The possibility of being appointed director of the Arnold Arboretum in 1978 had come as a considerable surprise, but I jumped at it. Ever since my first professional appointment in 1962 as forest botanist in the Sultan of Brunei’s government, I had been sending plant specimens to the Arnold as one of the six leading botanical research institutions both within and outside the Far East that specialize in the flora of East Asia, tropical as well as temperate. I respected the Arnold’s scientific reputation in large part because of former Arboretum director Elmer Drew Merrill’s astonishing achievements on the flora of the Philippines and southern China. Arboretum notables Ernest Wilson and Alfred Rehder were also well known to me and, as a life-long gardener and amateur horticulturist, the Arboretum’s unique design by Frederick Law Olmsted intrigued me.

Mary, my wife, and I will never forget our first glimpse of the Arboretum. During my interview, I sensed unhappiness among staff; morale was low. Mary was asked why she would wish to leave Scotland and her sheep; “Why on earth do you wish to come to this place?” quizzed another. Even the housekeeper in the fine old guesthouse at the faculty club, where we were accommodated on the Harvard campus, expressed the same feelings, and the (somewhat mythical) view that the Boston area had a crime level unimaginable in Aberdeen.

When I arrived, curation and the living collections policies bore the mark of the celebrated horticulturist Donald Wyman who had been at the Arboretum from his appointment by tropical systematic botanist and director Elmer Drew Merrill in 1935 until his retirement in 1970. Wyman’s interest had been in ornamental horticulture, reflected in his book Wyman’s Gardening Encyclopedia, still the most comprehensive text specifically designed for American gardeners. The Arboretum then, as now, continued to sustain the keen interest and support of many members of the Garden Club of America and the Federation of Garden Clubs, as well as the ornamental nursery industry. But I was skeptical that Harvard and its upper administration really understood its fundamental scientific importance, nor the importance of its potential role within the university. Indeed, only one director following Charles Sprague Sargent, Karl Sax, had used the living collections in his research.

But research universities focus on endeavors that advance scientific theory. The Arboretum’s global herbarium collection, and with it the systematic botanists, had been removed to Harvard campus in Cambridge in the 1950s on the recommendation of a review chaired by Professor Irving H. Bailey. That decision alone led to nearly a decade of litigation between the University and the Association of the Arnold Arboretum, Inc. Harvard’s adjacent Bussey Institute for plant research finally closed near that time, its distinguished faculty, scholars and researchers having been relocated to Cambridge two decades earlier in the 1930s. The Arnold Arboretum had become a backwater for the University, indeed “an orphan institution” within the broad missions of the University to educate and discover. Among faculty, Carroll Wood was alone in running a course based on the collections by our time, though Peter Stevens also used them later.

Around the time I assumed my position, the Jamaica Plain-West Roxbury neighborhoods had been experiencing long decline, and this, too, had impacted the Arboretum. Trash collection had become a major activity for grounds staff, kids periodically drove beat-up automobiles off the summit of Peters Hill, while two corpses were discovered in our first year, one head-first down a road drain. So, there was no shortage of challenges, but that gave the job particular interest!

Once I accepted this challenging position, it became my goal to reinvigorate the research functions of the living collections of the Arbo-
Colleagues in Cambridge had to be convinced that a systematic collection of specimen trees could be a resource for cutting-edge research. But first the living collections themselves had to be reviewed, and a new curatorial policy defined and executed, before a convincing case could be made. Because Sargent, on advice from Asa Gray, one of the world’s leading botanists in his time, had established a systematic collection of woody plants, carefully selected and documented, the key was to bring this foundering vision back to the fore. As I soon discovered, the Arboretum could then assume a unique role among gardens in Boston that complemented Boston’s other two great living botanical and horticultural gardens: Mount Auburn Cemetery, a horticultural landscape focused on trees; and the Garden in the Woods, a native wildflower garden. Together, these three wonderful botanical collections could together offer the public a diversity of plants unequaled anywhere else in the New World, and in very few other places elsewhere. I realized that our collective objective should be to complement, rather than compete.

My first quest, therefore, was to see the original Olmsted road plan and planting scheme. As Sargent had intended, the collections were laid out in such a way that a visitor could observe the families of trees hardy in the climate of Roxbury “without alighting from his carriage.” On inquiry, I discovered that the Arboretum library did not have the plans, nor was it clear where they could be found! But the old Olmsted firm buildings and archives still existed at Fairsted in Brookline, thanks to the interest and commitment of the landscape architect Joe Hudack. Arboretum archivist Sheila Connor spent a fortnight searching for the original plans in a garage full of Olmsted’s...
original works; she found them and retrieved them for copying. Only later, Fairstend became a National Historic Site, while the original plans are now in the Library of Congress.

One must recall how revolutionary Olmsted’s landscape philosophy was in the late nineteenth century. This was the time when leafy suburbs started to expand on a grand scale, when a new industrial urban rich could express their fantasies in ornate gardens. A vast array of plant introductions from other regions of similar climate had become available during the nineteenth century, to decorate garden space and to ornament domestic architecture. John Claudius Loudon, in England, was the leader, adorning colorful but often fussy gardens with masonry in formal classical mode while, by the end of the century William Robinson was promoting mythical bucolic utopia in elaborate pastiches. But Olmsted returned to those more serene and unified landscapes, when the whiggish English aristocracy of the eighteenth century could afford to create scenes recalling Claude Lorraine’s paintings, and of sufficient scale for architecture to be subordinate to nature. Perhaps significantly, these potentates were against the king and often much in sympathy, politically as well as esthetically, with the American project [did you know that Thomas Hollis, whose name is commemorated in the Harvard library system, Hollis House, and the town of Holliston, was a landowner here in Somerset, England, and a major Harvard benefactor who never visited America?]. The foremost proponent of their mythical landscapes, Lancelot “Capability” Brown, used mass plantings of native trees to sculpt his spaces with only the occasional exotic as punctuation. Olmsted was in that spirit and I was empathetic, having been at a high school set in one of Brown’s creations.

That was the time when Sargent, Gifford Pinchot, and their colleagues were instigating the first systematic survey of the American tree flora, gauging the extent of America’s forests and revealing the enormous diversity of native trees and their potential for parks and gardens—in comparison to England’s rather paltry thirty-five native tree species. Olmsted, although responsible for the plan of Biltmore and other great American private estates in the Brown tradition, was primar-
ily focused on bringing an appreciation of natural landscapes to the general public in city parks, university campuses, and in his involvement with the growing conservation movement. Harking back to Capability Brown, he exploited the majestic spaces of the new continent including the growing cities, and achieved what was unachievable in crowded Europe. This accomplishment can still be admired and cherished in Boston's Emerald Necklace. Olmsted's Arboretum plans revealed how he seamlessly combined his philosophy of landscape design with the requirements of a systematic botanical collection. Bearing in mind that trees within genera and even families share much architecture in common, groves of tree families, rather than species, can achieve a similar effect in the landscape. But cultivars selected for outstanding color or shape must be used with utmost discretion.

Thus it became clear that the Olmsted-Sargent design and planting plan not only provided an optimal solution to the design of an arboretum whose purpose was both to provide a representative systematic collection for systematic and comparative research, but it is a historic landscape for designers and planners: a park within which the public can both recreate and learn. I realized that such a project remained unique. The Royal Botanic Gardens, Kew, are a historic landscape, but their land is uncompromisingly flat, denying the curving sweep of Olmsted's contour-hugging roads at the Arnold. Neither did Kew start with a clear accession plan. The aim at the Arnold, to introduce at least three provenances of each taxon, to record location of collection, and to ensure nomenclatural verification with an herbarium voucher, is known to me in only one other great nineteenth century botanical garden, Buitenzorg, which was originally established by the Dutch as an ornamental garden around the palace of their governor-general of the East Indies. Modeled after the king of Prussia's garden Sans Souci ("carefree"), Buitenzorg was set in Bogor, the town that was built as the colonial administrative center on the island of Java. The gardens were reorganized and landscaped under Stanford Raffles, founder of Singapore, who, in his twenties, governed the Dutch East Indies for the British who had expropriated them during the Napoleonic wars. The gardens became a scientific establishment thereafter, while remaining a public park. For me, with a decade in Borneo at the start of my career, the plant explorations of Sargent and Engelmann west of the Mississippi River recalled the great Johannes Teijsmann. Thanks to his intrepid explorations of Borneo and Sumatra in leech-gorged clogs, the Buitenzorg gardens [now the National Botanic Gardens of Indonesia] hold the world’s greatest collection of tropical woody plants. From the outset they too had been meticulously documented and curated. And they are beautiful to look at, though nothing compared to the Arboretum! And they have had a research laboratory on their grounds for over a century [though they, too, recently had their herbarium moved to Jakarta by unthinking biological policy-makers].

My prime objective, of returning the Arboretum to the fold of great research institutions
within a research university, had therefore to be to review collections policy, and especially to redefine accessions policy. This was admirably accomplished under horticultural taxonomist Stephen Spongberg’s leadership. This resurgence also called for enhanced documentation and verification of the living collections. To accomplish this, with National Science Foundation funding, herbarium vouchers were obtained, afresh or for the first time, from all established living collections and sent to taxonomic authorities for verification. That project was led by David Michener, who had little difficulty in attracting a burgeoning team of enthusiastic volunteers. And collections documentation and management was computerized: BG-BASE was introduced by its creator, Kerry Walter, who had come with the fledgling Center for Plant Conservation to whom we had offered the Hunnewell Building attic, at that time unreconstructed. This critical and widely used database system was based on the Arboretum’s documentation and workflows, and the Arboretum became the very first user of BG-BASE. Since then, these pioneering efforts in curation and collections management have been enhanced to bear the fruits that represent the Arboretum’s current superb program led by Curator of Living Collections Michael Dosmann.

The program of public education, which expanded as membership in the Friends of the Arnold Arboretum had grown, was awarded a major grant to initiate a schools program, including a botany and interpretation program for teachers. In the meantime, we were reaching out to local communities, and to the West Roxbury police who received a Christmas cake from my unstoppable and persuasive Mary. This worked with such effect that officers on horseback soon appeared. And a crash campaign against trash resulted in a dramatic response from the public and less work for grounds staff. Meanwhile the gentrification of Jamaica Plain, Roslindale, and West Roxbury, which was to utterly change community interest in the Arboretum, was starting.

Thanks also to Mary’s involvement with our volunteers, a support group, the Arboretum Associates, was formed. The group successfully raised funds for a variety of Arboretum projects that had heretofore been on the back burner. The annual plant give-away and plant sale became a major event thanks to the support gained by the Associates among leading nurseries. For instance, an accompanying auction attracted media attention: Bids came from as far as Paris, and a yellow-flowered Clivia went for a princely $2,000!

But returning active fundamental research to the living collections remained an unresolved challenge. Harvard is a “guided democracy.” The heart and soul of Harvard is the Faculty of Arts and Sciences [FAS]. All academic policy, including

The late 1970s and early 1980s saw an upswing in violence and vandalism in Boston, which led to a subsequent drop-off in visitation to city parks. In response, the Arboretum collaborated with several parks associations and the Boston Parks Department to create the Boston Park Rangers program, with the goal of increasing safety and visitorship. Seen here, mounted Park Rangers interact with Arboretum visitors along Meadow Road in 1983.
faculty appointments, rests with the faculty themselves. The university’s schools have their own faculty and policies. But the allied institutions, such as the Arnold Arboretum, are in a no-man’s land in which responsibility for faculty and research appointments has changed from time to time. Those allied institutions that are recognized as essential assets for FAS academic departments were in the best position, for their appointment priorities coincide. But the director of the Arnold Arboretum, clarified by the lawsuit of the fifties, reported directly to the university’s president. Derek Bok, president at that time, was
determined to bring the directors of Harvard’s rich panoply of allied institutions, who understandably were perceived as unfettered oligarchs, under appropriate authority within FAS. This intent was particularly desirable in plant science, which was and still is fragmented under several institutions, each with its own endowment: four herbaria (the Arnold Arboretum, Gray, Ames, and Farlow), the Botanical Museum, Harvard Forest, and the Arnold Arboretum. Only in the case of the Arboretum is there a legal constraint on subsuming the institution within the program of an academic department—and only the Arboretum possessed a sufficient and substantial endowment. President Bok insisted that all research appointments, both curatorial and faculty, receive the support of the faculty of that academic department whose mission was closest to the Arboretum’s, in this case, Organismic and Evolutionary Biology (OEB). This at once orphaned the applied research in horticulture and forestry for which the Arboretum had built a distinguished reputation. The Museum of Comparative Zoology (MCZ) had an invaluable research and pedagogic relationship with Harvard’s school of applied zoology: the Medical School. But there has been no botanical equivalent at Harvard since the Harvard Forest’s program in forestry ceased in 1931. Research appointments at the Arboretum were then exclusively in the field of systematic botany (taxonomy), at that time no longer at the cutting edge of theory as in Sargent’s day, although there was about to be a renaissance thanks to advances in molecular genetics. Research was confined to the herbarium, which had been amalgamated with other herbaria in Cambridge.

I saw limitless opportunities for exciting new comparative research that would avail of a systematic collection of living trees, but colleagues in the Arboretum and OEB were unconvinced, skeptical whether candidates of stature could be found. Thanks in large part to the support of Professor Lawrence Bogorad, who chaired the committee of directors of biological institutions at that time, I was able to initiate a search for a junior faculty appointment on the Arboretum staff, in root biology. Bogorad happened to be a distinguished colleague in a different department, Cellular and Developmental Biology. John Einset was appointed, and a modest lab set up for him in the Dana Greenhouses headhouse. His work, on the evolution and systematics of hormonal response to root initiation, was pathbreaking and of both theoretical interest and practical application. Besides, he had the friendly and sympathetic personality that made him a superb instructor and a star among our volunteers and Friends. But Einset did not succeed in gaining tenure, and opinion hardened against my experiment. Most difficult, I was convinced that no research program would flourish at the Arboretum without a good field laboratory, which would allow fresh plant material from the living collections to be brought in at once for study and experiment.
Without researchers on the staff who wished to avail of a laboratory, I sought to attract the interest of faculty in the several plant science departments in the universities of the Boston region. Thanks to some beneficent friends of the Arboretum, funds had been promised for construction of a modest lab. But new laboratories are normally approved at Harvard only where there is a potential or existing faculty to attract to them, or where a group of existing faculty campaign for one. Unfortunately, my own research in tropical tree biology could hardly be said to avail of our temperate living collections. Had I depended on the living collections in Jamaica Plain and Roslindale, a case could have been made as a condition of my appointment. Instead, a conclusion was reached at a meeting of the OEB Visiting Committee in 1988 that the Arnold Arboretum should retain a separate existence from the department and therefore FAS, and that no strong case therefore existed for faculty appointments on its staff. Lawrence Bogorad, a past president of the American Association for the Advancement of Science, alone continued to support my viewpoint: It was clearly time for someone more suitably placed to take up the challenge. Eddy Sullivan, educator and at that time vice-mayor in the City of Boston's mayor Kevin White's government, who had become a staunch supporter in my negotiations with the city, quipped, “You don’t have to worry, Peter; if it all fails, you can always go home to Ireland”!

Seen in this setting, it was no surprise that my successor as Arboretum director, Bob Cook, was not initially optimistic about the prospects of my case to embed the university’s research back into the Arboretum. Bob had come from directing Cornell Plantations, which enjoyed a successful research and pedagogic relationship with academic departments in one of the leading universities in both fundamental and applied agricultural research. In the expected way, he arrived with a new broom. It was not long, though, before he came to realize the importance, even if against all odds, for building a laboratory at the living collections if they were to stand any chance of returning to Harvard's academic fold. Freed of faculty influence as he was by the Arboretum’s detachment from FAS, it is to Bob’s great credit that with dogged determination he gained the support of the president’s representatives in the administration. Those were the times of skyrocketing endowment values, and Bob’s ambition came to vastly exceed my wildest dreams. But he—and the endowment—paid a heavy price when the recession of 2008 arrived. But the new laboratory building was nearing completion; it was fortunately too late to go back. Bob Cook should be remembered as the director who successfully brought the Arnold Arboretum back to a position where it could valuably contribute to Harvard’s research and pedagogic mission, and in which it could reignite a major program in fundamental tree research—but this is his story to tell. For the first time in almost a century, the magnificent new Weld Hill Research Building might serve as a magnet for a new director, who could be a leader in a field that would avail of both them and what is now again the outstanding research collection of living trees in the temperate world.

And so it has befallen! In spite of severe budgetary constraints, current Arboretum director William (Ned) Friedman has brought the new laboratory building to life with graduate students, with new faculty and classes availing of the living collections, and is attracting researchers from other institutions. Most importantly, thanks to a new generation of faculty in OEB and changing understanding in the Harvard administration, Friedman has been able to gain the university’s support for advancing the Arboretum’s scholarly mission in spite of current financial constraints. And in the spirit of the original intent, the public programs have been enriched by enhancing public appreciation of science. Regular research seminars have returned to the Arboretum, while the Director’s Lecture Series is introducing increasing audiences to a variety of issues in the social as well as biological sciences. My dream has indeed come true, and with a flourish!

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