirty miles of Meadowlark, have long-standing traditions of
displaying holiday lights. At the conclusion of three seasons, the Winter Walk of Lights earned a half-million dollars. The show’s success with visitors of all ages is owed to its core elements: numerous trees wrapped very high, a strong nature theme, and several software-driven features. The lights are essentially a complex temporary physical plant. Refining, replacing, and refurbishing are ongoing tasks that ensure quality. After concluding in January, the entire show is neatly stored on site in shipping containers. Its impact on the actual gardens is minor, but they still require additional work as spring approaches.

MORE THAN A BEAUTIFUL PLACE, THE THEME OF CONSERVATION IS CONSTANT

The face of a four-year-old glowing with fascination during a light show is magical. A bride and groom search for the perfect photo spot within the garden. Out of sight in a fully licensed kitchen, catering staff puts the final touches on a fine dessert. All this happens while the earthly aroma of fresh leaf mulch wafts across the landscape, fostering a horticultural cornucopia. Horticulturists and volunteers work together, carefully tending ornamental and native plant collections. Beyond all the revenue activity, Meadowlark is ultimately a public garden endowed by the emotive magnitude of nature. Indeed, it’s unlikely these enterprising activities would yield the same revenue if it weren’t for the garden setting, but the Gardens’ core mission must not be lost.

Meadowlark was the first garden in the Washington, DC region to implement the International Agenda for Botanical Gardens in Conservation. In addition, various aspects of the Global Strategy for Plant Conservation (GSPC) support the gardens conservation collections, but none more so than Target 14: The importance of plant diversity and the need for its conservation incorporated into communication, education, and public awareness programs. This simple message is emphasized in every aspect of the Gardens’ branding and education programs. Moreover, it’s an important interpretive forum that adds intrinsic value to the enterprise operations. People are eager to support institutions that have a clear conservation message.

Our garden is small, with no research program and limited fundraising staff, so our dependence on our parent agency is central to all our operations. NOVA Parks embodies operational, leadership, and budget and facilities management across a broad spectrum of expertise. While we share these resources with nearly thirty other public parks, we are a specialized site. The success of enterprise operations at any public garden is dependent on various institutional assets, mission focus, and economic geography. At Meadowlark the culmination of focused customer service, the region’s economy, and cultural expectations has resulted in full annual funding. Ideally, a continuum of diversified revenue streams can support the conservation of open spaces, including public gardens, when revenue goals are realized.

Keith Tomlinson is the Manager of Meadowlark Botanical Gardens and a biology fellow at the Washington Academy of Science. He may be reached at ktomlinson@nvrpa.org.

Jules Maloney is the Gardens’ Program Specialist and can be contacted at jmaloney@nvrpa.org.

Kim McCleskey is the Senior Budget Analyst for NOVA Parks and may be contacted at kmccleskey@nvrpa.org.
THINGS WE LOVE THIS WINTER

FALLING FOR VIBURNUM

“This Viburnum wrightii is descended from an Arnold Arboretum plant and is no longer easy to find in the trade. When the firm, vibrant fruits appear, it’s a sign that our New England fall is on its way. They persist until late winter, then soften up to feed the birds.”

www.thetrustees.org/places-to-visit/north-shore/long-hill.html
Submitted by Sara Helm Wallace, Living Collections Manager, and Daniel Bouchard, Superintendent and Horticulturist, The Sedgwick Gardens at Long Hill

SNUGGLE IN WITH A GOOD BOOK

Adam Braun, a successful economist for a large New York company, had made it. But something inside tugged at him. How to make a difference in the world? Using real life examples that can be applied to public gardens, Braun explains how to take small steps so that you can turn your ambitions into reality, whether you are a director or a frontline team member. From fund raising to building a world class team, common sense approaches are discussed.

www.amazon.com/The-Promise-Pencil-Ordinary-Extraordinary/dp/1476730628
Submitted by Shawn Kister, Grounds Division Leader, Longwood Gardens

BREAKOUT INTERPRETATION

When The Morton Arboretum staff were preparing for Nature Connects: Art with LEGO® Bricks by Sean Kenney, they created three-dimensional interpretation panels that looked like snapped-together over-sized bricks. The signs included fun facts like tree trivia, the number of bricks used or hours needed to build. A mobile game was also developed to encourage guests as they moved through the exhibition. The end result was engaging for everyone.

Submitted by Jennifer GoodSmith, Vice President of Marketing and Communications, The Morton Arboretum
Since 2013 New England Wild Flower Society’s trillium collection at its Garden in the Woods has held accreditation from the Plant Collections Network. The Garden, located in Framingham, Massachusetts, has long been known as a haven for trillium lovers, who come to admire the beauty of this plant’s blossoms in the Curtis Woodland Garden and in its propagation beds. Work on propagating these wildflowers began here more than eighty years ago under Garden

Mark Richardson
photos: Stephanie Colony

![Trillium Collection](image)

Although not a New England native, *Trillium cuneatum* (at right) performs exceptionally well at Garden in the Woods, where its bold, textured foliage and long-lasting maroon flowers make it a perennial showstopper.

**Perennials**
founder Will Curtis. Curtis, an expert propagator, grew hundreds of species—including trilliums, some of his favorite spring wildflowers—in order to understand their “likes and dislikes.” Curtis’s small personal collection featuring nearly thirty taxa native to the eastern United States grew into the largest collection of trillium in New England.

Trilliums are true harbingers of spring in the woodlands of the northeastern United States where generations of nature lovers have treasured the appearance of these ephemerals whose leaves, petals, and sepals come in threes. In fact, the eastern United States is home to the largest diversity of trillium species in the world. In colors ranging from the white of *Trillium grandiflorum* to the lemon-yellow blooms resting atop the mottled foliage of *T. luteum* and the deep red blossoms of *T. erectum*, trilliums are among the most highly prized shade perennials. Here at Garden in the Woods, it is no coincidence that peak visitation each year overlaps with peak trillium bloom, when thousands of visitors flock to the Garden to enjoy the show.

Today, the trillium collection at Garden in the Woods includes more than 325 accessions, and our main goal for the collection is to display all trillium species hardy to zone 6 and native east of the Mississippi River. Primarily a conservation collection, our aim is to represent the broad genetic diversity of the genus to help foster an appreciation for the importance of preserving the species’ habitat across their range. The collection also is important for propagation efforts and serves as our primary seed source for nursery production. Balancing propagation needs against the integrity of the collection represents a conundrum thanks to the propensity for hybridization and is a constant challenge. For that reason, we are growing a comparable collection of trillium in our on-site nursery to serve as both seed source and accession replicates.

Starting in 2015, the horticulture staff, working with landscape architect W. Gary Smith, began a three-year “revival” of the Curtis Woodland Garden, the historic core of Garden in the Woods and the primary trillium display area. Plans for the redesigned garden include large sweeps of *Trillium grandiflorum*, a significant increase in trillium specimens on display throughout the garden, and a trillium bed where representatives of each taxon in the collection can be more effectively displayed and interpreted to our guests. While some species work well in mass plantings, others, like the diminutive *T. pusillum*, are best displayed as individual specimens. As construction of the garden continues, so will the work to perfectly place each species where it can both thrive and be appreciated by garden visitors.

In spring 2016, we are planning to highlight the collection with a weeklong celebration called Trillium Week. Throughout the week, a number of events are planned to educate visitors about this unique and eclectic collection of plants and excite them about including them in their own gardens. New England Wild Flower Society has a long history of growing and displaying trilliums at Garden in the Woods, and we look forward to building on that reputation by raising the profile of this fascinating genus.

Mark Richardson is the Director of Horticulture at New England Wild Flower Society.
With roughly 2,100 species of plants, The Arnold Arboretum, North America’s first public arboretum, is host to one of the most diverse temperate woody plant collections in the world. Of the forty species of oaks in this Olmsted-designed landscape, one of the most magnificent is Quercus variabilis, the oriental oak or Chinese cork oak. I am drawn to these trees because of their deeply furrowed bark, their smooth brown fruits (the “acorn”) and over-the-top caps (the “cupule”). Every fall, the cupules, with their unruly, curled, tough, awl-shaped scale leaves cover the ground, conjuring up images of abstract sunbursts. This photograph of an oriental oak cupule was taken on a bright sunny day with a backdrop of a still-green leaf picked from the parent tree.

As for the provenance of the oriental oaks at The Arnold Arboretum, it all starts with a beautiful nineteenth century specimen (3671 A) collected by Charles Sprague Sargent (the first director) during his travels to Japan in 1892. John Jack (dendrologist, educator, and plant explorer) got into the game with an accession (18053 A) from his travels to Asia in 1905. A 1908 specimen (17631 A) collected by Ernest Henry Wilson grows just yards away, as does a much younger tree (753-94 A) from the 1994 North America China Plant Exploration Consortium collecting expedition to China.

The Arnold Arboretum has developed a new Plant Image Database to share pictures of its amazing collections with the world. For more of my photos, go to: http://www.arboretum.harvard.edu/plants/image-search/?keyword=friedman&sort=date.
MUSEUMS MOVE OUTDOORS  

Don Rakow

The museum experience begins when you pull open the heavy entrance doors, and get your first peek at the collections, right? While museums have traditionally been seen as institutions behind thick walls, many museums today are finding that by extending their collections into the landscape, they can entice, delight, and inform audiences in new ways.

As depicted in the following three examples, managed museum landscapes allow visitors to appreciate human creativity in ways that change with each season and each passing year. As such, guests begin to see exhibits as sensory and interactive experiences involving wind, weather, and other human beings rather than just static and relatively stationary objects located within four walls.

We’ve all seen pre-teens who’ve grown bored and disruptive inside museums, but when these same youngsters are allowed to explore and run free in museum gardens and natural areas, they are engaged, learning, and energetic. And for older children and adults, the managed landscape can allow the museum to amplify themes introduced inside the building.

Finally, a well-designed landscape can make the museum seem more welcoming, eliminating the stigma of museums as stuffy, exclusionary places. The institutions described on the next page have each broken down the psychological walls between inside and out, and have been enriched as a result.

Donald A. Rakow is an associate professor in the School of Integrative Plant Science at Cornell University. He is co-author, with Patsy Benviniste and Sharon Lee, of the article, “How Does Your Garden Grow?” It appeared in the July/August 2013 issue of Museum, the journal of the American Alliance of Museums. It is available as a web extra with their generous permission.

Don may be reached at dr14@cornell.edu.
STEPPING STONES MUSEUM FOR CHILDREN
Linda Kwong

Philosopher and poet George Santayana once said, “The earth has music for those who listen.” Spending time outdoors and connecting with nature are a critical part of child development. An early love of the outdoors also is a great predictor of how a child will appreciate and protect the environment as an adult.

Children and families thoroughly enjoy exploring the natural world at Stepping Stones Museum for Children in Norwalk, Connecticut. Year-round they can stroll along a stone path through six gardens: Grassland, Rain, Butterfly, Herb, Edible, and Woodland. Three whimsical sculptures called Garden Follies are placed throughout the gardens. These follies use solar, wind, and water energy to produce a lively concert of musical sounds!

A LOVE OF NATURE LIVES IN THE FOUNDING MISSION OF STEPPING STONES MUSEUM FOR CHILDREN: “TO BROADEN AND ENRICH THE EDUCATIONAL OPPORTUNITIES FOR CHILDREN AGES BIRTH TO TEN AND ENHANCE THEIR UNDERSTANDING OF THE WORLD. THE MUSEUM SEEKS TO CREATE AN ENVIRONMENT THAT INSPIRES LIFELONG LEARNING…”

Linda Kwong is Community and Public Relations Manager at Stepping Stones Museum for Children. For more information, see steppingstonesmuseum.org.

above:
At the Natural History Museum of Los Angeles County, metal listening stations allow visitors to hear the amplified sounds of the vascular system of a coast live oak (Quercus agrifolia).

right:
These are just a few of the perennials planted at the University of Michigan Museum of Natural History to attract and nurture butterflies. The garden is an oasis in the middle of campus.

UNIVERSITY OF MICHIGAN MUSEUM OF NATURAL HISTORY
Amy Harris

The University of Michigan Museum of Natural History’s Butterfly and Pollinator Garden is part of a larger dream to take the Museum’s educational activities outdoors into the landscape around the museum building. A student project developed under the direction of Adjunct Assistant Professor David Michener and Museum Assistant Director for Education Kira Berman featured the concept “Beyond the Museum Walls … Lives a Landscape of Learning,” which envisioned a full circuit of learning spaces around the building.

The garden was planted in 2004 by Museum Friends and the public, under the direction of University Landscape Architect Kenn Rapp. Since then, Master Gardener Mary Duff-Silverman and volunteers have cultivated the garden.

The garden was designed to meet the needs of all four life stages of the butterfly (egg, caterpillar, chrysalis, and adult) by providing water, shelter, places to lay eggs (host plants), and food (plants and flowers).

The impact of the garden has been far reaching. We recently received word of a new butterfly garden planted at an engineering college in Tamil Nadu, India. The writer said that our Butterfly Garden webpage had provided inspiration.

Visit ummnh.org/exhibits/butterfly andpollinatorgarden for a list of over fifty-five herbaceous perennials planted in the garden.

Amy Harris is the director of the University of Michigan Museum of Natural History.

Photos: University of Michigan Museum of Natural History.

THE NATURE GARDENS: CONNECTING OUR VISITORS TO URBAN NATURE
Carol Bornstein

In summer 2013, the Natural History Museum of Los Angeles County officially opened its new Nature Gardens. Designed to create habitat for urban wildlife, these three-and-a-half-acre gardens are a field site for visitors to experience nature in an urban setting and to assist museum scientists in documenting the rich biodiversity found in the Los Angeles Basin. Occupying the site of a former parking lot, the gardens reflect the native and exotic plants and animals found throughout the region and exemplify how to garden in harmony with nature, using sustainable practices.

The gardens include a pond, edible garden, pollinator meadow, living wall, and woodland. The latter, a naturalistic “urban wilderness,” is planted with trees, shrubs, and herbs native to California, primarily the Los Angeles region. Visitors can take a guided tour or make their own discoveries along the elevated boardwalk or the seasonally dry streambed. They may stop to hear the amplified sound of water flowing through the xylem of an oak tree or view the insect trap, one of several citizen science projects around the gardens, whose contents are sorted and identified by museum entomologists right in front of visitors in the nearby Nature Lab. These are just a few examples of how the Natural History Museum is using the Nature Gardens to fulfill its mission: inspiring wonder, discovery, and responsibility for our natural and cultural worlds.

To read more about the Nature Gardens, visit www.nhm.org/nature/visit/nature-gardens.

Carol Bornstein is the Director of the Nature Gardens at the Natural History Museum of Los Angeles County. She may be reached at cbornste@nhm.org.


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photos: Natural History Museum of Los Angeles County.
Zoo horticulture is a unique blend of plants, animals, and people. Similar to plant professionals in public gardens, zoo horticulturists create beautiful displays of color and texture, plant and maintain gardens that educate guests about plants, showcase plant species that face extinction, and highlight the conservation efforts to save these plants. Then comes the zoo part—zoo horticulturists must also design gardens that avoid toxic and hazardous plants within exhibits, use plants as barriers and screens, and grow plants specifically for animals to devour and destroy!

Many elements of a typical garden display are tossed out the window when the garden is to house two Malayan Tigers, hide the holding building, allow for guest viewing, and mimic the Asian forest ecosystem—without using chemicals and often with little to no irrigation. Some exhibits are designed with plants from the animal’s native range, while others will use “look-alike” plants to replicate wild places. Resources for the zoo horticulture industry include the Association of Zoological Horticulture (www.azh.org) which offers opportunities for collaboration on projects and solutions for our industry through annual conferences, newsletters, and online education courses specific to this unique field.

Plant toxicity is top priority when planning and maintaining an exhibit. Each plant considered for an exhibit area must be approved by a veterinarian or animal manager with input from the zoo horticulturist. Inspections are performed by zoo horticulturists regularly to scout for toxic plants and invasive weeds inside exhibits. Inspections are also necessary to assess the health of the tree canopy both inside and outside an exhibit. This is especially important in areas that experience weather extremes. A tree failure can damage an exhibit holding building or display areas, resulting in an animal escape, injury, or death. Plant hazards refer to mechanical defenses that can cause harm to animals—thorns, needles, serrated edges, excess fiber, etc. In an exhibit, hazardous plants can cause animal health issues such as abscesses or gut obstructions due to excess fiber.

Zoo horticulturists will use plants as barriers both inside and outside exhibits. Inside exhibits, plants can be used to protect trees from root compaction caused by animals, to deter animals from getting too close to zoo guests or keeper...
areas, and to act as barriers to separate animals visually from each other when necessary. For example, at Naples Zoo, to maintain a safe distance for guests and staff, we use white and red mangroves as exhibit barriers around the small primate islands within Lake Victoria.

Plants in the zoo environment are frequently used for animal enrichment. Enrichment is defined by the American Association of Zoos and Aquariums (AZA) as enhancing animal environments with the goal of increasing behavioral choices available to animals and drawing out their species-appropriate behaviors, thus enhancing animal welfare. Plants are a major component of any zoo enrichment program. A few examples of this interaction between plants and animals are: limbs and branches are fed to the animals, logs and stumps are used as platforms or climbing structures, and flowers are used as food or scent enrichment.

Browse is another difference between a public garden and zoo horticulture. Browse is the term used in zoo horticulture to describe plant material (leaves and branches) that is harvested and offered to the animals as a supplemental food source. Some zoo horticulturists’ primary role is to grow and/or harvest this food source. Most public gardens would never consider postponing pruning until animals need the vegetation. Pruning the landscape to encourage a higher yield for plants used as browse is part of the maintenance plan for the zoo horticulturist. Plant maintenance is also based on when or if the gorillas “go off exhibit”—not a likely consideration in a public garden.

Many plants used in zoo garden displays have a purpose greater than beauty and education; they also provide a source of enrichment for the animals—and for people too! The gardens within zoos are often in the shadows of the magnificent animals on display, but consider the joy of zoo guests who are amazed by the beautiful garden where the animals live! 🌿

Danielle L. Green is Director of Gardens and Grounds at Naples Zoo at Caribbean Gardens. She is also President of the Association of Zoological Horticulture.
EXPOSED:
THE SECRET LIFE OF ROOTS

Devin Dotson
photos: Stephanie Colony

Plant roots are vital components of the earth’s ecosystem. They are necessary for plant growth and the production of food and nutrients for humans and other organisms. However, as root systems are typically out of sight, their beauty and importance often go unnoticed. The United States Botanic Garden (USBG) exhibit Exposed: The Secret Life of Roots showcased the importance of roots, using the visually stunning displays, root representations and educational materials of agricultural ecologist Dr. Jerry Glover, photographer Jim Richardson, and sculptor Steve Tobin.

A twenty-five-foot-tall central structure in the East Gallery held more than forty dried plant specimens, allowing the roots to hang to eye level. The walls held large-scale root photographs by National Geographic photographer Jim Richardson and interpretive panels to teach visitors about the ecology and botany of roots. Tours were offered by different USBG staff members throughout the exhibit to highlight the horticultural, agricultural, ecological, and botanical aspects of roots. Additional exhibit-related programs included botanical illustration workshops, public lectures, and meet-the-artist opportunities.

The USBG Terrace and front gardens featured five large-scale, freestanding root sculptures by artist Steve Tobin. The largest sculpture, Cathedral Root, stood more than forty feet high. The sculptures tied in with the indoor exhibit and provided an artistic welcome to the exhibit as visitors approached the Conservatory.

Top: Visitors explored the many prairie plants with fully excavated roots systems displayed in the US Botanic Garden’s exhibit, Exposed: The Secret Life of Roots.

Right: This visitor tests his knowledge of which food plant is actually a root.
In spring through fall, the Terrace raised gardens highlighted living specimens of prairie plants featured in dried form inside the exhibit as well as edible roots and tropical plants with interesting root stories. From March and through the fall, the USBG hosted classes, programs, children’s activities, and demonstrations associated with Exposed: The Secret Life of Roots.

With more than 1.2 million visitors to the Garden each year, hundreds of thousands of people interacted with the roots-focused exhibit during the eight months it was presented and provided positive feedback to the USBG. A few of these visitor comments included:

“I LOVE THE GARDEN’S DISPLAY OF ROOT SYSTEMS. IT IS AMAZING! I WILL CONTINUE TO RETURN... WHAT A WONDERFUL LEARNING TOOL.”

“SO GLAD THIS IS HERE. BEAUTIFUL! GREAT ROOTS EXHIBIT! COOL CONCEPT.”

Devin Dotson is the Public Affairs and Exhibits Specialist at the United States Botanic Garden.

The next exhibits at the USBG open just weeks apart in February 2016. Flora of the National Parks, an art exhibit celebrating the diversity of plants in the US national parks, will run from February 18 to October 2, 2016. Orchids in Focus, the annual orchid celebration in partnership with Smithsonian Gardens, will run from February 27 to April 17, 2016. This year’s exhibit will showcase orchids from around the world, including American natives and endangered orchids, and the role orchids have played as muse for photographers and artists through the years.
Think Magnetic Poetry®, but made of stones and used in a garden space. Welcome to the Word Garden. Visitors move individually carved word stones to create poetry, leave messages, start a discussion, protest injustice, or crack a joke. We see all of these “intellectual footprints” left by others in our Word Garden on campus at Saint Michael’s College in Vermont. The birth of our Word Garden was somewhat serendipitous; when we ordered a title stone for the Teaching Gardens, the stone artist, Chris Cleary, invited us look at stone samples in order to choose the typeface. The words shouted “move us around,” and we knew right away that we needed a garden of words to invite playful composing in our college community.

With a budget surplus and stellar ground preparation, the Word Garden was installed to great delight. Even before all of the initial 320 words had been unloaded, people nearby began composing; gnomes love gibberish may have been the first to appear, but it was quickly followed by a typical Vermonter observation: cows love peace. Now five-years-old, the Word Garden is appreciated at many different levels. On the first day of the semester, an English professor begins her poetry course by composing a poem with

her entire class. Our Provost gathers all of the summer research students and challenges them to pick a word that will help them describe their successes and challenges. One student selected prevail to convey her stance toward the frustrations she was facing in the chemistry lab.

College students are passionate about causes, and their drive to change the world is reflected in stone. Rallying cries like end hunger and seek peace appear alongside more humorous messages as reflected by
the math joke 7 ate 9. Participants at a library conference hosted on campus challenged viewers to occupy library and discover book. Local schools visit on field trips; poetry writing is a popular assignment.

Visitors often remark that the Word Garden makes the gardens come alive. It has become a favorite spot on campus for solo contemplation, romantic communication, class activities, and intermission fun for our campus theater summer playhouse. The appeal of loose, movable parts, the pleasure in crafting a novel phrase, and the power of agency make the Word Garden a linguistic playground for all.

To learn how to make your own Word Garden check out this web extra.

Valerie Bang-Jensen is Professor of Education at Saint Michael’s College in Colchester, Vermont. She studies connections between gardening, literacy, science, and children’s literature. She is the co-founder of the Teaching Gardens of Saint Michael’s College with Professor of Biology Mark Lubkowitz. She may be contacted at vbang-jensen@smcvt.edu

To try out a digital version of the Word Garden, go to http://academics.smcvt.edu/gardens/WG%20interactive%20Maps.html.
The most colorful and floriferous part of Bloedel is its Rhododendron Glen Garden, which dates back to the late 1960s. This landscape was planted in large part with Mrs. Bloedel’s favorite plants and flowers, including rhododendrons, cyclamen, and candelabra primrose. Its botanical diversity has increased dramatically over time.

In March 2015, one of Bloedel’s gardeners working in The Glen noticed a *Pieris floribunda* with brown leaf spots and dieback of its lower branches. Unable to determine the cause, Bloedel sent a sample to the Washington State University (WSU) Plant and Insect Diagnostic Laboratory. Three weeks later, Bloedel received bad news: the diseased *Pieris* had Ramorum Blight (*Phytophthora ramorum*), also called Sudden Oak Death. Because of Bloedel’s involvement in the Sentinel Plant Network (SPN), it knew the issue was significant.

Ramorum Blight is a federally regulated disease and, as required, WSU staff notified state and federal Departments of Agriculture (WSDA/USDA). Prior to the agencies’ visits, Bloedel closed the infected area to deter visitors and staff from entering and unknowingly spreading the pathogen. By April, WSDA and USDA personnel were on site to inspect the infected Pieris and survey the grounds for other infected plants. Testing discovered nine more diseased plants. The ten plants with *P. ramorum* are in the genera Rhododendron, *Pieris*, Gaultheria, Mahonia, Viburnum, Vinca, and Camellia. The infected plants were found in two garden areas on Bloedel property.

How Bloedel became infected with the pathogen remains a mystery. A major renovation of The Glen happened near the infected *Pieris* two years before the pathogen’s discovery. Bloedel provided a list of nursery purchases to USDA, but all source nurseries tested negative for Ramorum Blight. To this date, Bloedel is unsure how it became infected. The best guess still points to infected nursery stock.

Ramorum Blight’s discovery at Bloedel was a first for a US public garden. Previous discoveries of the pathogen were limited to wild lands, nurseries, and home landscapes, and Bloedel’s situation presented unique circumstances. Because Bloedel receives up to a few hundred visitors daily and because its grounds consist of irrigated slopes, controlling this water-borne pathogen is a challenge. USDA officials inspected each infected site and delimited an “eradication zone.” All plants within the zone were removed and destroyed by burning. Normally, this zone extends in a two-meter radius from the drip line of infected plants. Because of slopes and natural barriers, Bloedel’s eradication zones were

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**WAGING WAR ON PHYTOPHTHERA RAMORUM AT BLOEDEL RESERVE**

Darren Strenge and Ed Moydell, photos: Darren Strenge

**BLOEDEL RESERVE IS A ONE-HUNDRED-FIFTY-ACRE PUBLIC GARDEN ON BAINBRIDGE ISLAND, WASHINGTON, ACROSS THE WATER FROM SEATTLE. FOUNDER PRENTICE BLOEDEL WAS A CONSERVATION PIONEER, INNOVATOR OF THE TIMBER INDUSTRY, AND AN EARLY ADVOCATE OF THE POSITIVE EFFECTS OF NATURE ON HUMAN WELL-BEING. AFTER RETIRING IN 1951, PRENTICE AND HIS WIFE VIRGINIA PURCHASED THE PROPERTY THAT IS NOW BLOEDEL RESERVE. OVER THE NEXT THIRTY YEARS, WITH THE HELP OF NOTED LANDSCAPE ARCHITECTS, THEY DEVELOPED SEVERAL LANDSCAPE EXPERIENCES WOVEN THROUGH NATIVE PACIFIC NORTHWEST FOREST.**

---

Pieris foliage showing foliar symptoms of Phytophthora ramorum
irregular, expanding in width downhill and partially delimited by logs, trails, and roads.

Controlling the spread of *P. ramorum* involves eradication, exclusion, and sanitation. Under guidance from the USDA and WSDA, Bloedel implemented various strategies to prevent the re-introduction, spread, and escape of Ramorum:

• Updated quarantine procedures (exclusion)
• Stricter worker sanitation procedures
• Confirmed Ramorum Blight plants destroyed (eradicated)
• Plant debris surrounding eradication zone not used for compost
• Steaming of soil in eradication zones (by WSU) to kill soil inoculum
• Visitors reminded to stay on paths and not to remove plant material
• Drainage and grade changes installed to prevent water from flowing over trails.
• Written Standard Operating Procedures (SOPs) for communicating control measures to staff
• Treating soil with *Trichoderma*, a *Phytophthora* antagonist
• Foliar applications of anti-*Phytophthora* chemicals

Bloedel discovered *P. ramorum* two years after its estimated introduction to the grounds, so the battle is likely to go on for the next few years. Recently the USDA informed Bloedel that follow-up testing revealed four new infected plants in Bloedel’s Glen. Strict adherence to its new SOPs and continued cooperation with government agencies will be key for Bloedel as it moves forward.

While it was disheartening to discover the pathogen at Bloedel, the quick reaction by its staff and the government agencies helped minimize damage. Although it is hoped that such a scenario never happens to another public garden, if it does, Bloedel will be a resource and share its best practices.

Darren Strenge is the Plant Health Care Manager and Ed Moydell is the Executive Director at Bloedel Reserve. They may be reached at ddstrenge@gmail.com and emoydell@bloedelreserve.org, respectively.
The multi-faceted approach to health, culture, and community building through gardening being implemented at the Fond du Lac Reservation in northeastern Minnesota was adopted in the spring of 2012. That was when the University of Minnesota’s Master Gardener program partnered with the reservation’s community and its Fond du Lac Tribal College’s 13 Moons program to create a new kind of Master Gardener program.

This new program is the first tribal (as opposed to county) Master Gardener program. The same agricultural and horticultural information that can be found in county programs nationwide are taught. In addition, volunteers learn about their culture and history through plants and nurturing gardens. Emphasis is placed on building a community through volunteering.

Once a volunteer base was established, new initiatives were developed, for example, a Junior Master Gardening program in which youth aged eight to twelve are taught how to garden, but with a unique twist. Currently at the Fond du Lac Brookston Community Center, one of three such centers on the reservation, this program builds on the regular program offered throughout the country by incorporating traditional Ojibwe teachings. Its specialized curriculum was developed by the Indigenous People’s Task Force. The Giikinoo-amaage-gidiwin-Gitigaan (“The Teaching Garden”) is the site of learning.

There is a biochar (a charcoal soil amendment) research plot where young people can learn about research and data collection. It is supported by a grant through CenUSA Bioenergy in collaboration with the University of Minnesota Extension, the Master Gardener program, and the Fond du Lac Master Gardeners. For this research, three plots are planted: the control without bio char, and two test plots—one with ½ pound and one with 1 pound of biochar added per square foot. The youth evaluate plant growth, fruit and flower production, ease of planting, and soil moisture levels. The question they are seeking to answer is this: Is biochar a good soil amendment?

In addition, the reservation offers a farmer’s market, a Farm-to-School initiative; and a Master Naturalist program. These all incorporate the Ojibwe culture’s experience of the land, plants, and the healing power derived from working with them. These initiatives would not be possible without the two land grant colleges—University of Minnesota, established in 1851, and the Fond du Lac Tribal and Community College Extension—working together and building off one another’s strengths in order to create a collective community impact.

Resources:
- Junior Master Gardening curriculum – [www.jmgkids.us](http://www.jmgkids.us)
- 13 Moons program – [www.fdirez.com/RM/13moons.htm](http://www.fdirez.com/RM/13moons.htm)
- Biochar research – [https://vimeo.com/111655127/](https://vimeo.com/111655127/)

Dawn Newman is an educator of American Indian Community Economics with the Center of Community Vitality at the University of Minnesota Extension. She may be reached at [danewman@umn.edu](mailto:danewman@umn.edu).

Nikki Crowe is the 13 Moons Program Coordinator with the Fond du Lac Community and Tribal College Extension Program. She was a co-presenter of “Reconnecting to Our Roots for Enduring Relationships” at the American Public Gardens Association’s June 2015 annual conference in Minneapolis. She may be reached at [NikkiCrowe@fdirez.com](mailto:NikkiCrowe@fdirez.com).
The minute flowers of *Callicarpa bodnieri* var. *giralldii* (a Chinese species of beautyberry) in full glory. While the fruits of beautyberries are mesmerizing in the fall, their flowers can be just as dramatic. The translucent style and stigma is exserted beyond the purple-columned stamens with their yellow pollen sacs.

Submitted by William (Ned) Friedman, Arnold Arboretum, Harvard University
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American Public Gardens Association
Total American Public Gardens Association Members

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American Public Gardens Association Programs

**Plant Collections Network**
- Nationally Accredited Plant Collections
- Member Gardens with Nationally Accredited Plant Collections

**Plant Protection Program**
- Sentinel Plant Network Gardens
- States/provinces represented in the Sentinel Plant Network
- Garden staff provided with no-cost training on regional pest and disease threats and best practices for monitoring collections and working with diagnosticians
- Gardens provided with free Sentinel Plant Network interpretive signage and labels

Professional Development

**Professional Development Symposium Attendance**

- 2015 Volunteer Engagement Symposium
- Native Plants Symposium
- Development and Membership Symposium
- 2014 Plant Collections Symposium
- Historic Landscapes Symposium
- Small Gardens Symposium
- 2013 Volunteer Interaction Symposium
- 2012 Green Buildings and Landscapes Symposium
- Grounds Management HGF Symposium
- 2011 Plant Exploration & Importation Symposium
- Volunteer Engagement Symposium
- Historic Landscape
- Design and Planning Symposium

Annual 2015 Conference Attendance

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Professional Sections

2015 Professional Sections

- Arts and Exhibitions: 199
- College and University Gardens: 229
- Design and Planning: 167
- Development & Membership: 274
- Education: 302
- Emerging Professionals: 136
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- Volunteer Engagement: 166

Our sponsors:

- APHIS
- NPDN

Plant Heroes website users

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Our Climate and Sustainability Alliance resources link you to the most current information and tools to engage garden and your community. Find out more at www.publicgardens.org and help us grow!
American Public Gardens Association Institutional Members are organized based upon reported Annual Operating Budget of each institution.

Less than or equal to $150,000:
- Alfred B. Machay Gardens State Park
- Alleghehy Arboretum at Indiana University of Pennsylvania
- Allegheny College
- Al's Autobody and Arboretum
- Alta Vista Botanical Gardens
- American Society of Botanical Artists
- American Veterans Heritage Center
- Annapolis Sculpture Garden and Arts Center
- Arbor View Gardens
- Arboretum at Interstate Packaging
- Arboretum at Penn State Erie
- Arboretum Fort Myers-Lee County
- Aquascape Inc
- Banyan Botanical Garden
- Bartlett Tree Research Laboratories and Arboretum
- Bedrock Gardens
- Bend of the River Botanic Garden
- Better Homes and Gardens Test Garden
- Block Botanical Gardens
- Boiling Springs Ecosystem and Desert Preserve
- Boston Symphony Orchestra at Tanglewood
- Botanic Garden of Historic Barns Park
- Botanic Garden at Oklahoma State University
- Botanic Gardens at Kona Kai Resort
- Botanical Garden of the City of New York
- Botanical Gardens at Asheville
- Botanical Gardens at Sanibel Moorings Resort
- Brandwein Conservancy and Museum of Art
- California University of Pennsylvania
- Carefree Desert Gardens
- Cave Hill Cemetery
- Cedar Crest College
- Chase Gardens
- Chihuahuan Desert Gardens
- University of Texas at B باسا
- Children's Fairyland
- Clary Gardens
- Clovis Botanical Garden Committee
- Coastal Georgia Botanical Gardens
- Cobb Hill College, State University of New York
- College of William and Mary
- Colorado Shakespeare Gardens
- Colorado Springs Utilities
- Colorado State University Extension
- Coolabunda House and Spring Garden
- Compton Gardens
- Congdon Gardens
- Core Arboretum
- Cottage Lake Gardens
- Crystal Bridges Museum of American Art
- Cummer Museum of Art and Gardens
- Delaware Botanic Gardens at Pepper Creek
- Delaware Center for Horticulture
- Donald E. Davis Arboretum
- Draime Estate Gardens of Kent State University
- Dubuque Arboretum and Botanical Gardens
- Dunsmore Botanical Gardens
- Durango Botanic Gardens
- Edith J. Carrier Arboretum
- Friends of the Garden at The Phipps Center for Urban Horticulture
- Elmhurst College
- Elon University
- Erie Zoological Society
- Evangeline Cemetery Association
- Exploration Gardens of University of Florida
- Fairhaven Memorial Park and Monastery
- Fell Arboretum at Illinois State University
- Fells
- Forest Lawn Cemetery and Arboretum
- Fort Myers-Lee County Garden Club Home of the Berne Davis Botanical Garden
- Frank H. Babbitt Arboretum
- Friends of Hilltop Arboretum
- Friends of Laurelwood Arboretum
- Friends of the Rogerian Clemen Collection
- Friends of the Topiary Park
- Gainsway Farm
- Garden Literacy
- Gardens at Gantz Farm
- Gardens of Matter Park
- Gardens at Mill Fleurs
- Gardens of Fanshawe College and The A.M. Cuddy Gardens
- Gardens of the Big Bend at University of Florida
- Glendale Kernscape Demonstration Garden
- Grauer Arboretum of Muhlenberg College
- Great Gardens in North Idaho
- Great Plains Native Plant Society
- Green Spring Gardens
- Guadalupe River Park Conservancy
- Hahn Horticulture Garden at Virginia Tech
- Hermitage Museum and Gardens
- Highfield Hall and Gardens
- Highline Seafall Botanical Garden
- Highsteds
- Highline, The Lincoln Family Home
- Historic Columbia Foundation
- Historic Hudson Valley
- Historic Landon Town and Gardens
- Historic Oakland Foundation
- Honolulu Zoo Society
- Hortulus Farm Gardens
- Huntington Museum of Art
- Illinois Central College Arboretum
- Illinois Wesleyan University
- Inniswood Metro Gardens
- Jacksonville Arboretum and Gardens
- Jardin Botanico de Cieza
- Jardin Botanico Francisco Javier Celaya del Instituto de Ecologia
- Jardin Botanico Lankester
- Jardin Botanico Regional de Caderenta
- Jensen-Olson Arboretum
- Jungle Gardens
- Kansas State University Gardens
- Keukenhof Castle Foundation
- Kutztown University
- Lake View Cemetery
- Lakes Park Botanic Garden
- Lakeshore Park
- Lakeside University
- Linden Botanical Garden
- Linneanum Arboretum at Gustavus Adolphus College
- Locust Grove
- Longleaf Botanical Gardens
- LSU Agcenter Botanic Gardens at Burden
- Luther Burbank Home and Gardens
- MaBevery Botanical Gardens
- Mariana H. Quibein Arboretum and Botanical Gardens at High Point University
- Marquand Park Foundation
- Marywood University Arboretum
- Maynard W. Quimby Medicinal Plant Garden
- McNair Botanical Garden
- Meadowburn Farm
- Meeker-Rhododendron Gardens
- Mendocino Coast Botanical Gardens
- Mercer Botanical Gardens
- Mildred E. Mathias Botanical Gardens
- Mill Pond Garden
- Miller Nature Preserve
- Mission Oaks Gardens
- Monk Botanical Gardens
- Monticello
- Montpelier Foundation
- National Botanic Garden
- Native Plant Center at Westchester Community College
- Nehrling Gardens
- Newport Tree Society
- North American Butterfly Association
- Northern Plains Botanic Garden Society
- Oak Hill and The Martha Berry Museum
- Ogden Botanical Gardens
- Oklahoma City Botanical and Botanical Garden
- Olds College
- Oregon Zoo
- Peace River Botanical and Sculpture Gardens
- Pennsylvania Horticultural Society
- Meadowbrook Farm
- Pine Hollow Arboretum
- Point Defiance Zoo and Aquarium
- PowellWood Garden
- Prairie Garden Trust
- Project Sweetie Pie
- Purdue University
- Quarri Gardens at Schuyler
- Redland Tropical Gardens and Botanical Foundation
- Reeves Reed Arboretum
- Reflection Riding Arboretum and Nature Center
- Rose Garden at Mesa Community College
- Rose Haven Heritage Garden
- Sachem Public Library
- San Antonio Zoo
- Sandhills Horticultural Gardens
- Schaepgilde Garden
- Secret Arboretum of The Ohio State University
- Shenwood Fox Arboretum
- Simpson Garden Park
- Sister Mary Grace Burns Arboretum
- Skylarks Association
- Smyton Arboretum of Hillsdale College
- South Carolina Botanical Garden
- Spartanburg Community College
- Stanley M. Rowe Arboretum
- Starr Hill Forest Arboretum of Illinois College
- Steigssuth Gardens
- Surreybrooke
- Taylor Conservatory Foundation
- Teton Botanical Garden
- Theodore Payne Foundation for Wild Flowers and Native Plants
- Telfair Botanical Gardens
- Tower Grove Park
- Tracy Avary
- Trees at Iarla
- Trinidad Museum History Museum; History Colorado
- Tudor Place Historic House and Garden
- Tulsa Garden Center
- Unbelivable Acres Botanic Gardens
- University of Arizona Campus Arboretum
- University of California, Davis Haagen-Dazs
- Honey Bee Haven
- University of Central Florida Arboretum
- University of Delaware Botanic Gardens
- University of Hawaii College of Tropical Agriculture and Human Resources Urban Garden Center
- University of Idaho Arboretum and Botanical Garden
- University of Kansas Medical Center
- University of Miami John C. Gifford Arboretum
- University of Nebraska-Lincoln Botanical Garden and Arboretum
- University of North Carolina at Charlotte Botanical Gardens
- University of South Florida Botanical Gardens
- University of Tennessee Facilities Services
- University of West Georgia
- Unterd极大地tert Botanic Forests and Arboretum
- Vailata Botanical Garden
- Vanderbiult University
- Waddell Barnes Botanical Gardens
- Washington Park Botanical Garden
- Welkirie
- Western Carolina Botanical Garden
- Western Kentucky Botanical Garden
- White Fences Equesitrian Center
- Wildwood Park for the Arts
- Yampa River Botanic Park

$150,001 to $399,999:
- Adelaide Botanic Garden
- Akron Zoological Park
- Allen Centennial Gardens
- Amy B.H. Greenwell Ethnobotanical Garden
- Andrews University Arboretum
- Annapolis Royal Historic Gardens
- Arboretum at Adelphi University
- Arboretum of the Barnes Foundation
- Arboretum, State Botanical Garden of Kentucky
- Atlanta History Center, gateway Gardens
- Awbury Arboretum
- Bailey Arboretum
- Barnsley Resort
- Bayard Cutting Arboretum
- Beech Creek Botanical Garden and Nature Preserve
- Bellefontaine Cemetery
- Blithewold Mansion, Gardens and Arboretum
- Bookworm Gardens
- Boone County Arboretum
- Boxwood Nature Center and Woodland
- Brenton Arboretum
- Bulington Gardens
- California Polytechnic State University
- Leanin Pine Arboretum
- California State University, Fresno
- Carthage College
- Cedar Valley Arboretum and Botanic Gardens
- Chihuahuan Desert Research Institute
- Columbia Botanical Garden
- Crosby Arboretum
- Dalhouse University
- Discovery Park of America
- Dothan Area Botanical Gardens
- Dyck Arboretum of the Plains
- Eden Project
- Elkton Community Education Center
- Gainsborough Farm
- Gardens of Kohler
- Gardens of the American Rose Center
- George Eastman Museum
- Glenstone Museum
- Goddard Gardens and Homestead
- HAC, Central Pennsylvania's Community College
- Haywood College Arboretum
- Heartitate Botanical Gardens
- Henry Foundation for Botanical Research
- Heritage Museums and Gardens
- Heronwood Garden
- Historic Forests
- Horticultural Arts and Park Institute
- Houston Botanic Garden
- Hoyt Arboretum and Heirrbartum
- Humboldt Botanical Garden
- Iowa Arboretum
- Junger Leev Botanic Garden
- Kalma Gardens of Coker College
- Key West Botanical Garden Society
- Knuckleberg Botanic Garden
- Lewis and Clark Community College
- Lockery Arboretum
- Longue Vue House and Gardens
- Lovet Pinetum
- Luthy Botanical Garden
- Marsh Botanical Garden of Yale
- Massachusetts Horticultural Society
- Maymont Foundation
- McLaughlin Garden and Homestead
- Mead Botanical Garden
- Meadow Lakes - The Robert A. Winters Arboretum
- Meadowlark Botanical Gardens
- Metro Parks Tacoma / W.W. Seymour Botanical Conservatory
- Minnesota
- Mitchell Park Horticultural Conservatory
- Mizou Botanic Garden
- Mobile Botanical Gardens
- Mountain Top Arboretum

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NEXT ISSUE: ADMINISTRATIVE LESSONS  CLIMATE CHANGE  RESEARCH ON NATURE CONNECTIONS

Fine planters, benches and garden ornaments for legendary gardens