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THE JOURNAL OF THE **AMERICAN PUBLIC GARDENS ASSOCIATION** VOLUME 34, ISSUE 2, 2019



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THE JOURNAL OF THE AMERICAN PUBLIC GARDENS ASSOCIATION
VOLUME 34, ISSUE 2, 2019

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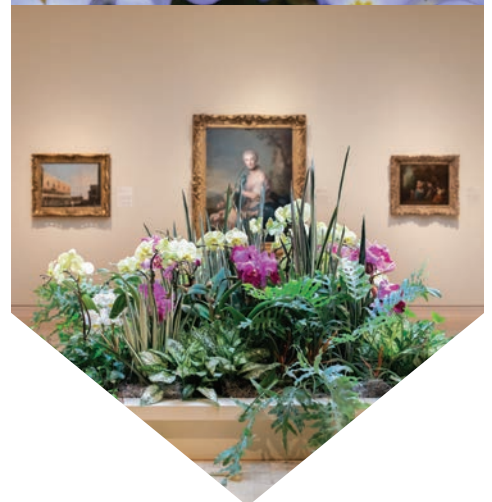
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Public Garden



On the Cover:

Ziibiwing Research Center Coordinator Anita Heard guides the Planting after Elder and Water Keeper Punkin Shananaquet (red hat) gave a teaching that included that no iron would touch the Garden. Traditional bone and antler hoes and rakes were used to make the mounds: everyone took turns and participated in tasks.

Photo: Lisa C. Young
(Dept. of Anthropology,
University of Michigan)

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Diversity.

When public gardens professionals gather next month in Washington, D.C., for the Association's Annual Conference, we're going to be hearing a lot about diversity.

When last year's Plenary Speaker Ron Finley called out the homogeneous nature of the Conference attendees, while some might not have appreciated his language, no one could really argue with his point. With some notable exceptions to the rule, our industry leadership and audience remains stubbornly monochrome.

Which isn't to say we're not doing anything about it—the "Diversity Grows Gardens" theme of this year's Conference had already been decided. But it is to say that there is much more to be done.

This month's cover story focuses on bringing more diversity into public gardens through programming with indigenous peoples. But it also says more than that. It notes a culture change that occurred when the Arizona-Sonora Desert Museum looked at the programming as more than an opportunity to secure grant funding and turned it into an opportunity to engage the broader community at the board and staff levels.

"Respect, honor, commitment, and reciprocity lay the foundation and are the guiding principles as we move forward."

That's a solid foundation to consider as we build the future of our industry.

And there's no time like the present.

Best regards,

RAD

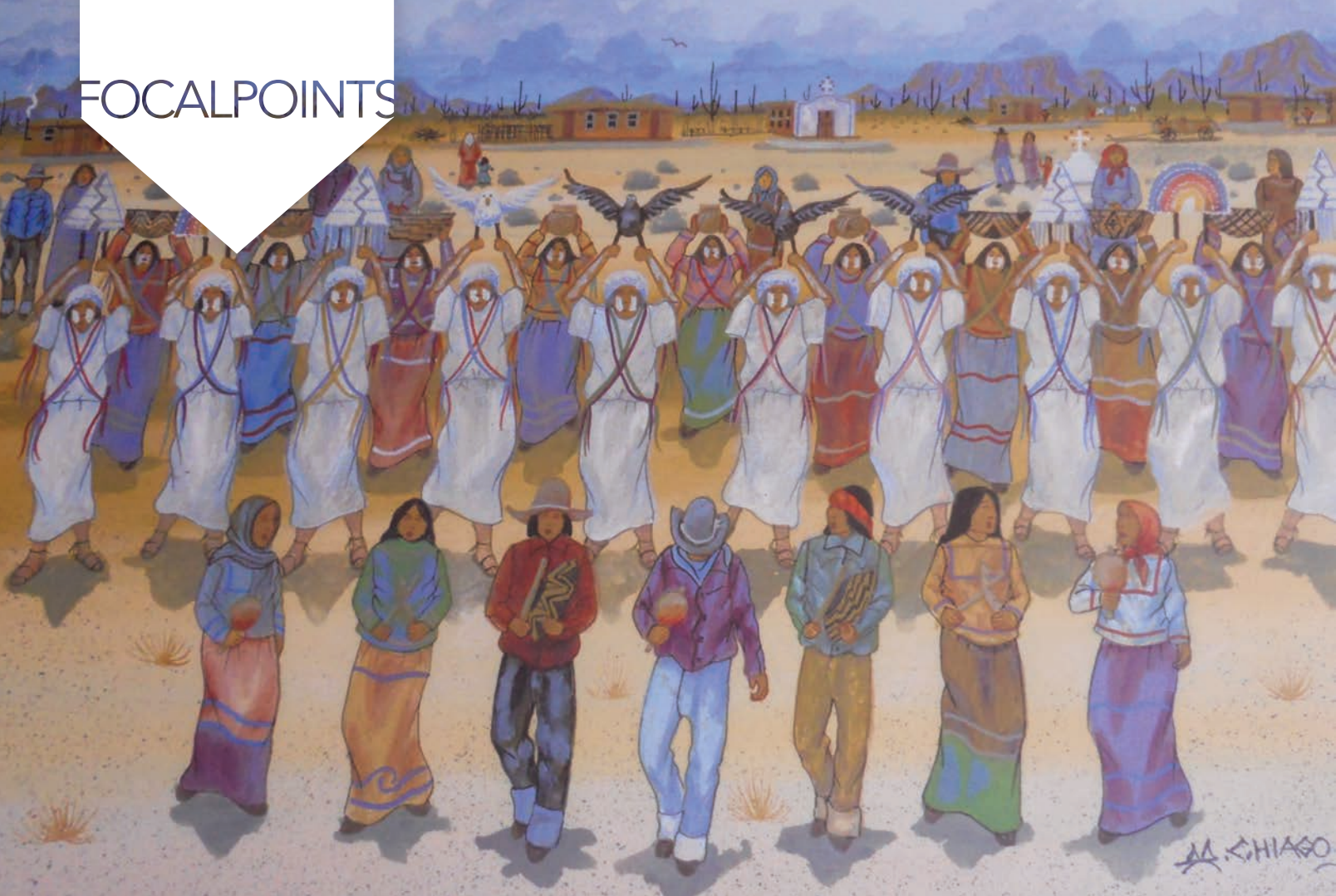
Richard A. Doran



EDITOR
IN CHIEF'S
NOTE

Florencio López Carrillo, governor of San Andrés Cohamiata and captain of the temple in San Jose in Wirikuta, the sacred land where the peyote grows, presents the fruit of their labor to the *peyoteros* (authorized peyote hunters).

Photo: Kevin Simpson



PARTNERING WITH OUR NATIONS' FIRST PEOPLES

*Alyce Sadongeian, Marie Long, Victor Hugo “Tonatiuh” Ochoa,
Shannon Martin, and David C. Michener*

COLLABORATIONS WITH INDIGENOUS PEOPLES CAN ENHANCE THE EDUCATIONAL EXPERIENCE AT A BOTANICAL GARDEN BY PROVIDING ALTERNATIVE VIEWPOINTS THROUGH THE LENS OF THEIR LANGUAGE AND WORLDVIEW. THIS INCLUDES NEW APPRECIATION FOR THE ECOLOGY, FLORA, FAUNA, AND THE LANDSCAPE WITHIN A GARDEN. THERE IS A REVOLUTION IN THE FIELD THAT IS TRANSFORMING OUR GARDENS FROM BEING SOLELY PLACES TO SHOWCASE A WIDE VARIETY OF PLANTS FOR EDUCATIONAL, SCIENTIFIC, AND ORNAMENTAL PURPOSES FROM OUR WESTERN POINT OF VIEW, INTO PLACES THAT PROVIDE THE CULTURAL CONTEXTS FOR ENHANCED UNDERSTANDING OF THESE SAME PLANTS FROM THE POINT OF VIEW OF OUR LAND’S ORIGINAL INHABITANTS.

BY INCLUDING THE VOICES OF NORTH AMERICA’S FIRST INHABITANTS IN OUR INTERPRETIVE EFFORTS, WE PROVIDE AN OPPORTUNITY FOR OUR GUESTS TO DISCOVER THE CULTURAL STORIES AND THE TRADITIONAL ECOLOGICAL KNOWLEDGE HELD BY THESE PEOPLES. CONVERSELY, WE CULTIVATE SPACES WHERE INDIGENOUS PEOPLES ARE WELCOME, CELEBRATED, AND RESPECTED.

WE INVITE YOU TO FIND INSPIRATION THROUGH THE FOLLOWING STORIES OF COLLABORATION. TAKE THE STEPS OF ASKING QUESTIONS, LISTENING TO THE ANSWERS, AND INTERACTING RESPECTFULLY. YOUR EFFORTS WILL BE REWARDED AS OURS WERE.



▲ Chef Arlie Doxtator leads a native foods cooking demonstration at the Desert Museum-Celebration of Basketry and Native Foods festival. Photo: Mary Paganelli

◀ *Tohono O'odham Rain Dance Ceremony*, painting by Michael Chiagos. Photo: Marie Long

TOHONO O'ODHAM NATION AND THE ARIZONA-SONORA DESERT MUSEUM

The Tohono O'odham Nation and the Arizona-Sonora Desert Museum have collaborated on a wide array of projects since the opening of the Desert Museum in 1952. In the past, these collaborations ebbed and flowed depending on staff levels and funding. The most recent collaborations were generated by two National Science Foundation grant projects, *Cosmic Serpent* and *Native Universe*. The goal of the grants was to bring together Indigenous Peoples and Western science educators to begin building relationships and exploring the topic of Traditional ecological knowledge and Western science.

Twelve years later, we have not only sustained our collaborative efforts with the Tohono O'odham Nation, but have begun to lay a solid foundation to ensure the Desert Museum's long-term commitment to the Nation. Changes, once grant-driven, are now being realized due to evolving institutional change. These include the creation of a new Board Council for Community Engagement that represents a broad cross section of constituents in the community, Tohono O'odham Board representation, and increased staff resources and time devoted expressly towards the cultivation and fostering of relationships with community members. Respect, honor, commitment, and reciprocity lay the foundation and are the guiding principles as we move forward.



▲ Tohono O'odham baskets
Photo: Tohono O'odham Community Action

◀ Bernard Siqueros is teaching students about a traditional game. Photo: Marie Long

▼ At day break after painting their faces with a yellow paint made from the root of a bush they call Uxa, the *peyoteros* (authorized peyote hunters) set out to find the peyote in the desert. Photo: Kevin Simpson



INDIGENOUS COLLABORATIONS AND THE VALLARTA BOTANICAL GARDEN

In Mexico, First Nations peoples continue to be marginalized, unappreciated for the great value of their experience and knowledge in traditional medicine, environmental care and maintenance of a healthy coexistence with nature and society in general—as well as creating healthy spaces and cultivating wisdom for the development and evolution of humanity. Those of pure and conscious hearts seek to connect with sentient beings and universal knowledge acquired across thousands of years. We are happy to freely share our knowledge and customs with those who show respect and humility.

For many years, my friend Neil Gerlowski from the Vallarta Botanical Garden has often included me and other representatives of Mexican indigenous cultures in many significant and important activities and events for our region and Mexico. Last year, at the invitation of Neil, our Marakame (traditional doctor/shaman of our Wixárika, aka Huichol, community), Alfonso "Xikawery" González exchanged experiences with participants in the Directors of Large Gardens Conference of 2018, hosted by the Vallarta Botanical Garden. We shared our cultural beliefs focused on

maintaining the sacred balance of life/nature with a focus, care and conservation of corn, deer, and ceremonially important peyote, which are especially venerated by the Wixárika Nation to support the sacred places of our country and preserve peace and natural order. Through dialogue, music, and poetry we conversed with the leaders of many great gardens to understand a collective vision for a world that honors life in all its forms and seeks to renew the balance necessary for a prosperous future for all. This is a noble pursuit.

Xikawery and I invite you all to Puerto Vallarta—to our beaches, mountains, and forests to experience first-hand our traditions and medicines. Those with open minds and hearts may experience the healing powers of ceremonial practices including *temazcal* (sweat house of our culture) and peyote (powerful natural medicine) among others. Or, maybe just a conversation, hug, and walk in the garden. Friendship and total healing begin with powerful forces such as these.

PLANTING A SEED: REGENERATIVE COLLABORATION

In 2015, during a NAGPRA (Native American Graves Protection and Repatriation Act) consultation at the University of Michigan (UM), an Anishinaabe Elder asked if there were any seeds in the Museum of Anthropological Archaeology's collections. This question began conversations about how seeds could be returned (a practice often called "rematriation") to the communities from which they originated. The Heritage Seeds—Indigenous Collaborative Garden Project represents an ongoing collaboration that is focused on growing heritage seeds with and for Anishinaabe communities in Michigan and southern Ontario.

Guided by Elders, on the last day of May 2018's lunar cycle, more than thirty Tribal partners, Nature Academy interns, Matthaei Botanical Gardens and Nichols Arboretum (MBGNA) and UM staff, and volunteers used antler rakes and shoulder blade hoes to prepare the planting mounds. Planted were corn, squash, and watermelon seeds that were gifted from participating Tribal communities.

Following Anishinaabe protocols a Harvest Feast was held on October 26, 2018. A delegation of UM Tribal students attended and presented Honor Gifts to the Elders, Ogichidaa (Warrior) Society, and Tribal Knowledge Keepers representing seven Anishinaabek Nations (see box).

The Heritage Seeds—Indigenous Collaborative Garden Project is a trust-building partnership to reconnect the seeds and plants grown in this Garden with the Anishinaabe communities from which the seeds originated. We are working together to develop a respectful, co-developed framework to rematriate seeds grown from museum collections in the near future.



▲ All the harvested foods and products that were not used in the food preparation were Gifted at the Harvest Feast. In addition, representatives of the Little Traverse Bay Bands of Odawa Indians brought traditional mandaamin from their Territory to share. This mandaamin braid was gifted to women of Bkejwanong First Nation. A season's worth of sacred tobacco flowers are in one basket; rattles for Ceremony in the foreground.

Photo: Lisa C. Young (Dept. of Anthropology, University of Michigan)

▲ The Gift of Seeds from Tribal and First Nation's Peoples are ready for planting from the wigwas (birchbark) winnowing basket.

Photo: Shannon Martin, Director, Ziibiwing Center of Anishabe Culture & Lifeways.



▲ Jacinto López Ramírez introducing his great granddaughter Georgina to Aramara, the Goddess of the ocean.

Photo: Kevin Simpson

ANISHINAABEK NATIONS ENGAGED IN THE HERITAGE SEEDS-INDIGENOUS COLLABORATIVE GARDEN PROJECT

BKEJWANONG TERRITORY-
WALPOLE ISLAND FIRST NATION

GRAND TRAVERSE BAND OF OTTAWA
AND CHIPPEWA INDIANS

LAC COURTE OREILLES BAND OF LAKE
SUPERIOR CHIPPEWA INDIANS

LITTLE TRAVERSE BAY BANDS
OF ODAWA INDIANS

MATCH-E-BE-NASH-SHE-WISH BAND
OF POTTAWATOMI INDIANS OF MICHIGAN
(GUN LAKE TRIBE)

POKEGNEK BODEWADMIK-POKAGON
BAND OF POTAWATOMI

SAGINAW CHIPPEWA INDIAN TRIBE
OF MICHIGAN

CONCLUSION

Respect, honor, Elder-guidance, friendship, and healing are concepts that deeply resonate across these brief perspectives. As shown through the groundbreaking First Nations Garden at the Montreal Botanical Garden (<http://m.espacepourlavie.ca/en/first-nations-garden>), if we have the intent, gardens and arboreta in North America can move past their historically—and all-too-often literally—whitewashed narratives. *Every one* of our North American institutions is on lands once, and often still, known to the Peoples who were here before “us.” That the Peoples have been decimated and forced into diaspora does not limit memories, Traditional Knowledge, profound spiritual realities of place, or our responsibilities to find ways to steward the Earth for a respectful, sustainable future.

If your institution is in North America, includes any “native” plants, or addresses cultural and ecological sustainability, you are encouraged to become part of this transformative circle.

Food for thought—would we accept as adequate for understanding only one Euro-American narrative of, say, plants of Jerusalem? What is different about the place where any one of us is now? With thought it becomes evident that the only answer requires multiple voices, each with their own perspective—not translations into what only one culture expresses. Much cannot be readily translated, for this involves world-views that English is challenged to express with clarity and respect. The opening and humbling of one’s mind is as necessary as it is challenging.

Beginning a conversation requires listening—not proposing projects and solutions, which are inherently arrogant, even if unintentionally offensive, displays of uncomprehending power. Rather, reach out to your Indigenous community. Build bridges with First Nations by inviting Elders to walk through your gardens and learn what is important to their community members. Ask the important questions: How do you see your community represented at our site?; What can our garden offer to your community?; and What would you like our guests to know about your Nation? Listen, continue the conversations, and commit to move forward. Many of the most productive and insightful conversations occur not in your offices, but in the garden, under the shade of a mighty tree.

The profound rewards that can emerge from reestablishing mutually acceptable relationships will be the just fruits of the most transformative engagement any of our institutions has made in their history. 🌿

All photos were used with the permission of the photographers.

Alyce Sadongei is Project Coordinator at the American Indian Language Development Institute of The University of Arizona.

Marie Long is Associate Director of Conservation Education & Science at the Arizona-Sonora Desert Museum.

Victor Hugo “Tonatiuh” Ochoa is a therapist, holistic healer, and cultural promoter of the Wixarika Nation through his collaboration with Alfonso “Xikawery” Gonzáles, a respected Wixarika shaman and tribal elder.

Shannon Martin is Director of Ziibiwing Center of Anishinabe Culture & Lifeways.

David C. Michener is Curator at University of Michigan Matthaei Botanical Gardens and Nichols Arboretum.



Read Victor Hugo “Tonatiuh” Ochoa’s remarks in the original Spanish. The English translation in the article was provided by Neil Gerlowski, Executive Director of the Vallarta Botanical Garden in Puerto Vallarta, Jalisco, Mexico. <https://bit.ly/2K0LTLj>

Related link: <http://graham.umich.edu/news/anishinaabe-partners>

Editor’s note: Original phrasing, capitalization, and other content was retained out of respect for the indigenous voices and the authorial process.

THORNHILL EDUCATION CENTER



PUBLIC GARDENS AS SENTINELS AGAINST INVASIVE PLANTS

Kurt Dreisilker, Clair Ryan, Theresa Culley, and Jessica A. Schuler

In many ways, public gardens are perfectly poised to become sentinels against tomorrow's invasive plants. Gardens have unique access to diverse living plant collections with an educational mission, often contain herbaria capable of documenting regional flora, and have extensive horticultural expertise. When plants escape garden cultivation and spread to nearby areas, public gardens are ideally positioned to document and share this information. Public gardens are, at their core, conservation organizations. They "collect, conserve, characterize and cultivate" plants from around the globe with the combined goals of conserving global plant biodiversity and of making diverse collections of plants accessible for visitors to enjoy (BGCI 2015).

The vast majority of plant taxa accessioned by public gardens will contribute positively towards these goals. However, a small number of plant species can exhibit invasive characteristics when cultivated outside of their native ranges (Reichard and White 2001). These species escape cultivation and can form self-sustaining populations that may compete successfully against locally native taxa with often devastating ecological impacts. Asian bittersweet (*Celastrus orbiculatus*) is an example of a modern invasive species that was collected and sometimes promoted actively by public gardens and nurserymen in the eastern United States long before plant invasion was a recognized ecological phenomenon (Small 1932; Del Tredici 2014).

Invasive plants have been an issue of concern within the horticulture industry in North America for many years (White 2002). This issue remains highly relevant today, and public gardens have been called upon to act in response. The 2016–2020 North American Botanic Garden Strategy for Plant Conservation specifically calls upon gardens to increase their roles in the management and control of invasive species to conserve plant diversity, including adopting voluntary codes of conduct, such as the St. Louis Declaration on Invasive Plant Species (BGCI 2016). Gardens are also called upon to develop and implement plant collections policies to manage invasive species. Furthermore, the St. Louis Declaration addresses the importance of partnerships, data sharing, and communication among botanical gardens and other groups (White 2002).

Many public gardens have been taking action individually in North America to address these issues by developing invasive “watchlists,” implementing relevant collections policies, managing invasive plants in natural areas, and undertaking plant risk assessments. However, there has been relatively little communication and coordination among North American gardens about plants escaping cultivation, which is a critical gap. By pooling expertise, experiences, and observations from their collections, public gardens can collectively become an early detection network to record and share observations about plants escaping cultivation (Heywood 2014). In a 2016 survey conducted by the authors involving 35 public gardens (mostly in the United States), 91% of gardens had observed plants escaping cultivation and 86% believed plants escaping cultivation to be an issue of concern. Perhaps more importantly, 89% of gardens thought it would be helpful to learn from other gardens what species escape cultivation and are being removed from living collections. The formation of this network could provide evidence-based indicators, signaling that some plant species may become invasive in the future, particularly for rare and recently introduced species that are not widely available in the nursery trade. These observations could be used by state and regional invasive plant advisory committees or by gardens themselves to develop more robust and conclusive assessments of invasiveness.

◀ Participants in Plants on the Move garden summit in November 2016.

▼ *Pyrus calleryana* removal at The Morton Arboretum.

Both photos:
The Morton Arboretum



GARDENS ARE ON BOARD!

In November 2016, The Morton Arboretum and the Midwest Invasive Plant Network (MIPN) sought to reinvigorate the conversation around plants that escape cultivation by inviting representatives from public gardens across North America to a two-day summit entitled *Plants on the Move: How Public Gardens Can Help Control Invasive Plants*. Representatives from twenty-three public gardens in seventeen states and Canada shared their expertise through presentations and discussed how gardens can monitor, manage, and share information about plants escaping from cultivation. Participants agreed that gardens are uniquely poised to do this as they collect information about plant movement that is not always available through other sources. Gardens should also discuss and develop solutions to this problem which should then be shared not only amongst themselves, but with their public audiences. The public is not always aware that a cultivated plant is not a native plant nor that it may be invasive when it escapes the confines of a garden. Disseminating this knowledge is a role that public gardens should embrace.

The Morton Arboretum and MIPN developed and circulated two similar surveys to gardens: one to aid the conversation at *Plants on the Move* and the other involving a live audience at the American Public Gardens Association's Excellence in Plant Collections Management Symposium in October 2018. In both surveys, 84–89% of responding gardens indicated that they control non-native plant taxa spreading from cultivation, and 79–84% removed taxa determined to be invasive from their collections. In the 2016 survey, 66% of responding gardens also indicated that their collections policies include some type of stipulation against the inclusion of invasive plant taxa. Roughly half of responding gardens reported engaging in public outreach on invasive species issues. These survey results indicate that gardens are independently enacting recommendations in the St. Louis Declaration.

Although the independent development of invasive plant policies and practices by public gardens represents important progress, a bolder charge emerged from *Plants on the Move* that public gardens should work together and assume a leadership role as sentinels against potentially invasive plants. The Morton Arboretum and MIPN's goal is to take adoption of the St. Louis Declaration one step further by developing a coordinated network.

FORGING AHEAD

In fall 2017, a working group from gardens across the United States and Canada gathered to implement the key findings and next steps from *Plants on the Move* by discussing the development of a tool for documenting plant movement and sharing data among gardens in North America. The initiative, now known as Public Gardens as Sentinels against Invasive Plants (PGSIP), currently engages representatives from Dawes Arboretum; Holden Arboretum; Lady Bird Johnson Wildflower Center; Missouri Botanical Garden; The New York Botanical Garden; Royal Botanical Gardens, Ontario; and Sustainable Conservation; in addition to The Morton Arboretum and MIPN.

Since the formation of PGSIP, the group has been evaluating the suitability of thirteen existing data-sharing platforms for sharing public gardens' information and observations about plants escaping cultivation. The effort focused on low-cost, accessible, and user-friendly platforms that could readily accommodate the specific data that gardens collect over time. The working group is also exploring customized options, such as a web portal with data forms that integrates with an existing online plant records database and would be accessible to any public garden.

YOUR GARDEN'S EXPERTISE IS NEEDED!

The work of PGSIP continues in 2019 to develop a method for documenting and sharing observations among gardens. Once the information is compiled and synthesized, it can be shared more broadly with the horticulture industry and the conservation community to help prevent the next major plant invasion. For this initiative to be successful, gardens must be willing to contribute their information so





Top: Burning bush (*Euonymus alatus*) hedge at The Morton Arboretum prior to its removal in fall 2011.

Middle: Plants on the Move garden summit participants discussing plants that escape cultivation in November 2016.

Left: Removal of a callery pear cultivar from The Morton Arboretum's living collection in 2015.

Below: Burning bush (*Euonymus alatus*) hedge removal in progress in 2012 at The Morton Arboretum.

All photos: The Morton Arboretum



that patterns of plant behavior and dispersal can be found on a wider geographic scale than an individual garden. Our 2018 survey found that 78% of garden survey respondents are willing to share observational data related to plants escaping cultivation with no limitations, while an additional 13% would be willing with certain limitations on how that data would be used and shared. Furthermore, 85% of respondents indicated that they would find it beneficial to have access to data and observations from other gardens. Perhaps even more encouraging is that the broader horticulture industry is also interested, as indicated by a third survey conducted by the authors at the Midwest Green Industry Experience trade show in December 2018. Ninety-three percent of nursery industry attendees indicated that they would find it helpful to hear from public gardens about the species and cultivars observed spreading from cultivation, presumably to avoid investing in commercialization of those plants.

Now is the time for public gardens to move forward, share knowledge, and prevent future spread of invasive species. The unique resources contained within gardens collectively across the continent can improve early detection of problematic species before they become invasive. In doing so, gardens will underscore their value to society as organizations focused on plant conservation and reducing threats to the environment.

If you would like further information about PGSIP, please contact the authors. Also look for announcements about the online data-sharing portal and standardized recommendations for collecting and categorizing observations.

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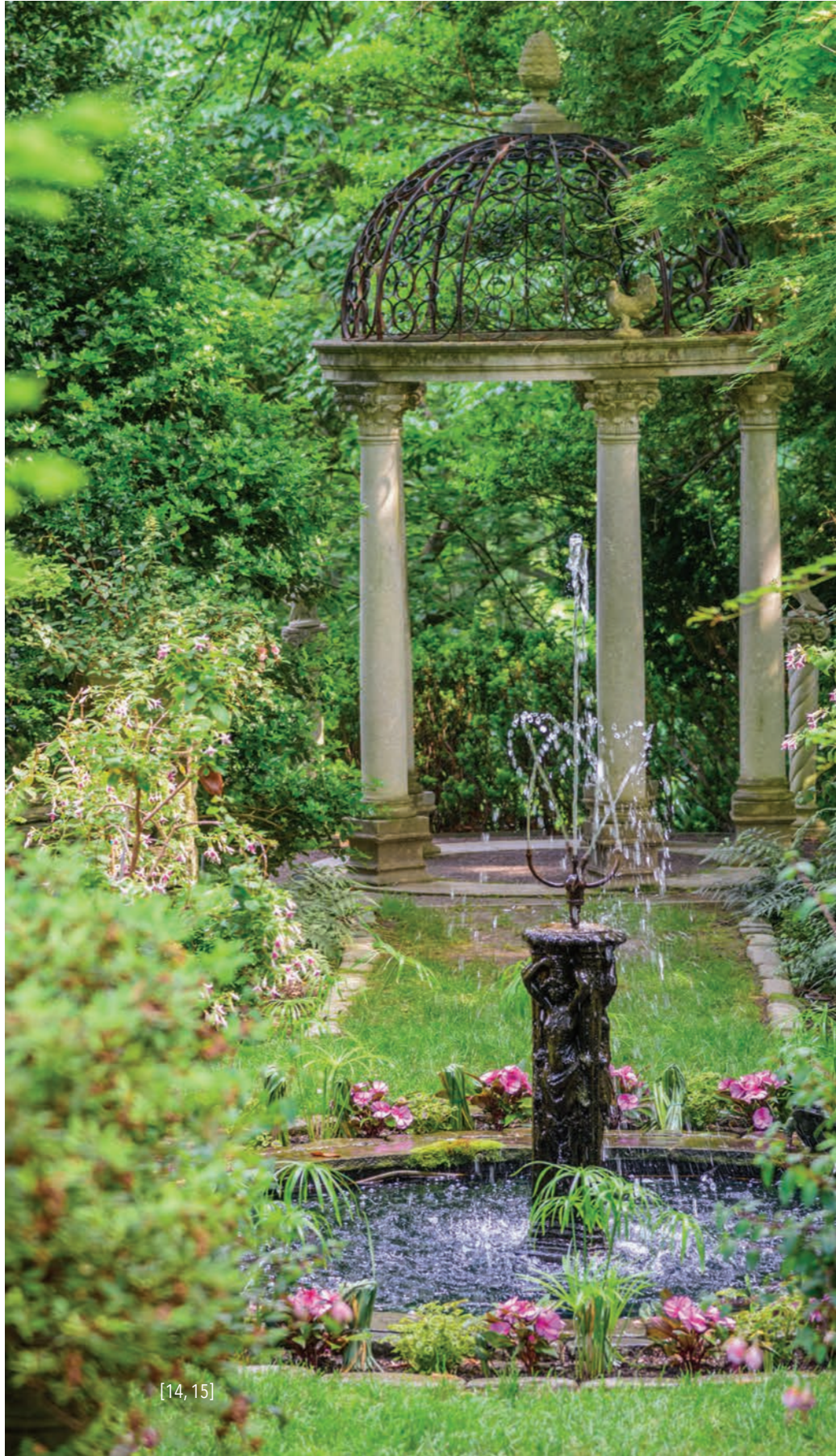
PHS MEADOWBROOK

Public gardens are often rather grand affairs—former estates or large landscaped areas designed to be awe-inspiring and educational for garden visitors. This large scale horticulture gives us room to showcase diverse plant collections and is often necessary to attract people to visit—but what about small gardens?

And how can we help visitors to get real ideas for their own, smaller gardens?

By dividing up large garden areas to create more intimate “garden rooms” the staff at Meadowbrook seeks to inspire gardeners to improve their own spaces. The smaller areas seem more relatable and ideas may be easier to translate to residential spaces.

THE GARDENS AT THE PENNSYLVANIA HORTICULTURAL SOCIETY'S MEADOWBROOK FARM HAVE BEEN OWNED BY THE SOCIETY SINCE 2004. MEADOWBROOK IS LOCATED IN THE BEAUTIFUL HUNTINGDON VALLEY, NORTH OF PHILADELPHIA. THE HOUSE AND ITS SURROUNDING GARDENS WERE DONATED TO THE SOCIETY BY J. LIDON AND ALICE PENNOCK, WHO HAD BUILT THE HOUSE AND DEVELOPED THE GARDENS FOR SEVEN DECADES, BEGINNING IN THE 1930S. THEIR SENSE OF DESIGN AND STYLE COMES THROUGH STRONGLY IN THE GEOMETRIC, AXIAL STRUCTURE OF THE GARDENS THAT SURROUND THE HOUSE.



SMALL GARDEN INSPIRATION USING GARDEN ROOMS Jenny Rose Carey



While touring the gardens visitors appreciate the gradual unfolding of the discrete spaces. Changes of level heighten the sense of surprise, as they round a corner to find another small space. Hedges and walls delineate each garden room. Our founders, the Pennocks, used a wide range of mostly evergreen plants to screen each garden from the next. *Aucuba*, *Buxus*, *Pieris*, *Rhododendron*, *Stephanandra*, and *Taxus* create hedges of different heights.

Each garden has its own feeling and palette of plants. Garden visitors are delighted by the sense of whimsy that pervades the garden, with trees and shrubs pruned into topiaries and espaliers to decorate and surround the spaces. The southern magnolia (*Magnolia grandiflora*) espaliered onto the back wall of the house is a crowd-pleaser. The statuesque cloud-pruned hemlocks (*Tsuga* sp.) that flank the eagle statue in the central garden amaze people. But really they are learning lessons about how to include woody plants in a small space by trimming them to keep them in scale.

The next lesson we hope that visitors take away from our gardens is that this wonderful green framework is a great backdrop for colorful seasonal bulbs, annuals, and tropical plants that can be added to the garden. Some plants are in the ground while others are

▲ Trees and shrubs in the formal gardens at the Pennsylvania Horticultural Society's Garden at Meadowbrook Farm delineate the axial view that crosses the Circle Garden and terminates at the bathhouse in the Pool Garden.

◀ The view to the Belvedere across the Circle Garden. The rotating fountain produces a gentle sound that is amplified in the enclosed space.



▲ The Herb Garden, adjacent to the Pennock House, dates from the 1950s. It is delineated by an *Ilex crenata* 'Steeds' hedge and contains a varied collection of culinary and decorative herbs.

displayed in containers, but each of these smaller garden areas and potted collections have plant combinations that are an instant take-home idea. Add in the array of garden seats and benches throughout the garden and people begin to see how to use their home landscape for living and entertaining.

While visitors may not be able to re-create the same spaces as at Meadowbrook Farm, what they can do is find inspiration in our garden rooms, as each space is a small garden in itself. As public garden staff we think deeply and inventively about ways to inspire and educate our garden visitors. By making some small garden rooms within our larger landscapes it is possible to give our visitors concrete examples of how to improve their own gardens. 🌸

All photos: Meadowbrook Farm

Jenny Rose Carey is the Senior Director at Philadelphia Horticultural Society's Meadowbrook Farm.



TWO CHARISMATIC COLLECTIONS RECEIVE GOLD

Terry Huang and Michael Dosmann

The *Ginkgo* and *Forsythia* collections at the Arnold Arboretum are celebrated for their vivid backstories and as resources to scholars, horticulturists, and everyday visitors. Each began with a fascination that steadily grew into today's richness. Beginning in the late 1980s, Peter Del Tredici, senior research scientist emeritus, collected *Ginkgo* in China from regions harboring wild populations with unique genetics. This assemblage, complemented by cultivated genotypes, has created one of Earth's most important resources of *Ginkgo* germplasm. The *Forsythia* collection grew from combined efforts of explorers, horticulturists, and researchers spanning the late 19th and 20th centuries. Initial species introductions from the wild such as *F. ovata* (Korean forsythia) formed a backbone, while plant breeding efforts yielded cultivars like 'Spectabilis' and 'Meadowlark'.

After years of prioritization ("Eight Great Collections Become Exemplary after National Accreditation," pp. 20–21 this issue), both collections received National Accreditation in 2018 through the Plant Collections Network, with goals of preserving *Ginkgo* genetic diversity and *Forsythia* species diversity. Benchmarking revealed that among institutions in North America, the Arnold's collections of these genera are uniquely well-documented and comprehensive. For this reason among others, they are excellent resources, particularly as they relate to conservation. The Arnold Arboretum continues to develop each collection further through new acquisitions, and adds value through novel documentation and cutting-edge research. 🌿

Terry Huang was a Living Collections Fellow and Michael Dosmann is the Keeper of the Living Collections at the the Arnold Arboretum of Harvard University. Michael also serves on the Board of Directors of the American Public Gardens Association.



This page: Named for the former Arnold Arboretum Director and Harvard Professor of Biology who created it, *Forsythia x intermedia* 'Karl Sax' is among the many notable lineages in the collection. Photo: Michael Dosmann

Opposite: The familiar fan-shaped leaf and green, unripe seed of *Ginkgo biloba* 'Hayanari'. Photo: William (Ned) Friedman

PERENNIALS



Plant
Collections
Network

AMERICAN PUBLIC GARDENS ASSOCIATION



EIGHT GREAT COLLECTIONS BECOME EXEMPLARY AFTER NATIONAL ACCREDITATION

Michael Dosmann

The Plant Collections Network recognizes the high conservation, scientific, and education value of public garden collections. What makes the network phenomenal, though, is that it also raises curatorial standards—even post-accreditation. This happened at the Arnold Arboretum, where careful selection of genera in the first place, followed by prioritized efforts afterwards, made great collections exemplary.

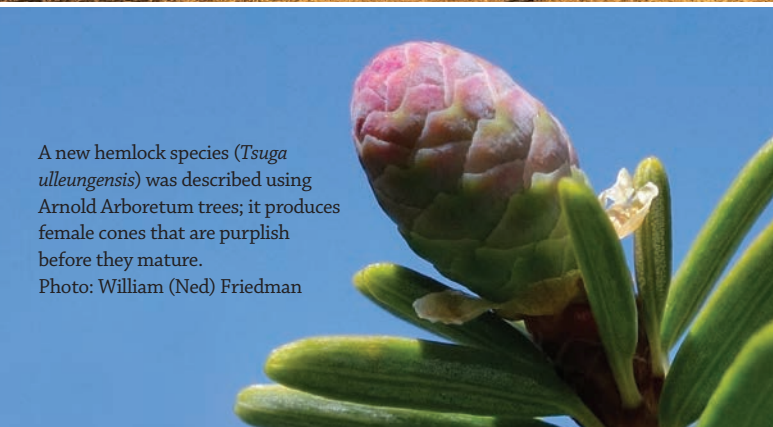
Selecting collections for accreditation was a deliberate, but not easy process. Prioritizing botanical diversity, we identified genera represented in our living collections by species richness and accessions of documented wild origin. Yet, due to over a century of active collections development, that left us with still too many to choose from. The next step was to select those bearing an Arboretum legacy. If they were already part of our institutional DNA, we had confidence of a long-term commitment transcending trendiness. After celebrating Lilac Sunday for so long, our dynamic *Syringa* collection was a clear candidate. Our *Acer* (maple) collection was long recognized as one of the most significant in cultivation, so it too was an obvious target. We also took the opportunity to include genera unlikely to be picked by others, a reason we proposed *Carya* (hickory).

The initial five collections [*Acer*, *Carya*, *Fagus* (beech), *Syringa*, and *Tsuga* (hemlock)] were recognized in 2002; *Stewartia* followed in 2005. In 2008, we joined the *Acer* multisite group, and two additional collections (*Forsythia* and *Ginkgo*) received accreditation just this past year (see *Photosynthesis*, preceding pages). Unwilling to rest on those laurels, however, we then

focused efforts to improve each collection *after* accreditation. Calling these collections out as the *crème-de-le-crème* of our Core Collections in our Collections Policy triggered several downstream actions. Beyond highlighting each for extra horticultural care in our Landscape Management Plans, priority comes into play when making tough decisions. We have preserved hemlocks in the face of hemlock woolly adelgid, but removed majestic, yet diseased beeches to spare younger, unaffected ones of greater value. Without accreditation, our response plans may or may not have been different, but they certainly would have lacked the justification accreditation provides.

We also apply prioritization when it comes to collections documentation. We decided that each accession within a Nationally Accredited Collection™ must have voucher herbarium specimens that capture it in flower, fruit, and vegetative states. These collections are also top priority when building our dried emerging leaf collection, perfect for future DNA extraction and sharing with researchers. We target them for identity verification, too, as well as archival records review. In fact, as we conduct data audits or integrate historic information into our database, we often start with these eight collections first or select them as case studies.

National accreditation has also improved collections composition. For each genus, our goal is not only to maximize species diversity, but for each species to comprise at least three wild-sourced accessions broadly representing its natural range. In 2002, 41% of our permanent (i.e., non-nursery) *Acer* collection was of documented wild origin. After seventeen



A new hemlock species (*Tsuga ulleungensis*) was described using Arnold Arboretum trees; it produces female cones that are purplish before they mature.
Photo: William (Ned) Friedman

Opposite: Most lilacs are not known for their autumn leaf color, however *Syringa oblata* ssp. *dilatata* is an exception, consistently developing deep wine-colored leaves each fall. Photo: Michael Dosmann

This page, top left: A 1907 accession of *Acer griseum* (paperbark maple), collected by Ernest Wilson in Hubei, China, stands tall at the edge of the maple collection. Photo: Michael Dosmann

This page, top right: The hickory collection, including these shagbarks (*Carya ovata*), throws golden shade each autumn. Photo: Michael Dosmann

years of collections dynamics (mostly acquisitions, but also some prudent deaccessioning), that value has climbed to 54%. The Campaign for the Living Collections, our ten-year acquisitions initiative launched in 2015, highlights Plant Collections Network genera, and our nurseries now teem with material collected on recent expeditions. As I write, ninety maple trees grow in the nurseries, of which 90% are of wild origin. When planted out, they will drive the percentage even higher. We've seen the same enrichment in other genera.

Profiling national significance helps us to share these collections. Last year alone, twenty percent of the plants in the collections used in research belonged to one of these eight genera. Magnificent Maples (one of our Collections Up Close events) celebrated their amazing floral and bark diversity in springtime, a season when New Englanders tend not to think of maples. And speaking of maples, the multisite approach to

stewarding our collection has fostered a wide exchange of ideas, information, and, of course, germplasm with other gardens seeking to achieve similar goals.

Had we never joined the Plant Collections Network, it is possible that these collections would have been developed, documented, and shared similarly over time. However, national accreditation made the tasks easy and obvious. Although reaccreditation is not part of the network, if it ever was, I am confident that our eight collections would be renewed. Each now surpasses what it was when initially proposed. Because of these successes, we recently (2016) added a Robust Collections category to our Collections Policy. Anecdotally referred to as "Nationally Accredited Collections in waiting," the approach allows us to target and prepare collections in advance of future application. It has worked to make good collections great, just as accreditation has made great collections exemplary. ❁

Michael Dosmann is the Keeper of the Living Collections at the Arnold Arboretum of Harvard University and also serves on the Board of Directors of the American Public Gardens Association.

MULTI-DISCIPLINARY A TRAUMA-FOCUSED THERAPEUTIC GARDEN FOR NORTH CAROLINA YOUTH

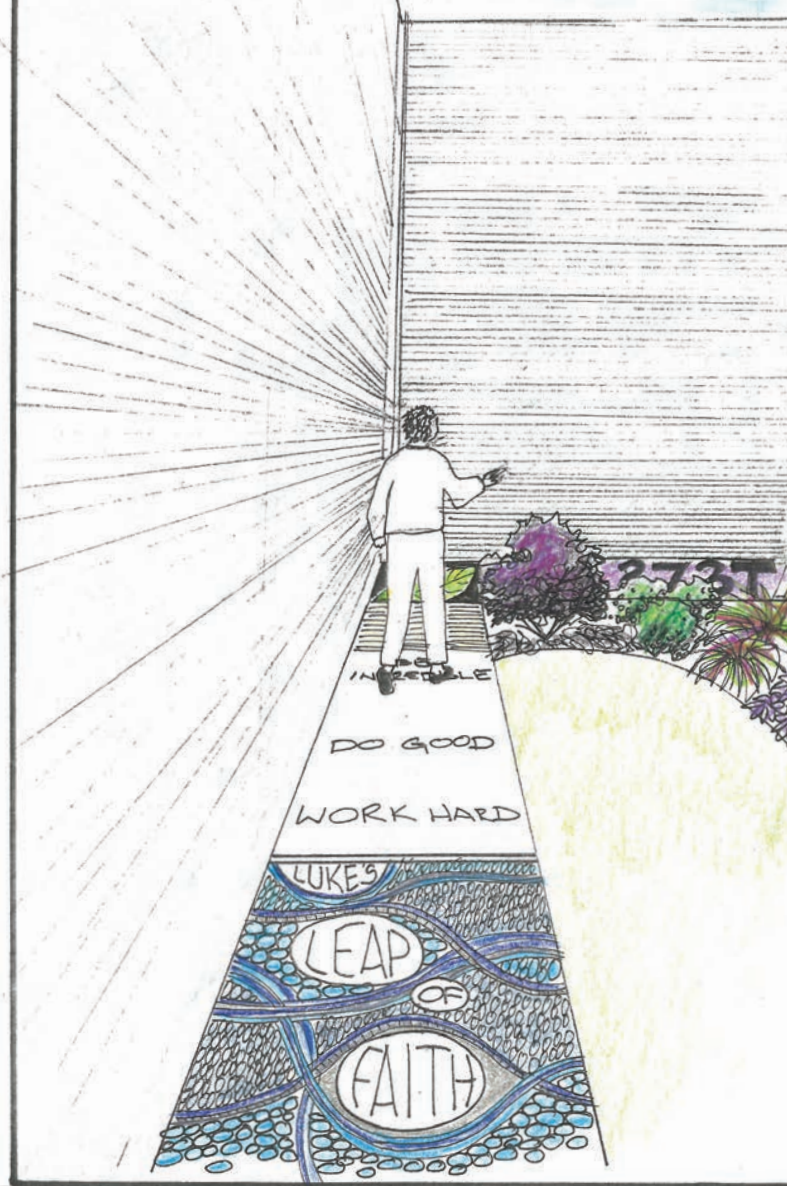
Anne Spafford and Natasha Donnelly

Beautiful landscapes and gardens have intrinsic therapeutic value. This well-established quality of garden environments is at the root of horticultural therapy, and is being harnessed to support healing and rehabilitation for youth in North Carolina’s juvenile justice system.

No child chooses the environment they are born into. Some are dealt a very unfortunate set of cards. Others make a single bad decision. In North Carolina, 100% of committed youth have at least one mental health issue or substance abuse diagnosis and most have trauma and stressor-related disorders (*Juvenile Justice Annual Report 2017*). The average age of the juvenile justice population is fifteen, and these individuals are still developing socially and emotionally.

At the Cumberland Regional Juvenile Detention Center, we have been working with a multidisciplinary team to design and fund a new garden that will serve the needs of these youth. Led by the authors, this team includes administration, staff, and youth at the Center; students in co-author Anne Spafford’s landscape design courses at North Carolina State University; and supporters at NC State’s JC Raulston Arboretum in nearby Raleigh.

Trauma-focused care is at the heart of our approach to both garden design and programming. In this therapeutic model, emphasis is placed on healing from the traumatic experiences that can impact youth, as well as helping young people develop resiliency and strategies for managing stressors. Every element in the garden—including the overall layout, plant massings, plant selection, and built elements such as walls, walkways, and arbors—should not only impact mental and physical health, but also support safety and security measures at the facility. Juvenile justice settings should be environments that encourage positive social change and rehabilitation. Trauma-focused care in a specifically-designed therapeutic environment is at the center of recovery and successful transition back to the community.



A therapeutic garden provides opportunities for participants to take pride in their environment, to feel valued, to succeed, and to be role models. Young people and the staff that dedicate their lives for these youth need spaces designed for healthy expression, positive role modeling, vocational activities, and life skill development. The most successful therapeutic gardens carefully research the users of the space and tailor the design to meet the needs and wants of that population. In a juvenile justice context, such an approach can reduce recidivism rates, support staff, and reduce high turnover rates.

Many of the features at the Cumberland Juvenile Center garden have been designed to provide opportunities for healing. An example is the perimeter pacing pathway, which is designed to be used for exercise and physical meditation. The garden pathway will include thirty individual sections with different textures, colors, inspirational words, and quotes through inlays or stamps. The design also includes a large sensory garden with a meandering path throughout. Several smaller color-coded areas with inviting counseling spaces are



designed to elicit emotive responses and provide a safe environment for more productive counseling sessions. The garden also promotes art expression in a variety of areas and offers a vegetable garden and an edible landscape.

Our team is currently in the process of raising funds for the garden. In spring 2018 we held a fundraiser at the JC Raulston Arboretum, with “art expression in the garden” as the theme. The event showcased musical performances by artists in a variety of genres, dance, and a fashion show with renowned designer and NC State faculty member Justin LeBlanc. One of the highlights was a performance by spoken poetry group Authoring Action, which composed a piece specifically for the event. This group was riveting and all the more powerful because some of its members had themselves spent time in juvenile justice facilities. Although we are still in the process of fundraising, the completed landscape renovation is planned for summer through fall of 2019.

The benefits of these specifically and safely designed gardens are many: opportunities for internalized behavior

modification, improvements in mental and physical health, education and vocational skill-building, and development of professional and life skills. These are environments that will inspire growth and encourage healthy conversations. While such gardens can help youth and staff immediately, some benefits are long-lasting and can provide a life reset. Our goal is that the garden will spark an interest in nature, encourage reflection and socialization, and potentially change the trajectory of the lives of these youths. Our larger vision would be to expand gardens like this one into more facilities, then incorporate gardens into community centers used for re-entry. For now, we are looking forward to the establishment of this first juvenile justice therapeutic garden. ❁

Photos: Drawings for the proposed garden. Courtesy of Anne Spafford.

Natasha Donnelly is a nurse and sociologist whose specialties include trauma-focused care and suicide prevention.

Anne Spafford is a professor of landscape design at North Carolina State University, specializing in applied design research and therapeutic landscape design.



HORTICULTURAL HOW-TO

ORCHIDS IN THE GALLERIES

Ian Wilhite

This year's iteration of our annual, four-week-long exhibit, *Orchids*, brought a new perspective: Presentation within the walls of the Indianapolis Museum of Art, as well as in Newfields' greenhouse or manor. It brought together the talents of the museum and garden staff for the first time since the 2017 rebranding of the institution. (See side bar for more about Newfields.) We set out to create beautiful horticultural displays in several of our galleries. In doing so, we tested the process of developing a plant-based exhibition in the museum, established partnerships among departments that don't often get to work together, and drew visitors during a historically slow season. There were some hurdles along the way, which we successfully cleared.

Using an established museum exhibition planning process, we started with a tour of the galleries led by the art curators to locate potential areas for the plant-based displays. We had so many possibilities that they needed to be whittled down to a few locations on each floor. Most sites were selected so that the floral displays could work in conversation with the artworks around them. The curators were very enthusiastic in choosing locations and expressed that they wanted to see more of these collaborations in the future.

CEO Dr. Charles Venable chose to spotlight a dark hallway in our Asian gallery, just in front of a moon gate, where we placed an arrangement of big, white *Phalaenopsis* hybrids. This had a huge visual impact in the space. We decided to place a "showpiece" on each floor; these showpieces were larger displays with interpretive information giving guests insight into our decisions. The Asian gallery had award-winning trees installed by the Indianapolis Bonsai Club. The European gallery had a six-by-six-foot garden imagined by our designer and planted with orchids and tropical plants. A bowl of African plants and orchids was placed in the African gallery, while a fluorescent display of orchids was installed in our contemporary gallery, where it

NEWFIELDS, ONCE KNOWN AS THE INDIANAPOLIS MUSEUM OF ART (IMA), ENCOMPASSES A 152-ACRE CAMPUS INCLUDING THE MADELINE F. ELDER GREENHOUSE, WHICH HOLDS A RESPECTABLE ORCHID COLLECTION. IN YEARS PAST, WE HOSTED AN ANNUAL ORCHID SHOW IN THE GREENHOUSE, AND IN THE LILLY HOUSE—THE HISTORIC MANOR HOME THAT DOMINATES THE ESTATE. WITH THE REBRANDING OF THE INSTITUTION, OUR MISSION STATEMENT CHANGED: "TO ENRICH LIVES THROUGH EXCEPTIONAL EXPERIENCES WITH ART AND NATURE."

◀ Orchids add life to the European galleries.



White ▶
Phalaenopsis
create a dramatic moment in front of the Asian gallery's moon gate
All photos:
Newfields

contrasted with the surrounding, more muted works. The wide array of orchid designs reflected our diverse art collections, and lured guests into numerous parts of the museum.

The museum has a floral policy originally developed with the historic Lilly House in mind. It aims to preserve the art objects and gallery environment, while still allowing us to fulfill our mission statement by bringing art and nature together. When pulling and buying plants for galleries, we paid special attention to pests, making sure we were using either pest-free plants, or preventively treating them before installation. The floral policy helped lay the groundwork for this show and future exhibitions, protecting the many materials used throughout the museum. Thinking through these decision points particularly helped the horticulture staff, who were able to thoughtfully select plants and make sound decisions about the containers and accent pieces they installed.

We were also able to overcome many of the horticultural challenges that came with this exhibition. Special pressurized water sprayers (Plant-TechH2O Waterboys) were used for their portability and neatness, which is important in an art museum environment. Whenever some primping or re-potting needed to be done, containers were removed from the galleries through our basement-level loading dock and moved across campus in a heated van to be worked on in the greenhouse. Plants stressed by the dry and low light

conditions (used to preserve the art) were swapped out as needed to keep designs looking perfect and lively. All of these activities were tackled before the museum opened to the public each day, necessitating close communication with security and many other departments to guarantee we were not interfering with artwork rotations or installations. Proper plant selection was also crucial. We had to choose orchid genera that we knew were well proven in horticulturally inhospitable conditions. *Phalaenopsis* and *Paphiopedilum* are staples that we used because we knew they would tolerate the low humidity gallery environment, but we also experimented in our use of obscure species such as *Bonatea speciosa* and members of the *Polystachya* genus from South Africa, which have proven their worth. One genus that we tried, *Renanthera*, did not work in the dry conditions of the museum, but other vandaceous species performed surprisingly well.

Orchids has been a groundbreaking exhibition for us, by driving us to work in depth with nearly every department in the institution, engaging our devoted garden lovers in a new space, and challenging the museum's loyal art enthusiasts to see the galleries come alive in a way they never have before. Hopefully our visitors will look at the art in a new light and see orchids as spectacular pieces of art themselves. ❁

Ian Wilhite is the Greenhouse Plant Specialist at Newfields. He may be contacted at iwilhite@discovernewfields.org

CELEBRATING NEW AMERICAN GARDENS



Come explore what's new in public gardens!

This exhibit celebrates American gardens created or renovated within the last five years. These gardens showcase new plant collections, create spaces for people to connect with nature, and foster sustainability.



GARDEN EXHIBIT

THIS SUMMER WASHINGTON, D.C., WILL BE ABUZZ WITH GARDENS, GARDENERS, AND GARDEN DISPLAYS. ALONG WITH THE ASSOCIATION CONFERENCE BEING HELD IN D.C. THIS YEAR, THE UNITED STATES BOTANIC GARDEN (USBG) AT THE FOOT OF THE U.S. CAPITOL IS PRESENTING A SERIES OF EXHIBITS SHOWCASING OTHER PUBLIC GARDENS ACROSS THE COUNTRY. ASSOCIATION MEMBERS CAN EXPLORE BOTH EXHIBITS DURING THE CONFERENCE'S OPENING NIGHT EVENT AT THE USBG AND SMITHSONIAN GARDENS.



The USBG is presenting a new exhibit, *Celebrating New American Gardens*, from January 31 through October 15, 2019, showcasing 21 gardens from across the United States that have created new gardens or renovated a garden within the last five years. Photos, drawings, landscape designs, and project descriptions share the story of each new garden.

"Gardens are always changing—with the seasons, with emerging gardening trends, and with their communities. We are excited to feature these new gardens and showcase the diversity and beauty of modern garden projects," said Saharah Moon Chapotin, U.S. Botanic Garden executive director.

GARDENS WITH PROJECTS FEATURED IN THE EXHIBIT ARE:

- ADKINS ARBORETUM, MARYLAND
- BROOKLYN BOTANIC GARDEN, NEW YORK
- CASTLE HILL ON THE CRANE ESTATE, MASSACHUSETTS
- CHICAGO BOTANIC GARDEN, ILLINOIS
- DENVER BOTANIC GARDENS, COLORADO
- FERNWOOD BOTANICAL GARDEN AND NATURE PRESERVE, MICHIGAN
- GREEN BAY BOTANICAL GARDEN, WISCONSIN
- THE GROTTO GARDENS AT THE DAYTON VA MEDICAL CENTER, OHIO
- LONGWOOD GARDENS, INC., PENNSYLVANIA
- MARIE SELBY BOTANICAL GARDENS, FLORIDA
- NEW ORLEANS BOTANICAL GARDEN, LOUISIANA
- PHIPPS CONSERVATORY AND BOTANICAL GARDENS, PENNSYLVANIA
- PORTLAND JAPANESE GARDEN, OREGON
- REIMAN GARDENS, IOWA
- SAN DIEGO ZOO, CALIFORNIA
- SAN DIEGO ZOO SAFARI PARK, CALIFORNIA
- STATE BOTANICAL GARDEN OF GEORGIA, GEORGIA
- TOHONO CHUL, ARIZONA
- TULSA BOTANIC GARDEN, OKLAHOMA
- UNITED STATES BOTANIC GARDEN, DISTRICT OF COLUMBIA
- WATERFRONT BOTANICAL GARDENS, KENTUCKY

An outdoor exhibit entitled *Gardens Across America* will run May 24 through October 1. Featuring vignettes of a selection of gardens from across the country, this exhibit will spotlight the diversity and beauty of the more than 600 public gardens in the United States. From rare and endangered plants to historic estates to modern oases, the collections and stories of 20 different gardens will be showcased throughout the grounds of the U.S. Botanic Garden. These gardens reflect their local communities and the amazing diversity found in the plant kingdom. The displays will include signature plants and visual elements to provide visitors a deeper understanding of the gardens' plants, styles, origins, regional characters, and missions.

FEATURED IN THE EXHIBIT WILL BE:

- SARAH P. DUKE GARDENS, NORTH CAROLINA
- LOCKERLY ARBORETUM, GEORGIA
- THE BOTANICAL RESEARCH INSTITUTE OF TEXAS AND THE FORT WORTH BOTANIC GARDEN, TEXAS
- EDISON AND FORD WINTER ESTATES, FLORIDA
- PITTSBURGH BOTANIC GARDEN, PENNSYLVANIA
- NORFOLK BOTANICAL GARDEN, VIRGINIA
- DENVER BOTANIC GARDENS, COLORADO
- SMITHSONIAN GARDENS, DISTRICT OF COLUMBIA
- PAUL J. CIENER BOTANICAL GARDEN, NORTH CAROLINA
- STATE BOTANICAL GARDEN OF GEORGIA, GEORGIA
- ATLANTA BOTANICAL GARDEN, GEORGIA
- U.S. NATIONAL ARBORETUM, DISTRICT OF COLUMBIA
- MT. CUBA CENTER, DELAWARE
- MAGNOLIA PLANTATION AND GARDENS, SOUTH CAROLINA
- BETTY FORD ALPINE GARDENS, COLORADO
- BOOKWORM GARDENS, WISCONSIN
- NORTH CAROLINA BOTANICAL GARDEN, NORTH CAROLINA
- FRANKLIN PARK CONSERVATORY AND BOTANICAL GARDENS, OHIO
- TUCSON BOTANICAL GARDENS, ARIZONA
- RANCHO SANTA ANA BOTANIC GARDEN, CALIFORNIA

The USBG will present talks about garden and landscape design, guided tours, and other public programs related to both exhibits throughout the year. Learn more at www.USBG.gov/Exhibits.

PERENNIALS



HOW DOES YOUR GARDEN GROW?

O'CONNOR

GRAIN AND HOP GARDEN

Alexandra Cantwell

In a back corner of Norfolk Botanical Garden is a garden with ever-increasing appeal to the public—the O'Connor Grain and Hop Garden. This garden grew from an idea back in 2015, when I began bartending at O'Connor Brewing Co. in Norfolk, Virginia. At that point, I had been a horticulturist at the Garden for about a year with an interest in the horticulture behind the booming craft beer industry. I wanted to merge two different demographics—those that visit the garden and those that visit the brewery—and what better way to do that than through education about one of the world's most favored beverages? Brewery founder and president Kevin O'Connor and Garden president and CEO Michael Desplaines met with me and have supported the project since early 2016. I was fortunate to have both support and freedom in the design of this project, and by the early months of that summer, we had our grand opening of the Grain and Hop Garden.

This educational garden has interpretive signage for visitors, not only about the brewing process, but also about the plants themselves: Grains (usually barley), hops ('Cascade', 'Chinook', and 'Nugget') growing in three large gazebo-like structures, and herbs that brewers can use in the beers they produce. O'Connor has made several small batch beers over the years using ingredients grown at the Botanical Garden, and the goal is to make an entirely Norfolk-sourced beer—from the water and wild harvested yeast, to the locally grown hops, grains, and herbs. The classes taught at Norfolk use the garden as a teaching tool, supporting programs like The Horticulture and History of Beer and Gardening for the Homebrewer, and provide live plant samples for similar programs taught offsite at O'Connor Brewing Co. We've periodically created other educational opportunities as well, such as one of the more popular exhibits, Fermentation Station, where Old Dominion University Professor Dr. Dan Barshis set up a booth complete with a beer being brewed onsite for visitors!

The Tidewater area of Virginia has become quite the beer destination, with new breweries popping up all the time. This partnership between O'Connor Brewing Co. and Norfolk Botanical Garden has been a way to stand out amongst breweries, provide a more in-depth look at what goes into each pint glass, and attract beer aficionados to the garden. 🌿

Alexandra Cantwell is Adult Education Manager at Norfolk Botanical Garden.



Top left: Guests enjoy beer, food trucks, and live music during the Garden's Grand Opening. Photo: Leon Guanzon

Bottom: Hops begin to climb their trellises as barley is ready to harvest. Photo: Laura Christian

Opposite: Collected flowers used in beer-themed décor for one of the annual O'Connor Beer Dinners held in the Garden. Photo: Lucy Grice



GARDEN PROFESSIONAL SPOTLIGHT

STEPHANIE OBERLE

DIRECTOR
BROOKSIDE GARDENS, WHEATON, MARYLAND

TELL US ABOUT YOUR JOURNEY IN THE GARDEN INDUSTRY.

My journey within the public garden field has been centered on Brookside Gardens. As a child, I visited many gardens and museums in the Mid-Atlantic with my parents and we came to Brookside Gardens. In high school, seniors had the opportunity to volunteer and I chose to work at Brookside. I enjoyed it so much that I continued to volunteer over the summer. I met two women who worked here and they were instrumental in my understanding that there was a place for me in public horticulture and in a leadership role.

After I received a BS in Horticulture at the University of Maryland, I worked at Tudor Place as a horticulturist for a few years. I knew that I wanted to be more involved in the management of gardens. I was accepted to the Longwood Graduate Program and received a Master of Science in Public Horticulture from the University of Delaware.

After I graduated, a position as a Horticulturist 1 at Brookside became available. I took it, thinking that I would stay until I found something better. I was lucky that I came to the gardens at a time of growth and innovation. I was mentored and encouraged to learn and try new things. Twenty-one years later, I am still working at Brookside, now as Director.

TELL US ABOUT A RECENT PROJECT YOU WORKED ON.

Our most recent project is an 11,000-square-foot propagation greenhouse. This project was part of our master plan, but became a priority when we received a generous gift from a volunteer and donor. The project allowed us to vastly improve and centralize our growing space. We also included a 25,000-gallon cistern to collect rainwater that is used to water crops. Given our location within the Chesapeake Bay Watershed, it is important to us that the facilities are a model for the community and that we are a part of a conversation about water quality and sustainability. This project ties in with our parking garden project that used permeable pavement and micro-bioretenion.

WHAT DO YOU FIND TO BE THE MOST REWARDING THING ABOUT WORKING IN THIS INDUSTRY?

It's very rewarding to see that our work makes people feel good. Not only do our visitors benefit from a positive experience in the gardens, our staff benefits as well. They are choosing to come here, to be a part of nature, to feel better. Horticulture is essential to our well-being. Brookside is making that connection and articulating it to visitors. 🌸

Editor's note:

You will have the opportunity to meet Stephanie when Brookside Gardens hosts the closing dinner at our Annual Conference in Washington, D.C.

THINGS WE LOVE THIS SPRING

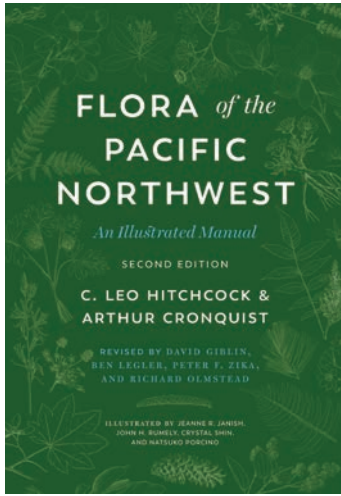


PERENNIALS

BLUETS, *HOUSTONIA CAERULEA*

Sometimes called Quaker ladies, these little plants embody the Quaker spirit, friendly and charming! In nature, they occur traiside and in rock crevices. Any garden has room for these cheerful signs of spring.

Uli Lorimer, Director of Horticulture, Native Plant Trust



Flora of the Pacific Northwest: An Illustrated Manual, Second Edition was published in October 2018, providing a modern update to the classic 1973 first edition published by The University of Washington Press. The second edition contains 5,545 taxa, up by 24.6% from the first edition, complete with updated taxonomy and nomenclature. It covers all vascular flora of Washington, the northern half of Oregon, Idaho north of the Snake River Plains, the mountainous portion of western Montana, and southern British Columbia south of about 51° North latitude in a single-volume 10" x 7" compact format. An essential reference for serious hobbyists, students, and botanically inclined professionals in the region.

Ben Stormes, Curator and Horticulturist, University of British Columbia Botanical Garden

EVERBILT HARDWARE CLOTH

Squirrels are cute, but they don't share! I use hardware cloth to prevent them from running off with all the seeds I intend to collect. It's easy to shape into whatever size you need and simply zip tie it together. As an added bonus, it keeps all your seeds together in a convenient parcel when you do collect them. This works best for seeds produced on an infructescence. **HomeDepot.com**

Jessica Sparks, Seedbank Coordinator, Montgomery Botanical Center



INSULATED WATERPROOF BIB OVERALLS

Seemingly mundane things can have dramatic affects. Cold wet soil can make gardening miserable, but insulated waterproof bib overalls keep me dry and warm. I can work happily in the garden for hours in weather that would otherwise be problematic. **Cabelas.com**

Chuck Gleaves, Executive Director, Kingwood Center Gardens



POROUS PAVE PERMEABLE PAVEMENT

We had a long list of requirements for a paving material to replace bark mulch: ADA accessible, non-slip, safe in rain and snow, porosity to allow air and water to get down into the soil, and a non-intrusive installation to protect our trees. After a pilot test, we chose Porous Pave.

Kyle Bagnall, Whiting Forest Program Manager, Dow Gardens



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October 14-17, 2019, Phoenix, AZ
Hosted by Desert Botanical Garden



EDUCATION COMMUNITY SYMPOSIUM

February 12-14, 2020, Austin, TX
Hosted by Lady Bird Johnson Wildflower Center, Zilker Botanical Garden
Conservancy, San Antonio Botanical Garden

Visit www.publicgardens.org for more details on all of these events!



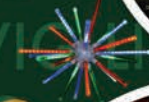
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