

Botanical Gardens and the Urban Future
Garden and Landscape Studies
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ABSTRACTS

Sheila Brady

Designing Ecosystems at the New York Botanical Garden

Principal Sheila Brady, FASLA, led the design efforts for Oehme, van Sweden & Associates (OvS) commissions at New York Botanical Garden (NYBG) and the Gardens of the Great Basin at Chicago Botanic Garden (CBG). In this presentation, she will illustrate how the design of ecosystems at NYBG's Native Plant Garden (NPG) and The Gardens of the Great Basin at CBG differ from the design of the more ornamental companion plantings at NYBG's Azalea Garden. Designed as a series of ecosystems, the NPG creates legible and memorable garden spaces that highlight the beauty, diversity, and cultural significance of native plants, and showcases a commitment to education and conservation.

The Azalea Garden features an ornamental encyclopaedic collection of the world's perennials. OvS, in collaboration with the New York Botanical Garden, designed a ground plane of diverse companion perennials for the expanded collection of azaleas and rhododendrons. The herbaceous perennials peak from early spring through late summer, offering arrays of color and texture that complement the seasonal displays of the core collection. The Azalea Garden, one of the most important collections of azaleas in the United States, is the premiere venue for people to enjoy, learn about, and be inspired by the beauty and diversity of these beloved shrubs.

The Chicago Botanic Garden's ecologically functional Gardens of the Great Basin demonstrate what landscape architects can achieve when artistic expression and scientific understanding equally drive design. The 12-acre site is a model of successful cross-discipline collaboration. The result is a beautiful landscape that serves a multiplicity of needs: expanding display gardens, modelling sustainable soil practices, stabilizing the shoreline, accommodating regional storm-water management, and creating habitats. In addition to dramatic planting, the Gardens of the Great Basin at the Chicago Botanic Garden feature pathways, bridges, terraces, and overlooks.

Peter Crane

Botanical Gardens: History, Diversity, and the Future of Plants

Botanic gardens are "institutions holding documented collections of living plants for the purposes of scientific research, conservation, display and education." There are ca. 2,500 botanic gardens worldwide, most in urban areas, and together they receive approximately 500 million visitors a year. There is therefore a substantial opportunity to connect their visiting public with plant-related issues of all kinds, including responsible stewardship of the world of plants. At the same time, however, botanic gardens have diverse histories, governance and finances. This results in particular constraints and pressures, which explain many of the institutional priorities and behaviours that specific botanic garden exhibit. Nevertheless, a dominant trend in the recent evolution of botanic gardens has been increased focus on the stewardship of plant diversity, as reflected for example in the Global Strategy for Plant Conservation (GSPC), which has been endorsed by governments through the Convention on Biological Diversity. The GSPC emerged from the botanical garden community, recognizing their position as centers of expertise that are uniquely placed to help conserve and manage plant diversity. Objective IV of the GSPC is "Education and awareness about plant diversity, its role in sustainable livelihoods and importance to all life on earth is promoted" and its specific target (Target 14) is "The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes." The twin challenge for the leadership of botanic gardens is how to operationalize such a worthwhile objective, and how to balance investment in this area with other institutional priorities? This may be one area in which design can make a potent contribution, by ensuring that visitors to botanic gardens have an aesthetically and emotionally rewarding experience, as well as one that causes them to think about the future of plants. Botanic gardens, as many have already realized, need to appeal to the heart as well as to the mind.

Adriaan Geuze

Contemporary Paradises

Mikyoung Kim

Looking to the Future: New Paradigms for Botanic Gardens: The Regenstein Learning Center at the Chicago Botanic Garden and the McIntire Botanic Garden in Charlottesville, VA

With a sense of renewed purpose, botanic garden leaders are striving to transform and expand their gardens' roles in the communities they serve. They manage a delicate paradox: honoring the gardens' vital heritage of monitoring, studying and sharing horticultural research with the public, while also helping them cultivate a thriving future. Accordingly, botanic garden leaders have evolved their focus in new garden development from plant taxonomy display to a more nuanced and interactive definition of these beloved community institutions' purpose. Mikyoung will discuss two botanic gardens, the Chicago Botanic Garden and the McIntire Botanic Garden in Charlottesville, Virginia.

In designing the Chicago Botanic Garden at the Regenstein Learning Campus, Mikyoung Kim Design (MYKD) centered their vision on inspiring visitors' immersive engagement with the natural world. While traditional botanic gardens focus on viewing and admiring, the Learning Campus transcends this lineage. Evolving the visitor's journey through the garden into a multisensory and interactive experience, the landscape highlights the human experience and the ways in which our actions both positively and negatively affect the ecological world and our botanical future.

The McIntire Botanic Garden in Charlottesville, Virginia further builds on the studio's body of work in reimagining landscapes to promote learning and engagement for families. As envisioned, the project activates the existing site's ecology in novel ways to create a compelling new place that integrates the art and science of landscape with various vibrant experiences. The design richly layers the garden's elements in ways that can feel both enlivening and healing. Specifically, it features sculptural interventions that act as devices to change the visitor's bodily experiences of plant communities, mediating moments of unexpected wonder and communion with their surroundings. Ultimately, the plan will bring to life a garden in the woods that focuses on discovery and the transformative experience the natural world gives us.

H. Walter Lack

Berlin-Dahlem Botanical Garden: Botanical Scholarship and Botanical Representation

The Botanical Garden in Schöneberg near Berlin was originally founded by the Great Elector in 1679, but transferred in 1897–1910 to a larger site on the former royal estate of Dahlem southwest of the city centre. Belonging to Berlin's Friedrich-Wilhelms-Universität the Berlin-Dahlem Botanical Garden now covered 106 acres of former agricultural land. A huge complex of conservatories, the Botanical Museum, the official residences of the director, the deputy director, and the administrator were erected on this site. From its beginning, the Botanical Garden was intended as a means to represent plant systematics and plant geography on a global scale as understood by the institute's director Adolf Engler who had been the mastermind during the planning process. Judging from the sparse opening hours and many restrictions, it is evident that in the first decades it was basically the professor's garden. This is also mirrored by the limited number of features that sought to appeal to the general public, such as the creation of a small formal garden in front of the conservatories. In later decades, particularly during the years when the western sectors of Berlin were encircled by the infamous wall, the garden became more friendly towards visitors. Today, the layout of major parts of the garden—i.e. the plant geography section, the arboretum, and the conservatories—still strictly adheres to Engler's plans. In contrast, the systematic section was destroyed during the Second World War and recreated following a late eighteenth-century layout. The Botanical Garden, now belonging to Freie Universität Berlin, is at present a garden monument under the protection of the Berlin Monument Authority, while the conservatories are listed buildings. Generous opening hours make the Botanical Garden a major site for both Berliners and tourists, while, owing to the new university priorities, its use in academic teaching and research is limited.

Finola O'Kane

The Ideal Subversive Suburban Space?

The first public botanic gardens were not located at the centre of the British empire but at its more distant reaches. Sometimes this had to do with nascent national pride but more often it was to serve trade by identifying quickly 'which plants, useful in medicine, and profitable as articles of commerce, might be propagated'. The British empire's oldest public botanic garden is located in the Caribbean island of St. Vincent, where it was founded by General Melville, Chief Governor, in 1765. Edward Long, in his history of the island, was quick to chastise 'the gentlemen of Jamaica' that they had 'suffered the little colony to get the start of them', while publishing a 'catalogue of plants now growing in the public garden at St. Vincent's', among them cinnamon, vanilla, and turmeric. In 1778, the Jamaican Assembly legislated for the purchase of a site for a botanic garden at Bath, located in a valley on the eastern side of the island.

Closer to Europe, Irish gentlemen founded the first public botanic garden in the British isles in 1799. Descended from both a learned society and a university garden, the National Botanic Garden exhibited both colonial and imperial traits. Carefully positioned to benefit from northwestern Dublin's associations with both Joseph Addison and Mary Delany, its ideological position oscillated between mainland and island, elite botany and workaday farming. A rare instance of a national institution that argued for a suburban rather than a city centre setting, this preference ignited a design tradition that was less observant of the city centre's spatial supremacy and more concerned with the rich layering of suburban space. This suburban position allowed and encouraged an amalgamation of the botanic garden, the public park, the scientific institution, and the museum. This paper will examine why such colonial public botanic gardens were founded, who they served and how they differed, while also interrogating the benefits of a suburban spatial identity.

Emma Spary

Prospective Gardens in the Early French Empire, 1670-1730

By 1700, the Dutch had created a network of colonial botanical gardens which was aiding in the attempt to maintain maritime control over the worldwide trade in plant drugs and spices such as nutmeg, pepper, and tea. The ministers and administrators of Louis XIV's colonies looked on with envy: yet French state support for attempts to cultivate or trial new, potentially profitable plant crops was weak to nonexistent, and most such enterprises were localised, private ventures. This is reflected in the pattern of botanical gardens around the French empire: most were in private hands (Bourbon), and their existence was not even known to ministers. In this paper, relying on previously unused archival materials, I will reflect on how, when and why the situation changed. In early attempts to produce botanical gardens, two distinct types may be identified: the 'hospital garden', which arose in towns, in connection with the state's provision of medical services to a colony (Martinique, New Orleans), and the 'experimental garden', which proceeded in tandem with military expansion and conquest, and the construction of forts (Louisiana, Cayenne).

Gerda van Uffelen

Hortus botanicus Leiden: Past, Present, and Future

Since its founding in 1590, the *Hortus botanicus* Leiden has been part of Leiden University. The botanic garden was established on an open plot provided by the city of Leiden and surrounded by buildings within the city's boundaries. It was intended to be planted as a *Hortus Medicus* for the instruction of medicine students, but the University got a *Hortus Botanicus* with many different plants, both ordinary and exotic species; it was out of our botanic garden that the tulip established itself as a prized and much-grown crop in the Netherlands.

Substantial extensions in 1736 and 1816 necessitated the demolition of the neighboring houses and other buildings, which indicates the importance of the botanic garden. These resulted in the expansion of the plant collections. The building of an orangery in 1744 and of tropical greenhouses from the seventeenth century onwards enabled the cultivation and study of many tropical plants, especially those from Southeast Asia. Although the University has transferred its herbarium collections to Naturalis Biodiversity Centre in 2013, it has chosen to keep and support the Hortus, the oldest in Western Europe, as part of the university organization.

In the future, the Hortus and its living plant collections will continue to serve its long-term objectives. Living plants are indispensable for several types of research, such as plant taxonomy, molecular analyses, and the search for new plant compounds and their possible applications. A diverse collection of living plants is an important tool in education, so that students are able to recognize different plant species, genera and families. Living plants are important tools to raise awareness of the importance of nature and its conservation and to promote the wellbeing of the general public in a rapidly urbanizing environment.

BIOGRAPHIES

Sheila Brady's design achievements include many of Oehme, van Sweden & Associates (OvS) distinguished commissions. Brady's attention to detail and focus on ecologically responsible design is evident in her award-winning residential gardens, which include coastal estates throughout New England, and townhomes and suburban residences in Washington, DC, Virginia, Maryland, and Colorado. Her extensive work in sensitive waterfront environments has been widely publicized. Ms. Brady's recent work also includes St. Elizabeth's Redevelopment; Urban Design at Walter Reed, Caramoor Center for Music and The Arts, and The Martin Luther King, Jr. National Memorial. Brady has been elected to the Council of Fellows of the American

Society of Landscape Architects. She holds a Master of Landscape Architecture from Harvard University's Graduate School of Design and a Bachelor of Arts from George Washington University. She also studied at the Corcoran School of Art.

Sir Peter Crane is President of the Oak Spring Garden Foundation in Virginia (osgf.org), an estate of Rachel Lambert Mellon with an exquisite garden and an exceptional library focused on the history of plant science, plant exploration, gardens and landscape design. From 1999 to 2006 he was Director of The Royal Botanic Gardens, Kew, and from 2009 to 2016 was Dean of the Yale School of Forestry and Environmental Studies. He is known internationally for his research on the diversity of plant life – its origin, history, status, conservation and use. He serves on the board of the Chicago Botanic Garden, is a Board Member Emeritus of the Missouri Botanical Garden, and is a Distinguished Counsellor to the Board of the New York Botanic Garden. He previously served on the Board of Botanic Gardens Conservation International. He was knighted in the UK for services to horticulture and conservation in 2004.

Finola O'Kane is a professor of architecture at University College Dublin's School of Architecture, Planning and Environmental Policy. Her books include *Landscape Design in Eighteenth-century Ireland: Mixing Foreign Trees with the Natives* (Cork, 2004); *William Ashford's Mount Merrion*; *The Absent Point of View* (Tralee, 2012) and *Ireland and the Picturesque; Design, Landscape Painting and Tourism in Ireland 1700-1830* (Yale, 2013). She has also published widely on Georgian Dublin, Irish urban history, and Irish-owned Jamaican plantations. Appointed a fellow of Dumbarton Oaks in 2013, she embarked on her ongoing research project 'Landscape and Revolution; Ireland, France and America 1770-1810'. In 2017, she was elected a member of the Royal Irish Academy.

Adriaan Geuze is Founder and Design Director of West 8 urban design & landscape architecture, one of the world's leading practices for Landscape Architecture and Urban Design. Based in Rotterdam, The Netherlands, and New York, the West 8 team is responsible for such diverse works as Longwood Gardens' Master Plan and Main Fountain Garden in Pennsylvania (Honor Award ASLA 2018), Governors Island Park in New York City, the Kröller-Müller Sculpture Park in Otterlo, and Toronto's Central Waterfront. In 2015, Geuze and West 8 were awarded the commission to design an entirely new world-class botanic garden for Houston.

Mikyoung Kim is an international landscape architect and urban designer. This year, her firm has been awarded the prestigious Cooper Hewitt National Design Award and the American Society of Landscape Architects' National Design Medal. The design critic Sarah Goldhagen writes, "Mikyoung shows that landscape design and environmental art can be a public amenity, a social condenser, and a sustainable practice..." As Goldhagen affirms, Mikyounge's work does so "while simultaneously being a poetic art that captures and ... instigates deep imaginative thought about the many ways that every day landscapes can enrich people's individual experience and social congress." With a uniquely holistic approach, her firm's exceptional body of work has redefined the discipline of landscape architecture, inhabiting the intersection of art and science from the art of ecology to restorative landscapes. Mikyounge Kim Design's work addresses the most pressing environmental and health-related issues, while creating innovative and immersive human experiences. Kim will share projects that highlight her firm's multi-disciplinary approach to botanic garden design, integrating their artistic vision with ecological resiliency and education for all ages.

H. Walter Lack was born in 1949 in Vienna, attended the Theresianische Akademie and studied botany and zoology at Vienna University. In 1973 he obtained his PhD with a thesis in plant taxonomy and subsequently worked for two years as research assistant at Salzburg University. From 1975 until his retirement in 2014 Lack was a member of scientific staff of the Botanic Garden and Botanical Museum Berlin, and for the last 23 years, he was one of the directors at this institution. Lack taught at Freie Universität Berlin and has published widely on the systematics of the Asteraceae family as well as on the history of plant taxonomy and botanical illustration. For his book on the Bauer Brothers he was awarded the Stafleu Medal of the International Association for Plant Taxonomy.

Emma Spary received her PhD in 1993 from the University of Cambridge and has since published three monographs: *Utopia's Garden* (2000), *Eating the Enlightenment* (2012), and *Feeding France* (2014). Her interests throughout her research career have centered on the history of natural history, agriculture and chemistry in 'long eighteenth century' Europe. She is currently at work on a new book project, *Translations of Potency: Taking Drugs in the Sun King's Reign*, which traces the French state's relationship with experts on medicinal drugs from the 1660s until the 1730s, looking in particular at the growth of the colonial empire and the rise of botany and state bioprospecting. After time spent in various institutions in the UK and Germany, she returned to take up a position at Cambridge in 2010.

Gerda van Uffelen was born in Rotterdam, The Netherlands, and studied biology at Leiden University. She read geology as a minor for her BSc, and chose ecology, microbiology and plant systematics as her Master's subjects. She investigated spore morphology of the fern genus *Pyrrosia* and wrote her PhD thesis on *Morphogenesis and Evolution of the Spore Wall in Polypodiaceae*. Since 1993, she has been collection manager of the *Hortus botanicus* Leiden. In that capacity she is responsible for the plant registration, collections website, and part of the planning and planting of this botanic garden. She participates in

the Association of Botanic Gardens in The Netherlands, and is secretary of the Clusius Foundation, which promotes the interest in historic and cultural aspects of gardens, landscape and botany.