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Botanic Gardens: Modern-Day Arks (review)

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arising from the First World War. Migge's "Green Manifesto," produced in 1919, extended his call for community garden-making to become a national people's movement of working gardens. In 1920 Migge and his family moved into a house at Wörpswede, where the artist Heinrich Vogeler had created a self-sufficient colony. There was also the Settler's School, Wörpswede, which was run by Migge and his business partner, Max Schemmel, to teach practical gardening skills to young people. It attracted much attention and students from other countries, and eventually Migge and Schemmel worked from Berlin and Breslau (Wrocław).

At a time of greater postwar stability, Migge became involved in making gardens for large *siedlungen*, working with architects, including most significantly, on Ernst May's and Martin Wagner's *Grosssiedlungen*. This inner colonisation, as Migge called it, provided extremely large settlements for the over-populated cities on their outskirts, with gardens or allotments enabling the inhabitants to be self-sufficient. Rows of similar houses were built without ornamentation. With Leopold Fischer he pursued the concept of interconnection between house and garden, with fruits and vegetables washed in a ground floor room next to the kitchen, and a room of glass facing the garden. Water from the bath and kitchen sink would be taken by underground pipes to the garden, and a dry toilet would take human waste for composting outside. By 1927 there were allotment colonies throughout Germany, and Migge's claim for the "technological or biotechnic garden" could be justified by the provision of sprinkler systems and electric tillers and the attempts to "industrialise" gardening by laying out, with standard measurements, "components" as planting beds, plants, paths, enclosures, and pavilions (all similar to Theodor Lange's earlier ideas) (204).

There was collaboration with architects such as Bruno Taut, Martin Elsaesser, and Ernst May on other private gardens, and his own garden at Sonnenhof. But by the 1930s he became influenced by the conservative approach to landscape of the National Socialists, possibly because their supporters were able to provide work. He had quarrelled with most of his friends before his death in 1935.

Leberecht Migge's life was complicated and contradictory. David Haney's analysis of his work and theory is thorough and well researched, with no source left unexplored. Not only does he achieve his aim of setting Migge's work in the context of modernism, but explains his tortuous pursuit of a third way

between modernism and conservatism, which Migge more or less achieved.

Dr. Janet Waymark is a Senior Research Fellow at the Institute of Historical Research, University of London, and has taught Landscape and Garden History. She is the author of *Modern Garden Design: Innovation Since 1900* (Thames & Hudson 2003) and *Thomas Mawson: Life, Gardens, and Landscapes* (Frances Lincoln 2009).

Botanic Gardens: Modern-Day Arks

by Sara Oldfield. 2010. Cambridge, MIT Press. 240 pages, 200 color photographs.

\$29.95 hardcover.

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Reviewed by Laura R. Musacchio

Landscape architects have always had a curious relationship with plants and botany. Everybody who has pursued a landscape architecture degree remembers professors' warnings not to create planting designs like a "botanic garden" or "arboretum"—an emphasis on single-specimen plants with sometimes unusual horticultural traits (for example, topiary shaped into animals or big trees bred to have plum-colored leaves) that create one of the major sins of landscape architectural design—a cacophony of visual focal points. For those of us who earned degrees in the mid to late 20th century, large mass plantings of a single, usually non-native, species were one benchmark of successful planting designs. This tradition, which some can argue continues today to some degree, has left landscape architects strangely bereft of botanical knowledge whenever they utter the word "plant material" when they cannot identify a plant to the genus or species levels, which is more often than anyone would like to admit. Yet, interest in botanic knowledge and planting design in landscape architecture—and more recently architecture—have experienced a quiet renaissance as projects like the Lurie Garden in Chicago and the Highline in New York City demonstrate why public spaces with rich botanic diversity, which are inspired by each region's native landscapes, can please just about everybody including the public and design critics.

Landscape architects' changing attitudes about plants—meaning plants and botany matter—makes for fertile ground for a book like Sara Oldfield's *Botanic Garden: Modern-Day Arks*. Ms. Oldfield is based at the Royal Botanic Gardens, Kew

and is Secretary General of the Botanic Gardens Conservation International. The mission of the latter group is “to mobilize botanic gardens and engage partners in securing plant diversity for the well-being of people and the planet” (Botanic Gardens Conservation International 2010). Her richly-illustrated book challenges readers to rethink the Victorian image of botanic gardens with glass conservatories and annual flowering displays, which has lingered in the popular media and the public’s minds well into the 21st century. From her perspective, botanic gardens are the new global arks and genetic stewards of humanity’s coevolution with plants. With 200 color photographs as evidence of this mission, her approach to the subject matters makes the science and practice of plant conservation easily accessible to an international audience including the public, designers, researchers, students, journalists, and politicians.

The book features precedents to protect threatened plant species and their habitats, ecosystems, and landscapes. In the introduction, she succinctly explains the nature and extent of plant extinction crisis and how botanic gardens play an essential role in plant conservation. Following the introduction are sixteen precedents of leading botanic gardens and international collaborations from a wide range of countries such as the United Kingdom, France, Germany, Turkey, United States, Mexico, Brazil, China, Indonesia, Uganda, Madagascar, and Australia. Each precedent features a concise synopsis about the origins of the botanic garden or collaboration, threats to its particular ecoregion’s flora, important plant species of concern, major projects to protect its ecoregion’s unique flora, and examples of conservation science, practice, and outreach. After the sixteen precedents, Oldfield closes with a short conclusion about future planning issues, additional readings, and important web sites of non-governmental organizations and global biodiversity policies.

An important message from all of these precedents is that botanic gardens are a global strategy for protecting biodiversity and promoting sustainability across scales. They are becoming internationally recognized for their missions that are centered on understanding the interactions between biodiversity, cultures, and urbanization. To prove this point, Oldfield has included a number of precedents that coincide with global biodiversity hotspots like Brazil’s Atlantic Forest, Mesoamerica, Cape Floristic Province, South Africa, and Southwest Australia, which are ones that Myers et al. (2000) recently rank as highest conservation priorities for global biodiversity. For

example, the Rio de Janeiro Botanic Garden in Brazil, which is this country’s oldest botanic garden and was established to acclimatize agricultural crops in 1808, is a core site in UNESCO’s Atlantic Forest Biosphere Reserve, which is a rainforest system with over 20,000 plant species.

After reviewing this book, I can find a number of reasons why landscape architects will want this book in their collection. First, the most impressive aspect of this book is the breadth of the sixteen case studies represented. Landscape architectural educators will appreciate how the sixteen precedents are organized with enough information and photographs to be used in lectures and design studios. The precedents represent many of the world’s biodiversity hotspots and are often places that landscape architectural educators have not visited before. The narrative style of each precedent makes botanical science accessible to students at a beginning level of landscape architecture and horticultural programs, and the visual format of the precedents are helpful for students to learn how this type of research can be used to inform the design process. One suggestion of improvement to make these precedents even more useful would be more maps and plans showing where the botanic gardens are located in their respective ecoregions and countries and a plan of the botanical garden and its collections.

A second strength of this book is how many of the precedents are located in some of the world’s major cities, so there is an important urban conservation message about how botanic gardens can enhance urbanites’ contact and appreciation of nature. In fact, the presence of botanic gardens may help urbanites better understand what they are missing in their lives—enough access to urban nature. Examples of this emerging perspective can be found in the articles like Pinheiro et al. (2006) who present a proposal for a newly established Municipal Botanical Garden in Bauru, Brazil and Ward et al. (2010) who studied visitors at six of South Africa’s botanical gardens.

A third strength of this book is its numerous color photographs. The breadth of different types of plants and landscapes in this book is very educational in itself and one of the major reasons to purchase this book. One of the most unique aspects of the book is the photographs showing people practicing botanical conservation in different settings and with different tools. For an educator, these different photographs would be a helpful addition to lectures in courses like ecological design, planting design, plant identification, landscape ecology, and urban ecology.

I found this book to be delightful to read because it will resonate with many people from all walks of life. There are plenty of books for specialists about the science of botany, biodiversity conservation, and ecological restoration. This is a book that you can give to a relative and say, “This is what landscape architecture is about.” Better yet, this is a book that you can give to any designer, and you will truly win a place in their heart.

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The Landscape of Contemporary Infrastructure

by Kelly Shannon & Marcel Smets. 2010. Rotterdam: NAi Publishers. 272 pages, including front/back piece, bibliography, index, credits, authors biography, and acknowledgements. Color photographs and black and white illustrations. €59.50 hardcover. English Edition ISBN13 978-9-056-62720-1

Reviewed by Barry Lehrman

The Landscape of Contemporary Infrastructure by Kelly Shannon and Marcel Smets is an ambitious and provocative book that is not about landscapes or infrastructure, but is about our culture of mobility as expressed through architecture and

monumental works of engineering. The book consists of a series of critical essays on topics ranging from the “imprints of mobility on the landscape” (13) to “infrastructure as public space” (185) with a diverse cast of supporting case studies that are a good read and useful reference. The critical essays are used as short introductions to a theme that the subsequent case studies illustrate. These essays deserve to be longer, to allow for the myriad of ideas to be explored more fully.

Regarding the topic of landscapes, there are several eloquent statements made throughout the book that are worth sharing on how infrastructure defines the landscape:

Once married with architecture, mobility, and landscape, infrastructure can more meaningfully integrate territories, reduce marginalization and segregation, and stimulate new forms of interaction. It can then truly become “landscape.” (9)

But these few insights do not make the book about landscapes, or landscape architecture.

The etymology of infrastructure references the Latin for supporting structures, with the modern usage shifting to mean the entire network or system. “Infrastructure” is used throughout the book as a reference to the (monumental) nodes within the transportation network such as stations, bridges, and airports. These (large) projects may fall into the realm of civil engineering, but are just a fraction of the entire system. If only the authors had spent more time exploring the definition of infrastructure instead of assuming it was apparent.

In the introduction, the authors write how “the universal concern with sustainability and predicted consequences of climate change will most likely lead to major breakthroughs in rethinking the interplay between infrastructure and landscape” (11). But the authors never follow up with any significant discussion about road ecology, the energy used by different modes of transit, urban heat islands, stormwater, environmental justice, or the public health implications of any project. These are all issues that have been gaining momentum for most of the last decade or two, so their omission is curious.

The authors are very optimistic about the benefits of all transportation projects. This is most evident in their failure to condemn even the most oppressive acts of political subjugation like the Qinghai-Tibet Railroad (222), which is given the title “Colonizing the Roof of the World.” They gloss over of how the project was met “predictably with a good deal