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Greetings Members/Salutations Membres/Saludos Miembros/问候会员 —
I’m writing this just having returned from Toronto where over one hundred garden delegates from Canada and around the world convened to discuss how to stimulate greater tourism/visitation to gardens. As always, we celebrated successes and shared our best practices and worst pitfalls. As befits this experience perfectly, Toronto’s city motto is literally “Diversity. Our Strength.”

Gardens are in a position of great strength right now. Instead of being the opposition, they can instead lead/converse dialogues and serve as resources to inform, but not inhibit, the various debates underway in communities wherever they are located.

Our Association’s mission speaks to Leadership, Advocacy, and Innovation. With these in mind, we have “doubled down” on our commitment to diversity and inclusion as core values. We crafted our first Policy Statement after receiving input from our Diversity & Inclusion Committee, chaired by Mary Lynne Mack. The Policy Statement is on p. 15 as a part of Mary Lynne’s article on next steps. These are merely the “foundation plantings” to lay groundwork for more positive, impactful change in the months and years to come, but they are robust ones.

One of my favorite parts of the policy states “we seek to consistently re-examine our professional values and modify our existing practices.” It’s important for our Association to occasionally share provocative member viewpoints that may both challenge and inspire you. This issue includes Richard Piacentini’s viewpoint article “Being Less Bad Is Not Good Enough Anymore,” which offers a wake-up call for public gardens to “walk the talk” on climate change in how they operate, educate, and lead.

Socioeconomic and biological diversity are also shared in this and every issue of Public Garden. Artist and activist Ai Weiwei’s Natural State exhibit at Frederick Meijer Gardens & Sculpture Park, Seattle’s Trees for Neighborhoods program, and the newly certified Plant Collections Network collection of Penstemon of the Colorado Plateau, Arizona species, each embody the spirit in our mission described above. I’m writing this having just returned from Toronto where over one hundred garden delegates from Canada and around the world convened to discuss how to stimulate greater tourism/visitation to gardens. As always, we celebrated successes and shared our best practices and worst pitfalls. As befits this experience perfectly, Toronto’s city motto is literally “Diversity. Our Strength.”

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In just a few weeks, we’ll gather in Canada for our 2017 Annual Conference Celebrating Connections: Heritage, Partnership, Progress: Diversity and conservation will be only two of many, many important topics covered. I hope to see you and your peers there to continue these important discussions!
THE LIFE AND GARDENS OF BEATRIX FARRAND

Karyl Evans

Over the course of a career spanning half a century and encompassing hundreds of commissioned gardens, Beatrix Farrand (1872-1959) established a legacy as one of the twentieth century’s most significant landscape architects. Counted among her works are some of the most celebrated American gardens: Dumbarton Oaks in Washington, DC, the Peggy Rockefeller Rose Garden at The New York Botanical Garden, and the Abby Aldrich Rockefeller Garden in Seal Harbor, Maine. Farrand’s contributions to the landscape arts did not go unrecognized in her lifetime; in 1958, the American Public Gardens Association conferred on her its first Honorary Life Member Award, citing her “uncommon devotion to the field of public horticulture.”

More than a century after Farrand embarked upon her pioneering career, gardens she designed continue to be replanted, studied, and meticulously restored because of the classic nature of her work and their association with one of the nation’s most highly regarded landscape architects.

A niece of Edith Wharton who was raised among the New York City elite, Beatrix Jones spent childhood summers in Bar Harbor, Maine. Family connections led to over fifty commissions in the state during her lifetime, among them her family’s estate Reef Point. Her surviving Maine gardens include the breathtaking Abby Aldrich Rockefeller Garden in Seal Harbor, resplendent with its expansive perennial beds surrounded by faded pink stucco walls capped with yellow-glazed tiles from the fortifications of Beijing. Adding to this stunning garden are the bottle gate, the moon gate, a moss-covered stone path climbing a gentle rise to the Buddha shrine, and the Spirit Path, lined with statuary collected by the family on their travels to China. Although still privately held by the Rockefeller family, this garden is graciously kept open to the public on a limited schedule.

Two other privately owned Farrand-designed gardens are still lovingly maintained on Mount Desert Island by the descendants of the families who commissioned them: Mildred McCormick’s The Farm property and the Kennedy family’s grand Kenarden Lodge. Beatrix Farrand also consulted on the planting plans for John D. Rockefeller’s extensive Carriage Roads, today part of Acadia National Park, where visitors can experience them on horse-drawn carriage rides.

Farrand kept close ties with the Bar Harbor community throughout her lifetime and helped develop plans for the Bar Harbor Village Green as well as Seal Harbor’s Village Green, which can still be seen today. Traces also remain of gardens Beatrix Farrand designed as part of two estates that were eventually incorporated into the campus of the College of the Atlantic, also on Mount Desert Island.

Still, the place in which one can most feel the spirit of Beatrix Farrand is her last home and garden at the Garland Farm property in Bar Harbor, purchased in 2003 and restored by what came to be the Beatrix Farrand Society. Today the residence has been transformed into a small study center, and her gardens there have been meticulously restored. Both are open to the public on a limited basis.

Alongside her groundbreaking projects, Farrand’s legacy in the landscape arts is secured by having been the first woman to create a successful landscape architecture practice. Trained at Harvard’s Arnold Arboretum and
Columbia University, and fresh from absorbing classic garden design on a grand tour of Europe, Farrand ran a professional office in New York City starting at the age of twenty-three. Just four years later, she was among eleven professional landscape architects who founded the American Society of Landscape Architects.

As Beatrix Farrand’s reputation as a classically trained landscape architect grew, her aunt the novelist Edith Wharton put her niece in charge of the site engineering for the entry drive of The Mount, the home Wharton had just built in Lenox, Massachusetts. These gardens have been beautifully restored and are open to the public.

It was in this early part of her career that Farrand designed the gardens at Bellefield in Hyde Park, New York, heightening the sense of depth in the backyard by reducing the dimensions of the receding “rooms” in the garden. The house and gardens were donated to the National Park Service in 1976, becoming part of the Franklin Delano Roosevelt National Historic Site. In 1984, the National Park Service chartered the Beatrix Farrand Garden Association, which, under the direction of a head gardener, has revived this historic garden.

In 1912 Beatrix Farrand was commissioned to work on the design of a university campus by Princeton University. She was the first woman to have ever been hired as a landscape consultant for a college campus and is credited by scholars with landscaping about 90 percent of the Princeton campus.

When consulting at Princeton, Farrand met Ellen Wilson, the wife of the university’s president, Woodrow Wilson. When Wilson won the United States presidency, the First Lady hired Farrand to design the East Garden at the White House, which featured a lily pond ringed by Irish yews.

In 1915 Beatrix Farrand was commissioned to create the Rose Garden for The New York Botanical Garden. Her asymmetrical triangular plan included 138 beds with over six thousand rose plants enclosed by a climbing rose-adorned iron lattice fence. Today, with over six hundred varieties, the renamed Peggy Rockefeller Rose Garden is considered to be an encyclopedia of historic and modern roses.

Beatrix Farrand’s fourteen years in New Haven saw her complete three remarkable garden designs for Connecticut estates, all of which have been restored. In 1918, she began designing gardens for the Harkness estate, now part of the Harkness Memorial State Park in Waterford, which included a sunken garden and an informal alpine rock garden, allowing the formal gardens to fall off into a more rustic planting plan. This was to become one of Farrand’s signature design concepts.

In 1921 in Bridgewater, Connecticut, Farrand designed a small walled garden, traces of which had all but vanished by the 1980s when a major book on Beatrix Farrand’s work by Diana Balmori and two other authors was published, leading to the rediscovery and subsequent restoration of the gardens on the Three Rivers Farm property.

In the 1920s architect Theodate Pope Riddle commissioned Farrand to redesign an existing sunken garden for the estate of Farrand’s aunt Edith Wharton. The entry to the estate, which would have been reached by carriage, was designed to bring visual interest and a certain mystery in the approach to the house.

When Max Farrand retired in 1941, the couple returned to New Haven and is on the Garden Club of America’s National Speakers List for her Beatrix Farrand program. This article is based on the script for the new documentary film The Life and Gardens of BEATRIX FARRAND she produced and directed. The documentary is now available for screenings and for purchase at www.BeatrixFarrandDocumentary.com.

Above: Moon Gate, Abby Aldrich Rockefeller Garden, Seal Harbor, Maine. The use of a moon gate to transition between formal and informal gardens was a masterstroke by Beatrix Farrand at the Rockefeller Garden. Very little has changed at this spectacular garden today since the private garden remains in the Rockefeller family. Photo: Karyl Evans

Right: Six-time Emmy Award-winning documentary filmmaker Karyl Evans. Photo: Harold Shapiro

Dumbarton Oaks in Washington, DC, remains one of Beatrix Farrand’s most important landscape designs. She began work on the fifty-three acres of wide-ranging hilly topography at the Dumbarton Oaks estate in 1921. Farrand’s genius was allowing the natural land contours to dictate her design, accommodating a series of formal garden rooms close to the house as well as a terraced swimming pool area, a rose garden, a large kitchen garden, and English perennial flower borders. Farrand also designed most of the architectural features including terraces, steps, stucco retaining walls, wrought-iron gates, seating, and sculptures.

Today the site is owned by Harvard University and is open to the public.

In 1927 Beatrix Farrand’s career took an unexpected turn when her husband accepted the position of Director of the Huntington Library, necessitating a move to San Marino, California. Her first significant commission in California was for the California Institute of Technology in Pasadena, where she designed Dabney Courtyard, a semi-enclosed space planted with olive trees that endures today. Farrand designed the majestic walkway at Occidental College with its long allée of trees. She also designed and implemented gardens for the Director’s House at the Huntington Library. But likely her greatest California legacy is her design work for the Santa Barbara Botanic Garden.

When Max Farrand retired in 1941, the couple returned to Mount Desert Island in Maine, transforming her family’s summer home at Roof Point into an impressive study center for New England flora. When Beatrix in turn retired in 1955, she regretfully closed the Center and donated her impressive archive to the Department of Landscape Architecture at the University of California at Berkeley by virtue of its recognized school of Landscape Arts and Architecture and botanic gardens. She also relocated a number of her historic shrubs and trees to Asticou Azalea Garden and Thuya Garden, which are part of the Land and Garden Preserve of Mount Desert Island.

Today, the enthusiasm for restoring Beatrix Farrand-designed gardens is a testament to the timeless beauty of her work and the interest in preserving her important legacy. Beatrix Farrand had the fortitude, intelligence, and talent to transform ordinary landscapes into places of extraordinary beauty.

Karyl Evans, a six-time Emmy Award-winning filmmaker, has a BS in Horticulture with an emphasis in Landscape Architecture and an MA in Filmmaking, and is a Yale Fellow. She is a member of the Garden Club of New Haven and is on the Garden Club of America’s National Speakers List for her Beatrix Farrand program. This article is based on the script for the new documentary film The Life and Gardens of BEATRIX FARRAND she produced and directed. The documentary is now available for screenings and for purchase at www.BeatrixFarrandDocumentary.com.

The film explores more than fifty Beatrix Farrand-related sites around the country.
It’s an unusual pairing of horticulture and art that’s been nearly four years in the making: the landmark exhibition Ai Weiwei at Meijer Gardens: Natural State at Frederik Meijer Gardens & Sculpture Park. This is the first time Chinese artist and activist Ai Weiwei, known for his bold and daring style, has shown his work in a botanical garden or sculpture park anywhere in the world.

In the last twelve months alone, Ai Weiwei (pronounced “eye way-way”) has been the focus of major events in London, Paris, Helsinki, Florence, and New York. Adding Meijer Gardens in Grand Rapids, Michigan, to this list was an exciting undertaking. Here, the exhibition spans four galleries, public spaces, a theater auditorium, and four iconic glass conservatories in which a collection of Ai Weiwei’s sculptures has been carefully situated among the lush indoor gardens. Meijer Gardens’ permanent installation of his colossal outdoor sculpture Iron Tree (2015), which has a prominent location in the sculpture park, is also part of the exhibition. Combined, they create an extraordinary one-of-a-kind experience that appeals to a wide audience, from leisure travelers to art and garden enthusiasts alike.

To fully appreciate the work of Ai Weiwei, one must pay proper attention to his biography. In his sculpture, installations, photography, films, and even his carefully designed wallpapers,
the artist frequently and openly draws on his personal narrative as a means of understanding both China and the larger world. Born in Beijing in 1957, Weiwei is the son of the highly regarded and influential poet Ai Qing. When Weiwei was still an infant, the Ai family was exiled to a remote labor and re-education camp in Northwest China because his father was regarded as a free-thinking intellectual in dissent with the state. Once regarded as one of the country’s most important cultural figures, Ai Qing was forced to scrub toilets for nearly twenty years.

As a result, the young Weiwei and his brother grew up far outside the developing boundaries of modern and industrial China. They grew attached to the longstanding traditions and artisanal efforts of rural China, and also developed a keen awareness of what it means to commit to ideas and of the preciousness of both freedom of speech and human rights—themes that are foundational to Ai Weiwei’s work. Additionally, the seemingly contrasting ideas of tradition vs. modernity are critical to the artist’s work in every medium and seem to have been planted within the artist from a very early age.

Following the death of Chairman Mao in 1976, the Ai family returned to Beijing. A brief period of government relaxation ensued. Ai Weiwei entered the newly re-opened Beijing Film Academy, which was becoming a guiding force central to the city’s burgeoning avant-garde. Realizing the limitations of China’s awareness of contemporary art, he obtained a visa and moved to the United States. After a brief period in Philadelphia, the young artist moved to New York City and remained there for nearly a decade, leading a rather spartan existence but rapidly developing his ideas and perceptions of the world. He was greatly impressed by the many freedoms Americans enjoyed, as well as the creative diversity of the art world in the city.

Just as his career was unfolding in the United States, Ai Weiwei returned to China in 1993 to help care for his ailing father. Although in his absence freedom of speech and human rights had evolved greatly in Beijing, and China as a whole, it was obvious to him that they were not at the same level he had enjoyed in America. In 2005, he began blogging as an adjunct to his artistic practice and gained increasing recognition as an architect, most notably in his collaboration on the design of the famed “Bird’s Nest” stadium for the 2008 Beijing Olympics. Later that year, the infamous Sichuan earthquake became a focal point of his energy in criticizing the government for shoddy earthquake became a focal point of his energy in criticizing the government for shoddy construction that led to the deaths of thousands, including many schoolchildren.

Frequently at odds with the Chinese government, Ai Weiwei was arrested and detained for eighty-one days in 2011. Following that, he endured four years of house arrest but for the purpose of the exhibition at Meijer Gardens, his plan for the project was well established.

Initially, much of the discussion centered on the possible acquisition of Iron Tree, Ai Weiwei’s largest and most complex outdoor sculpture. It required a great deal of practical understanding between the artist and his studio, the Beijing foundry where the work was cast, and the staff at Meijer Gardens. It also required the Meijer Gardens staff, on numerous occasions, to travel to Beijing. During these visits, Ai Weiwei became increasingly interested in the unique mission of Meijer Gardens. Neither a traditional art museum nor a botanical garden, Meijer Gardens draws upon the strength and beauty of each. On one hand, the institution had established an international reputation for its sculpture collection and exhibition program. On the other, the newest horticultural delight, the highly acclaimed Richard and Helen DeVos Japanese Garden, had just opened, capturing the imagination of casual visitors and serious cultural devotees alike. It was against this backdrop that the idea of a large-scale, temporary exhibition was first imagined.

For the artist, one of most appealing opportunities was the possibility to present his work in physical spaces well beyond the boundaries of a traditional gallery or museum setting. The four conservatories and public spaces particularly intrigued him. For Meijer Gardens, one of the challenges was to consider how to best present the physical realities of its different environments to an artist who was unable to travel much beyond his home and studio. A flurry of photographs and plans went back and forth between Grand Rapids and Beijing. We even made and narrated a “walk-through film” to show how the traditional visitor might experience the spaces in successive order.

Ai Weiwei is a gifted and skilled architect. His ability to understand plans and imagine physical spaces is remarkable. Therefore, the many architectural and engineering renderings available and specifically commissioned for the project were of tremendous help. Halfway through the planning process, the artist had his passport returned, and he was able to travel once again. Since then, he has been dividing his time between Berlin and Beijing, but for the purpose of the exhibition at Meijer Gardens, his plan for the project was well established.
My responsibilities include managing our library, archives, and large group of volunteers, and liaising with university researchers. Over the last two decades, I’ve developed close working relationships with botanists, conservation biologists, ecologists, and other scientists and professionals engaged in public horticulture across Canada, around the world, and right here at RBG. The conservation, education, and research projects we’ve undertaken together have given me great satisfaction and a sense that I’ve contributed to something important. Since 1995 I’ve been able to help with several major initiatives including the Global Strategy for Plant Conservation and the North American Botanic Gardens Strategy for Plant Conservation. Most rewarding of all are many lasting friendships made through my work in various facets of public horticulture.

In 2006 we found that RBG’s 2,400 acres of nature sanctuaries are among the richest areas in Canada for wild plant species diversity. The Cootes to Escarpment EcoPark System was proposed at about the same time, and I seemed to fit in. For the next decade my focus was networking for biodiversity projects. In 2006 I was asked to head RBG’s science department. My responsibilities include managing our library, archives, and herbarium facilities, supporting our research staff and large group of volunteers, and liaising with university researchers.

The Camilla and Peter Dalglish Atrium at RBG Centre is a Gold-certified LEED building and the home of our winter exhibit space. In the background you can see some of The Big Freeze, our 2017 winter exhibit on the ice age.

FOR THE DEFINITIONS OF DIVERSITY, EQUITY, AND INCLUSION, SEE PUBLICGARDENS.ORG/SUSTAINABILITY-INDEX/ATTRAITS/EMPLOYEE-DEVELOPMENT-DIVERSITY-INCLUSION
In May the Chanticleer gravel garden is a monochromatic palette of purple. Large granite curbstones lead the visitor through the garden, a naturalistic, yet carefully orchestrated design. Wisteria sinensis ‘Amethyst’ blooms on the arbor, while Allium jesuvinum ‘Early Emperor’ and Allium hollandicum ‘Purple Sensation’ spill down the slope. This south-facing garden, amended with gravel, is home to sharp-drainage-loving plants, such as our native Asclepias tuberosa and Parthenium integrifolium.

Mediterranean genera also thrive. Glaucium flavum, Santolina chamaecyparissus, and Salvia argentea add silver foliage to the mix. A few hardy succulents survive our Zone 7 winters; Yucca rostrata is the most prominent, reaching six feet tall on thick trunks. Many plants self-sow happily. Echinacea tennesseensis and Callirhoe involucrata especially need to be edited to keep them in check. In this xeriscape garden, supplemental water is used to establish new plants but is otherwise unnecessary.

The gravel garden is nested within Chanticleer, a thirty-five-acre pleasure garden located thirty minutes west of Philadelphia. Chanticleer has been called the most romantic, imaginative, and exciting public garden in America. The garden is a study of textures and forms, where foliage supersedes flowers, the gardeners lead the design, and even the drinking fountains are sculptural. For more information, please visit chanticleergarden.org.

Photo: Lisa Roper, courtesy of Chanticleer Garden
PENSTEMONS, COLORADO PLATEAU, ARIZONA SPECIES

Sheila Murray

One of the jewels of the western landscape, Penstemon are irresistible perennial plants known for their dramatic displays of color and their adaptability to poor soils. Penstemon morphology and ecology are highly variable, ranging from diminutive alpine residents to woody desert shrubs. A member of the Plantaginaceae (Plantain) Family, it is the largest genus of flowering plants endemic to North America. There are over 250 known taxa from North and Central America. Every state in the US boasts at least one native Penstemon. In addition, Penstemon species are highly prized by gardeners and plant enthusiasts, with over nine hundred cultivars created for the avid collector. Challenges to growing include their short life span (five to ten years), common seed dormancy, pest issues, and requirement of special soils. Many species are endemic to areas with unique soils and microclimates, making them a challenge to propagate in the greenhouse.

The Arboretum at Flagstaff is in the fortunate position to house a newly certified Plant Collections Network of Penstemon of the Colorado Plateau. We are a two-hundred-acre botanical garden located in the southwestern corner of the Colorado Plateau with one of the highest levels of species diversity and endemism. The Colorado Plateau, often considered the epicenter for diversification of Penstemon, consists of high-elevation deserts and mountains roughly surrounding the Four Corners area of Arizona, Utah, Colorado, and New Mexico. It is home to six thousand plant species, thirty-four of which are endemic to the Colorado Plateau, and Penstemon are an integral part of this landscape. The Arboretum holds thirty-four Arizona Penstemon taxa, representing over 50 percent of species found in Arizona. Our curatorial goal is to focus on the Penstemon species found in Arizona, and in the future expand our collection to include all species found on the Colorado Plateau. Penstemon species are known to hybridize readily; thus it is imperative that wild-collected germplasm and properly identified species be obtained.

Past awards from the American Penstemon Society (www.apسدev.org) have provided funds for interpretive displays, collection management, and garden enhancements. In 2014, The Arboretum received Provisional Status from the Network for our Penstemon Collection. We were able to use our Provisional Status Review as leverage to acquire a grant from the Institute of Museum and Library Services. The award enabled The Arboretum to achieve full accreditation for our collection. Specifically funds were used 1) to develop and implement a strategic garden plan for optimizing Penstemon growth, 2) to create a five-year inventory schedule for the Collection, 3) to voucher 50 percent of the Collection, 4) to increase interpretive signage, and 5) to promote the use of the Collection for STEIM (Science, Technology, Engineering, and Mathematics) education opportunities.

In 2017, The Arboretum at Flagstaff will open our new Climate Change Center, which is a series of outdoor, interactive kiosks featuring STEM education and the Southwest Experimental Garden Array (for more information visit: www.sega.nau.edu). The newly developed Penstemon Phenology Garden (size 4,080 square feet) will be featured as this exhibit’s centerpiece. The garden highlights five important Arizona Penstemon species. It will be used to teach visitors and students about phenology and will engage people in citizen science research using the Penstemon Collection. The protocols for studying plant phenology will be adapted for use in local school systems as the science of phenology incorporates many STEM skills, including observation, data collection, data analysis, interpretation, and use of technology. Data collection materials and Phenology in Your Backyard, The Arboretum’s phenology guide, are available in the garden and on our website (www.thearb.org). Collected information will be uploaded to Project BudBurst, a user-friendly, public access database for phenology data (www.budburst.org). Sheila Murray is celebrating her fifteen-year anniversary as the Research Botanist at The Arboretum at Flagstaff. Her main interests are the rare and endangered plants of the Colorado Plateau, and she contributes to The Arboretum’s mission by collecting, growing, and studying these native plants. Sheila grew up in the small ghost town of Jerome, Arizona, and has always had a love of the outdoors. She moved to Flagstaff to pursue a career in the natural sciences and received her BS in Environmental Science from Northern Arizona University. When she finds free time, she enjoys river rafting, hiking, cross-country skiing, creating botanical illustrations, and indulging in other forms of artwork. Most of her free-time activities inevitably include botany in some fashion.
PUBLIC GARDEN MAGAZINE VOLUME 32, ISSUE 2, 2017

Paris here we come

Is not that wall. A wall we build around a species or habitat, unless we change the way we live, eventually desperate, hungry people will breach resource use are the direct cause of such problems as climate change, and loss of habitats and biodiversity. No matter how big it is more important to address the cause of a problem than it is to address the symptom. Our unsustainable lifestyles and continue to conserve species and habitats—especially those that are critically endangered. But recognize that in the long run, it is important to address the cause of a problem than it is to address the symptom. Our unsustainable lifestyles and resource use are the direct cause of such problems as climate change, and loss of habitats and biodiversity. No matter how big a wall we build around a species or habitat, unless we change the way we live, eventually desperate, hungry people will breach that wall.

CONSIDER THE FOLLOWING:

• It is a social justice issue. The only way we can maintain the lifestyles we enjoy in the West is to keep most of the world in poverty. Some estimates say that it would take seven planets of resources for everyone to enjoy the lifestyle we have in the West. Impossible. Yet, most people in the world aspire to achieve our lifestyle. We owe it to ourselves and everyone else on the planet to create a lifestyle that everyone can achieve.

• It is a lifestyle issue. We need to adopt lifestyles that will allow everyone, and every other species, in the world to share in the earth’s limited resources.

• It is time to make climate change a high priority in our education programs. Some of us are already doing this. Engage youth. One of the best examples of engaging people in understanding the impact of climate change and how we are all in this together is from MIT, www.climateinteractive.org. This is based on the same model the climate negotiators used in Paris and Marrakesh. We are all in this together, not any one country can fix it—every country needs to do it. It will take a mind shift from thinking about “me” to “we,” but we can do it.

• Take action—Paris here we come. Help people recognize that they cannot wait for governments to solve the problem or meet the international targets. Make it local. Use the social norm as a motivator. Ninety percent of Phipps visitors accept the reality that climate change is happening. I suspect it is similar for most other public gardens. You can help people change the way they live. Make it easy, and show the huge impact that they can have when they take action. For example, if every visitor to Phipps switched to renewable electricity and cut out red meat once a week, it would be equivalent to driving three billion fewer miles in an automobile each year. Now imagine if this happened at all of our gardens, nature centers, and museums of natural history. Facilitate action—on the spot. In 24 states in the US, consumers can pick their electricity provider. They can choose between fossil fuels and renewable energy. At Phipps we are helping them switch on the spot. We are partnering with a renewable energy provider by selling them bulk memberships at a discount. If someone switches when they are at Phipps, Green Mountain Energy will give them a free family membership to Phipps. It’s a win-win. We’ll be happy to share this model with anyone who wants to use it, and because we are certain that there are many other ways to get people to take action, we would like to learn about any ideas you have, too.

• Remember to walk the walk and talk the talk. You know what I mean.

Lastly recognize that if our government leaders won’t lead, then the people need to lead. Let’s all step up to the plate, show everyone that we come in contact with that it is possible to make a difference, and then help them to do it, too.

Richard V. Piacentini
Executive Director
Phipps Conservatory and Botanical Gardens

For additional resources on sustainability and global climate change, please see publicgardens.org/programs/climate-change-sustainability-program/about-climate-sustainability-alliance

The election last November should be a wakeup call to all of us in the Public Garden world that a significant amount of the US population is ill informed about climate change and the catastrophic effects it will have on the planet. We need a major paradigm shift in the way we build and operate our buildings, our lifestyles, and the way we interact with the public. Being less bad is not going to get us where we need to be, and it just is not good enough anymore.

Let’s start with our buildings. Net-zero energy needs to be the new minimum. Better yet, we need to build buildings that are regenerative and work in harmony with nature. The International Living Future Institute’s (ILFI) Living Building Challenge is the best example that I know of to guide and achieve this. ILFI has a certification program for net-zero energy, too. This is a great place to start. If you can’t do it all, at the very least, make your buildings net-zero energy.

As leaders and employees of public gardens, we all care about biodiversity and habitat loss, and it is important that we continue to conserve species and habitats—especially those that are critically endangered. But recognize that in the long run, it is more important to address the cause of a problem than it is to address the symptom. Our unsustainable lifestyles and resource use are the direct cause of such problems as climate change, and loss of habitats and biodiversity. No matter how big a wall we build around a species or habitat, unless we change the way we live, eventually desperate, hungry people will breach that wall.

For additional resources on sustainability and global climate change, please see publicgardens.org/programs/climate-change-sustainability-program/about-climate-sustainability-alliance

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SMALL GARDEN BIG IMPACT

CELEBRATING FORTY YEARS!
MEMORIAL UNIVERSITY OF NEWFOUNDLAND BOTANICAL GARDEN

Todd Boland and Anne Madden

The creation of Memorial University of Newfoundland Botanical Garden was not a straightforward process. When we started out in 1971, we faced a multitude of challenges, particularly with regards to our site which was far from ideal for a botanical garden. Perched atop a windy hill and surrounded by acres of burned forest, it included areas of deteriorating buildings, buried garbage, and naturally shallow, poor soil. Indeed, eastern Newfoundland is well known for its short summers, long winters, strong winds, and abundant fog and precipitation. Coastal icing often cool the climate even further in spring.

Yet from 1971 to our opening in 1977, we removed the debris, created soil, and thoughtfully planned, built, and planted new gardens and nature trails, paying careful attention to local growing conditions. Development, growth, and the methods we employed were sustainable for the health of both pollinators and wildlife. By developing the Botanical Garden through both ecologically sound techniques and some creative experimentation, we laid the foundation for site and policy development, including our research and education programs. The Garden’s practical sustainability policies attracted interest from a community concerned about such environmental issues as native habitat loss, the plight of pollinators, and the threats to native species. Requests for curriculum-based school programs were met as early as 1973, and this program continues today.

Our enthusiastic local community eagerly engaged with the Garden from the beginning, forming a group of volunteers and supporters known as the Friends of the Garden. Our influence on the local nursery and landscape industry goes far beyond introducing rock gardening as a style of gardening. Our experimentation with new plants has vastly increased the palette of plants suitable for our region. This has greatly influenced the demand from local gardeners for native and ornamental. Foremost is our rock garden, the largest east of Montreal. With our natural rocky landscape, rock gardening is the ideal way to work with nature. Most recent was the construction of our crevice garden, a style that is now being adopted in private gardens throughout the greater St. John’s area.

From our inception we composted all our organics. This “black gold” was used as a soil amendment as well as for mulch, reducing our reliance on chemical fertilizers. With the collaboration of the City of St. John’s and the Multi-Materials Stewardship Board, we are the “go-to” place to learn about composting. To further our engagement with the community and to celebrate rhododendrons, our largest accession at over 250 taxa, we host an annual Rhododendron Festival, in conjunction with Canada’s Garden Days.

Every season our interpretive programs offer something for everyone, from pre-schoolers to seniors: annual art shows, summer camps, family events, educator workshops, and more. In 2016, we launched our inaugural Merry and Bright light festival, bringing in over seven thousand visitors to view the Garden in a whole new light during what was traditionally our closed season.

We have now proven that Newfoundland can indeed nurture a botanical garden. This year we are celebrating our fortieth anniversary of fulfilling our mission of connecting people and plants by igniting curiosity and a sense of wonder. Our Garden is more than just a pretty place. Like all botanical gardens, while we provide a peaceful refuge for beauty and relaxation, we strive to increase our connections with our community, cultivating current and future generations of potential gardeners, environmentalists, and stewards of our earth.

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Although many components of the Montgomery Botanical Center (MBC) irrigation system date back to the 1950s, there now exist new technologies that can be retrofitted onto old systems to make them more efficient, conservation oriented, and regulatory compliant (when, and if, necessary). Thanks to a grant from the Stanley Smith Horticultural Trust, MBC, in collaboration with the renowned local irrigation contractor Evergreen Sprinklers and the internationally recognized irrigation innovator Rain Bird Corporation, has devised and implemented a multi-stage program to achieve these goals.

The first step in the system upgrade was to make sure all irrigation zones, both manual and automatic, are evaluated for a Distribution Uniformity Rating (DUR), which is the measurement of how evenly water is distributed over any particular zone. Over the years many zones have ended up with a variety of types of sprinkler heads for one reason or another. For the DUR evaluation we employed a truly high-tech system and used an array of graduated "catch cans" and a stopwatch. Irregularities in distribution are noted, and subsequently we repair or replace irrigation heads as needed to achieve optimal distribution.

Next we identified the zones that are currently operated manually, a tedious, inefficient, and time-consuming process that is also prone to "operator error." For example you may end up with too much water in one zone and not enough in another. These manual zones were upgraded to automatic zones operated by smartphones. Flow rates of two hundred gallons per minute (gpm) are considered to be the norm so the sensors are programmed to set off alarms should the gpm exceed 130 percent of the norm or, conversely, drop below 70 percent. Excessive flow rates could result in the pumps burning out, while minimum flow could mean a break in the main irrigation supply line. These sensors also provide both "real-time" and historical water-flow data. While the irrigation clocks and sensors have the capability to run on a totally automatic schedule, the MBC horticulturists prefer a semi-automatic mode that allows the irrigation in-ground soil moisture sensors. Obviously the sensors can be calibrated to meet the needs of any particular zone: for example areas of karst limestone substrate tend to dry out more rapidly than heavy, poorly drained organic soils.

Finally Netafim® flow sensors (originally developed for arid agricultural operations in Israel, where irrigation monitoring is essential) fitted onto the main and auxiliary booster pumps detect pressure anomalies that can be transmitted to remote communication devices such as office computers and smartphones. Flow rates of two hundred gallons per minute (gpm) are considered to be the norm so the sensors are programmed to set off alarms should the gpm exceed 130 percent of the norm or, conversely, drop below 70 percent. Excessive flow rates could result in the pumps burning out, while minimum flow could mean a break in the main irrigation supply line. These sensors also provide both "real-time" and historical water-flow data. While the irrigation clocks and sensors have the capability to run on a totally automatic schedule, the MBC horticulturists prefer a semi-automatic mode that allows them to physically monitor irrigation zones for problems related to malfunctioning heads or minor leaks that aren’t detected by the flow sensors.

The MBC irrigation system relies on a surficial well water supply, a localized segment of the vast Biscayne aquifer. This water isn’t burdened with the costs of domestic "city water" but is constantly under pressure from the threat of saltwater intrusion associated with the vagaries of climate change and sea level rise. The irrigation upgrade grant from the Stanley Smith Horticultural Trust allows Montgomery Botanical Center to more closely and accurately track the consumption of this vital resource.
Trees for Seattle is the City of Seattle’s tree resource, encompassing all of the city’s urban forestry efforts. A major goal of the program is to grow the urban tree canopy by engaging residents in the care of the urban forest. Trees for Seattle manages several projects and initiatives aimed at accomplishing this goal, including supporting residents in planting and maintaining trees on private residential property.

Over the last four years, the University of Washington (UW) Botanic Gardens has worked to support Trees for Seattle’s residential tree planting project—Trees for Neighborhoods. The project helps Seattle residents plant street trees and yard trees and teaches tree recipients how to properly plant and maintain those trees. Since 2009 Trees for Neighborhoods has helped Seattle residents plant over 7,300 trees.

UW Botanic Gardens education department staff members work together on this project with UW students studying urban forestry, environmental horticulture, landscape architecture, and environmental sciences. We deliver Trees for Neighborhoods educational workshops focused on tree planting, site selection, and structural pruning of young trees. These training sessions help program participants select the right tree for the right place, setting them up for long-term success as responsible tree owners. Under the direction of the Trees for Neighborhoods project manager at the City of Seattle, our student staff conduct summer field evaluations of trees planted in previous years, providing residents with score cards that evaluate tree health and offer care suggestions to help the young trees thrive. The students also help residents who have applied to plant new street trees by assisting in the early stages of the evaluation and permitting process for street tree planting sites.

Trees for Neighborhoods now provides a thousand trees to residents for planting each fall. The trees supplied are typically in five- to seven-gallon containers and can be up to ten feet tall, large enough to make an instant impact in the landscape. Available tree species include a mix of evergreen, deciduous, and fruit trees, with a variety of mature sizes to ensure there’s something appropriate for every yard. The trees are grown at commercial nurseries and delivered to UW Botanic Gardens where we hold large community events to distribute the free trees. Participants attend educational planting workshops, and experts are available to answer questions. Tree recipients are also supplied with woodchip mulch, water bags, and planting and care instructions—everything they need to set their new trees on the right path to a long and healthy life. Trees for Seattle program staff follow up with participants over the next few years to provide additional tree care information and educational opportunities.

UW Botanic Gardens serves as an international hub for plant science and ecosystem research, teaching, and stewardship. Our staff have traditionally worked to advance the education and outreach components of our mission by delivering a variety of communications and services including print and online media, continuing education classes, conferences and symposia, a world-class horticultural library, and plant health care information for the public. The support we provide to the Trees for Neighborhoods project offers us a different kind of partnership opportunity that advances our work to create an informed community of environmental stewards.

Hosting Trees for Neighborhoods at our site brings area residents to the gardens who may not have visited before, giving us a chance to introduce them to our beautiful spaces as well as our programs and resources. Supporting the project also offers a valuable opportunity for our UW students to connect with local urban forestry programs and professionals and to gain experience presenting scientific information in a public outreach setting.

This partnership has helped UW Botanic Gardens connect in a new way with residents and urban forestry professionals in our region, many of whom we engage with in other ways throughout the year—at our annual Urban Forest Symposium and through educational programming provided to landscape professionals, home gardeners, and volunteers. We’ve learned that partnerships like this one, which connect like-minded organizations with common goals, allow us to deliver excellent programming and expand our reach, which helps both the programs—and the trees—continue to grow successfully!

Jessica Farmer is Adult Education Supervisor at the University of Washington Botanic Gardens in Seattle, Washington.
David Fairchild, one of the most influential plant explorers of modern times, lived and worked in Coconut Grove, Florida, from 1926 to 1954. Fairchild’s scientific study is a window back in time to when commercial botany was still nascent. The Fairchild Laboratory and Study renovation recently completed by Museologist Mark Dion is an expert rendition of a noted botanist’s private sanctuary, with widespread impacts on our local culture, and on a national scale as well.

Fairchild’s photos of early Miami chronicle days when unpaved roads, now replaced by superhighways, were common. Visitors marvel at the photos of the early Kampong site, overgrown with brush and fronted by a dirt road. Today, the property is manicured and fronted by a modern thoroughfare.

David Fairchild established the Subtropical Plant Introduction Station in Miami as well as the Office of Seed and Plant Introduction in Washington, DC. Including his private plant introductions here at The Kampong, he is credited with over eighty thousand introductions in fifty years, resulting in major impacts in both horticulture and agriculture. His laboratory tells the story of this noted explorer and botanist. Museologist Mark Dion is a specialist in period rooms, recreating specific snapshots in time for museums worldwide. Funded by a grant from the Knight Foundation, his work in telling the story of Fairchild has drawn widespread acclaim from all visitors, especially our Coconut Grove residents.

Some of the local “Grovites” remember the days when David lived here, his enthusiasm for showing people his new or unusual fruit crops, and his willingness to share his travel stories. The laboratory recreation refreshes their memories and reconnects them to our site in most endearing ways. Hundreds who have visited the lab were unaware that David Fairchild helped introduce numerous important food crops, many of which are part of our daily diet. We were fortunate enough to be included on the prestigious Art Basel tour itinerary, which allowed global travelers to appreciate the rich history of the laboratory.

Without the clutter of story boards, the room connects people to the mission of the recreation, inspires people to ask more questions, and moves them into the garden where they can quite literally see the fruits of his expeditions. The Laboratory recreation sparks the imaginations of a new generation, connecting them to a man who introduced some of our most important food crops. We are fortunate to have the opportunity to bring this museum-quality work to our local populace, to illuminate people on history so often forgotten.

Craig Morell started his career at The Kampong in January 2016 as Curator of Living Collections and was appointed Director in July 2016. Formerly the Horticulturist at Pinecrest Gardens in Miami, Craig is a career horticulturist, with nearly thirty years of his career spent in South Florida. His mission at The Kampong is to preserve the legacy of plant exploration of Dr. David Fairchild, including some very historic germplasm, and the estate on which Dr. Fairchild lived a century ago. The eight-acre Kampong is located on Biscayne Bay just south of Miami, and is celebrating its centennial anniversary.
THINGS WE LOVE THIS SPRING

SILKY ZUBAT POLE SAW
This light, aluminum telescopic pole saw is the most useful horticultural tool in the garden. You can trim thick and spiny leaves at a distance without being scratched, you can remove weeds on the ground without bending, and you can reach and remove high vines. It really extends your reach!

Submitted by Stella Cuestas, Curator of Cycads, Montgomery Botanical Center

BATTERY-POWERED TOOLS
We have been using Stihl battery blowers and hedge trimmers at High Glen with good results. Our horticulturists prefer them over gas or corded tools. We added a Stihl HLA 85 pole trimmer in 2016 for tall hedges. The Li-ion battery packs provide excellent run time; just maintain spare batteries for large projects.

stihlusa.com/products/battery-products
Submitted by Phil Dickmyer, Lead Horticulturist, High Glen Gardens

GWEN FROSTIC CARDS, JOURNALS, NOTEBOOKS
As part of Matthaei-Nichols’ mission, we feature the work of local and regional artisans in our displays and retail shop. The late Michigan artist Gwen Frostic’s linoleum prints create timeless images that capture the essence of our native Michigan flora and fauna with charm and simple grace. Choose note cards, journals, and notebooks to experience and share the beauty of our natural world.

www.gwenfrostic.com
Submitted by David Betz, Visitor Services Manager, Matthaei Botanical Gardens and Nichols Arboretum

BATTERY POWER LOVELY STATIONERY A TALL SAW

Treat Your Members to Our Special Offer

Your members are our kind of people. They love gardens, and they’re keen on visiting and supporting them. To thank them for their enthusiasm and patronage, and to introduce them to the top-quality plants, garden gear, and gifts we offer, we hope you’ll invite them to take advantage of a special 20% discount on their next order from White Flower Farm. All you have to do is visit the web address below to request postcards. We’ll ship you as many as you need, which you’re free to hand out to members, guests and volunteers when you choose. Fostering enthusiasm among gardeners is good business for all of us. Thanks for everything you do to keep things growing.

WhiteFlowerFarm.com/apga