



A treasure of Chapultepec Park, the once beautiful giant, El Sargento (or El Centinela), died in the 1970s. Like most of the massive bald cypresses that witnessed the fall of the Aztec empire, it succumbed to the rapidly changing environment in and around Mexico City. The species—*Taxodium mucronatum*, the Mexican, or Montezuma, bald cypress— was voted National Tree of Mexico during the celebration of the centenary of independence in 1910.

by the many tourists and those who use the little chapel nearby. Although the small lawn around the giant is irrigated, this cannot replace the loss in humidity. In 1994, major changes were completed: the main road was diverted and the formal park with paths and flowerbeds around the trees extended. These have been major steps forward but by no means enough to secure the future of the giant in Oaxaca.

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The authors are researchers, Dr. Debreczy with the Massachusetts-based International Dendrological Research Institute and Dr. Rácz at the Hungarian Museum of Natural History. They are working on the Coniferae (Gymnospermae) volumes of their dendrological atlas with original field research, photo documentation, and connected conservation activity. For more information on their project, write IDRI Inc., P.O. Box 812910, Wellesley, MA 02181, U.S.A., or find them on the WEB at <http://world.std.com/~jegan/idri.html>.

To assist the group dedicated to saving El Arbol del Tule, contact Patronado Estatal de Promotores Voluntarios, 604 García Vigil Oaxaca de Juárez, Oaxaca, Mexico.

The St. Vincent Botanic Garden—The Early Years

Richard A. Howard

Late in the eighteenth century, while France and Great Britain were vying for control of the sugar-rich Caribbean islands, the first program of plant introductions in the British West Indies was instituted on the small island of St. Vincent. The garden's second superintendent—a master plantsman and collector of more than 100 plants new to science—not only expanded that program but also began propagating and distributing new discoveries from around the world.

The peace treaty signed in Paris in 1763 ended for a brief period the fighting between Great Britain and France in the Caribbean. British general Robert Melville (1723–1809) was appointed governor of the southern British Caribbees—Dominica, Tobago, Grenada, St. Vincent and the Grenadines—and made Grenada his headquarters. In June 1765 he visited St. Vincent and discussed with George Young, surgeon of the military hospital there, his plan for a botanic garden, primarily to provide medicinal plants for the military as well as to improve the life and economy of the colony. Dr. Young agreed with the proposal, and Melville ordered that six acres of land previously designated for military use be set aside for the garden, with Dr. Young as the superintendent. This marked the beginning of the St. Vincent Botanic Garden, which eventually expanded to twenty acres.

The garden was to serve as a repository for all useful plants that could grow on St. Vincent but also, in contrast to the botanic gardens at Kew, Oxford, Cambridge, and European botanic gardens at the time, as a nursery for plants to be distributed around St. Vincent and to other islands. Melville wrote to Young in 1766:

I need not repeat to you how desirous I am that my foundation of a botanical plan entrusted to your skill and perseverance should prove successful, nor do I suppose it necessary that I give you fresh assurances how much my attentions and support may be relied on, for already you know my assistance shall be as great as my situ-

ation and multiplicity of public affairs will possibly permit. . . . The articles of plants and seeds commissioned from the Main near Honduras I shall soon hope to receive, and seeds of the best cinnamon from Guadeloupe. If you have once made tolerable progress in raising useful and curious plants, I should not despair of obtaining from Home encouragement in books, machines, instruments, etc., but till then I find I must hazard what expenses are unavoidable (as I have already done). . . . Pray get as much information as possibly you can from all quarters relative to the indigenous medicines. It is against your craft but would be highly beneficial to the public and do yourself honour. And I should think for this purpose physical practitioners of the country, natives of experience, and even old Caribs and slaves who have dealt in cures might be worth taking notice of, and if at any time you should think that a secret may be got at or even an improvement for small expense, I shall readily pay for it.^{1,6,8,14}

In spite of Melville's promises, the government in London did not fund the garden, and neither of Melville's two successors as governor, Leybourne and Morris, was willing to assist in its maintenance. Nevertheless, by drawing on a variety of resources, Young was able to initiate the first program of plant introduction in the British West Indies. The War Department and the East India Company sent seeds and plants from tropical India and from British North Borneo, Sabah, and Sarawak in the East Indies, and others may have come from French horti-

culturists in the area. Since by 1770 Young had received only two plants of the cinnamon promised by Melville, he traveled to Guadeloupe himself to obtain ten more; in 1771 he obtained 1,200 seeds from a tree in Grenada from which he grew an additional 130 plants.

Proof of Young's success in spite of limited resources is found in a 1773 publication by John Ellis, an English botanist with interests in the Caribbean, entitled *Some Additional Observations on the Method of Preserving Seeds from Foreign Parts, for the Benefit of our American Colonies, with an Account of the Garden at St. Vincent, under the Care of Dr. George Young (1773)*, in which Ellis states:

Dr. Young has favored me with a catalogue of what plants are now growing in this garden, and of the plants he has lately collected here to carry out with him; which I take the liberty to insert, for the satisfaction of the public.

Ellis listed those plants and added, "Besides these articles, there are several without names that have been raised from Chinese and other seeds." A second list indicated those plants Young would be able to get from the royal and other botanic gardens in and about London.⁵

In the same year, London's Society for the Encouragement of Arts, Manufacture and Commerce awarded its Gold Medal to Young, "for the

Lithographs by Reverend Lansdown Guilding, 1824, from his Account of the Botanic Garden in the Island of St. Vincent (1825).

1. House of the Superintendent
2. View of the Botanic Garden St. Vincent, taken from the Superintendent's House
3. Botanic Garden, from the bottom of the Central Walk



Plants of the St. Vincent Botanic Garden, 1773

The following plants were reported by John Ellis in 1773 as growing in the St. Vincent Botanic Garden due to the efforts of Dr. Young. Over half are of reported medicinal value, reflecting Young's service as a physician to the military forces in the Caribbean.

MEDICINAL PLANTS

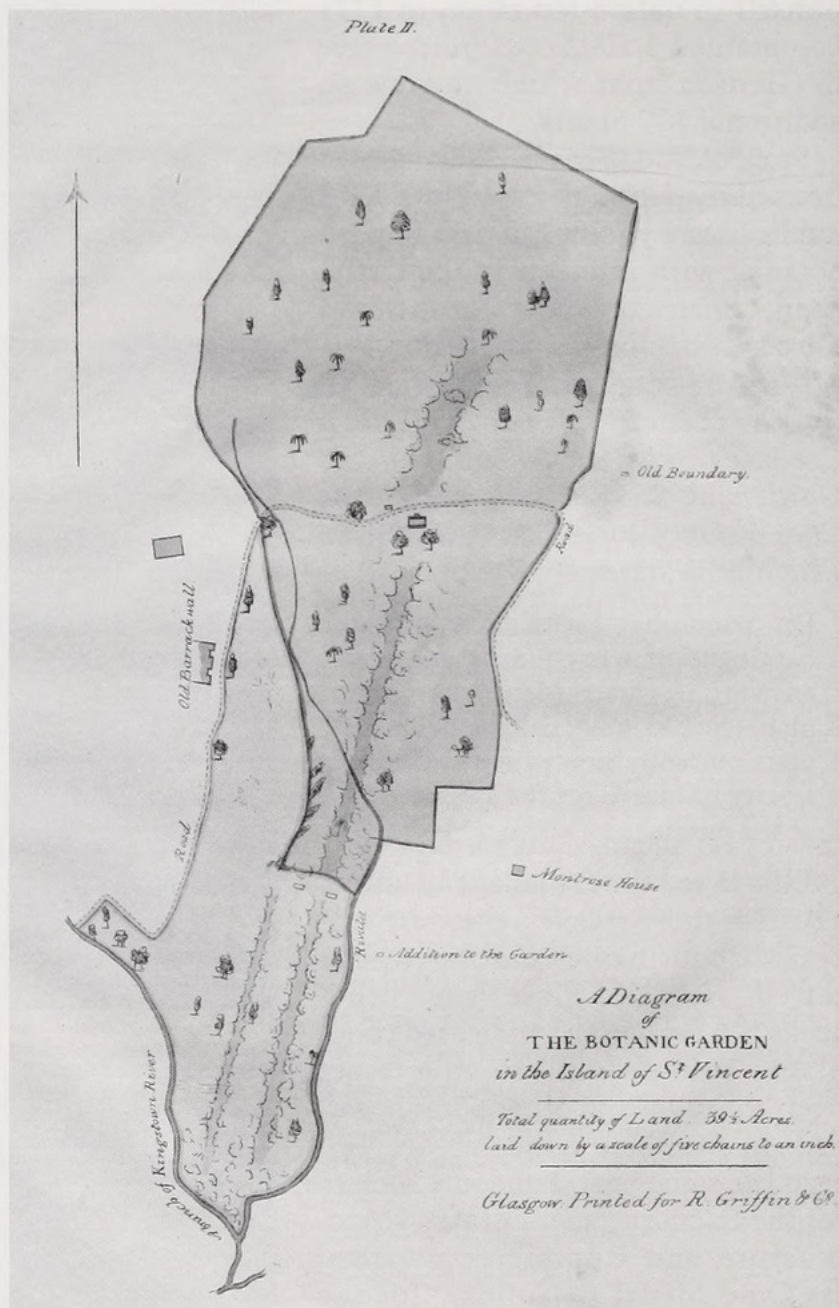
- safflower: *Carthamus tinctoria*
- turmeric: *Curcuma longa*—an aromatic stomachic and hemostatic
- scammony: *Convolvulus scammonia*—a resinous cathartic
- colocynth: *Citrullus colocynthis*—a powerful cathartic
- simarouba: *Simarouba amara*, a source of extremely bitter bark, used in treating malaria
- spigela: *Spigelia marilandica*
- citron: *Citrus medica*, a source of candied peel used for coughs
- bergamot orange: *Citrus bergamia*, a source of bergamot oil, a substitute for mint
- Italian senna: *Senna italica*—a strong purgative
- aloes: *Aloe vera*—a healing sap for treating burns
- balsam capivi: *Copaifera officinalis*, a resin valued in cough medicines
- Cassia fistula*—a laxative
- guaiacum: *Guaiacum officinale*—a cure for syphilis; also used as building material
- China root: *Smilax china*, a medicine—an alterative and diuretic
- gum galbanum: *Ferula galbaniflua*, a source of resin used both medicinally and for incense

EDIBLES

- cinnamon: *Cinnamum vera*, a spice, seasoning
- East Indian mango: *Mangifera indica*, a fruit
- rhubarb: *Rheum raphaniticum*, a vegetable
- Tobago nutmeg: *Virola surinamensis*, a South American relative of the true East Indian nutmeg
- coriander: *Coriander sativa*, a fruit used for flavoring
- vanelloes: *Vanilla planifolia*, a tonic and flavoring in cooking
- nopal: *Opuntia cochinellifera*, an edible fruit, host plant for cochineal insect
- sesamum: *Sesamum indicum*, a source of cooking oil made from the seed
- dates: *Phoenix dactylifera*, a fruit
- annatto: *Bixa orellana*, a food or cosmetic coloring agent
- China tallow tree: *Sapium sebiferum*, a source of vegetable oil burned in candles

OTHER PLANTS

- logwood: *Haematoxylon campechianum*, a dye
- paper mulberry: *Broussonetia papyrifera*, a source of bark fiber for tapa cloth or writing paper
- bamboo cane: *Arundinaria macrosperma*, a building material used for furniture and construction



Botanic Garden, for superintending its cultivation, and for relating the event of some trials and proposing further attempts."²⁰

The Garden Under French Administration

Early in 1778 hostilities between the French and the English were renewed in the Caribbean. In June of that year, when it became clear that the French would again occupy St. Vincent, Dr. Young was ordered by the chief of the British forces to move to St. Lucia to head the military hospital there. He left the botanic garden in charge of a Mr. Swartz (or Zwartz), who later obtained a position as secretary to the commanding officer of the French forces. Swartz was to later claim that this officer had given him title to the garden.

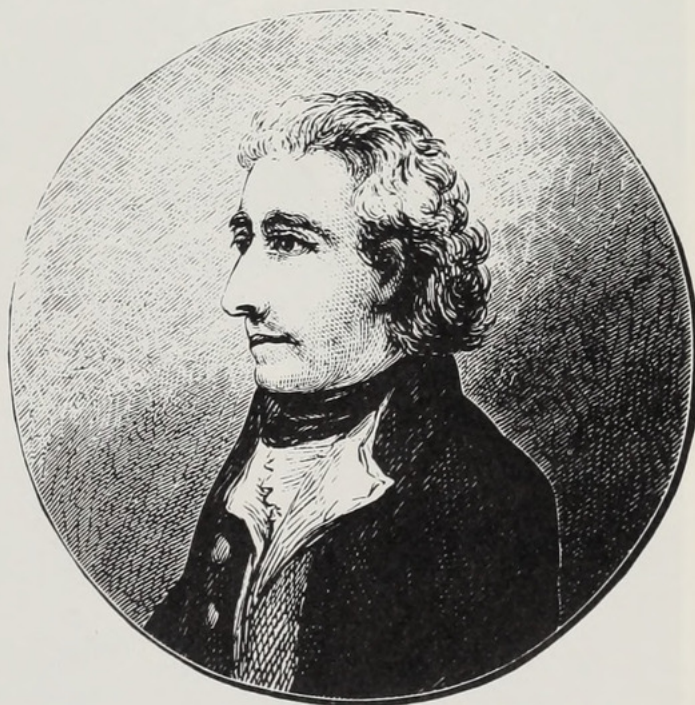
The French maintained the garden during most of the five years that they held the island, but when they realized that it would be returned to the British as part of the latest peace treaty, they abandoned the garden and it grew up in weeds. By the time Dr. Young was able to return to St. Vincent in 1784, he was no longer interested in resuming the directorship of the Botanic Garden, and with good reason: portions of the garden had been given over to the cultivation of cotton and tobacco by local people and the remainder had deteriorated badly; Swartz was pressing his dubious claim to the land, leading to legal wrangles, and the military was also competing to resume full control of the land; and finally, the financial operations of the garden were no more secure than before the war.¹⁴ Young recommended that an acquaintance from St. Lucia, Alexander Anderson, be appointed as his successor; his recommendation was approved in 1785 by Sir Joseph Banks, acting in his capacity as scientific advisor to the king and liaison with the Royal Botanic Garden at Kew.

Unlike his predecessor, Anderson had the full support not only of Banks and General Melville, but also of General Robert Adair, Inspector-General of the regimental hospitals, as well as the War Department and the East India Company. It was during the period of his administration—1785 to 1811—that the garden made its most significant contribution to the world's knowledge of tropical American botany.

The Botanic Garden Under the Management of Alexander Anderson

Alexander Anderson was born in Aberdeen, Scotland, and studied for a period at the university in Edinburgh although he did not complete the work for a degree. He was employed briefly at the Chelsea Physic Garden by a fellow native of Aberdeen, William Forsyth, at that time head gardener at the Physic Garden and later at St. James's and Kensington Palace Gardens. In 1774 Anderson went to New York to seek employment as a gardener, taking up residence with his brother John, a printer.⁷ During this period he sent botanical specimens and seeds from Long Island and York Island (now Manhattan) to Forsyth. At the same time he listed other plants he could send and asked for plants from England in exchange.

Being a loyalist, Anderson sailed for Surinam when the American revolution began, rather than be pressed into military service.¹ By 1783 he was on St. Lucia, employed as an orderly in the military hospital then headed by Dr. Young. Young asked Anderson to search for local



The only known portrait of Alexander Anderson, engraved by Stephen H. Brelett from a drawing made by Anderson's nephew in 1798 in St. Vincent.

From Benson J. Lossing, A Memorial of Alexander Anderson M.D., The First Engraver on Wood in America (New York, 1872). By permission of Houghton Library, Harvard University.



medicinal plants, particularly one that could provide quinine for treating malaria. One of the plants he found, called *quina*, or *china*, was sent to London for testing and was eventually described and named as *Cinchona santaeluciae*, a relative of *C. officinalis*, the source of quinine, but although it tasted as bitter as quinine, it did not contain the cinchona alkaloids and was eventually placed in the genus *Exostoma*.^{4,15}

Anderson also traveled to other British-held islands, with Dr. Young or at his direction, and accompanied Young on his return to St. Vincent in 1784. When Anderson became the first person known to climb the Soufrière of St. Vincent (at 4,048 feet, the highest peak on the island), Young realized that he was not only an experienced naturalist but an active field man as well and recommended him as his successor in the superintendency of the garden.^{2,10,11}

Along with the formal notice of his appointment by Sir Joseph Banks and the War Department in 1785, Anderson received orders to submit a list of the plants then growing in the Botanic Garden and to report new introductions or other developments at quarterly intervals, which he did, but if they were preserved, few have been located. In *A Catalogue of Plants in His Majesty's Garden on the Island of St. Vincent*, dated June 1, 1785, and now preserved in the British Museum (Natural History), Anderson listed at least 348 different

Anderson was first to climb St. Vincent's Soufrière and to see the crater of this volcano. His report to the Royal Society was published in 1785, giving credit to the wrong Anderson. Above is his sketch of the volcano circa 1780. Below is the author's 1972 photo of the volcano, which evaporated the lake and left a residual cinder cone. Soufrière has erupted once again since then.

kinds of plants, his heritage from Young, including all 31 plants of economic importance mentioned by Ellis in his 1773 publication. The top portions of several pages of the manuscript were charred in the World War II bombing of London, but it appears that Anderson categorized the plants as commercial, medicinal, esculent, ornamental, or timber species. He is not known to have made subsequent reports until around 1800, when he compiled a manuscript entitled *Hortus St. Vincentii*, which describes the plants then found in the garden. Each of its nearly 2,000 taxa is identified not only by its Latin, English, and French names, but also, where possible, by its Carib and "Negroe" names, showing that Anderson had fulfilled General Melville's instructions to Dr. Young by seeking out native plants. Each taxon is also given a description, along with data on propagation and culture as well as uses and sources of the plants.⁹

Anderson was a prolific letter-writer, with virtually a worldwide network of correspondents. Most extant correspondence was with William Forsyth, but there are also letters to an assortment of others in England as well as in the United States, where his most important contact was William Hamilton of the Woodlands in Philadelphia. Hamilton provided Anderson with many plants of the eastern United States for trial in St. Vincent and helped him establish exchanges as far away as Calcutta. Anderson also had correspondents in the French islands of the Caribbean as well as in Jamaica, the Bahamas, and Barbados, where his closest contact was Governor Lord Seaforth (1801–1806). He regularly sent plants to Seaforth for transshipment to England, with the result that the introduction into Europe of many plants that Anderson had obtained in the wild are credited instead to Lord Seaforth.^{1,3}



First-day cover and postage stamps in commemoration of the two hundredth anniversary of the St. Vincent Botanic Garden. The talipot palm is shown here in flower, meaning that it would die shortly after.

The Breadfruit Tree Arrives in St. Vincent

Great expectations were attached to the cargo of the H.M.S. *Providence*. A Jamaican newspaper declared: "The introduction of the breadfruit into this island will constitute a remarkable era in its annals. In less than twenty years, the chief article of sustenance for our negroes will be entirely changed: —plantains, yams, cocos, cassava, will be cultivated only as subsidiary, and be used merely for change; whilst the bread-fruit, gaining firm hold in the earth . . . will afford in the greatest abundance, for nine months in the year, the choicest and most wholesome food."¹⁹

The excitement that greeted the ship's arrival in St. Vincent is evident in Alexander Anderson's account.¹⁴ Imagine years of waiting for the H.M.S. *Bounty* to arrive, only to learn that a mutiny



RICHARD A. HOWARD

Breadfruit, Artocarpus altilis.

had put an untimely end to the expedition; then, after months of uncertainty about the *Providence*, to have it suddenly appear, quickly unload the least healthy of the plants in its cargo, and depart again just as suddenly. Anderson's account of the events shows an admirable willingness to put the best light on what must have been a rather disappointing outcome to the affair.

About nine o'clock of night of the 23rd of January 1793 arrived in Kingstown Bay the long wish'd for *Providence*, Captain Bligh, from the South Seas with the breadfruit and other useful and curious plants. The voyage was remarkably short and in every respect prosperous. Such a number of live plants were never before seen on board a single ship. On her arrival she was one of the most beautiful objects of the kind it is possible to conceive. Such a number of live plants of many different kinds brought from the remotest parts of the globe in such a state of preservation and carried through nearly all the climates of it was surprising to behold. Too much praise cannot be given to Captain Bligh for his great attentions to the chief object of his mission nor to the two young men who had the collecting and immediate management of them. Nor is it less surprising that the share of them allotted to the Garden have arrived to such perfection in so short a time in it. Some of the breadfruit plants began to produce fruit at the end of eighteen months from their arrival. In two years and three months all the fifty plants reserved in the Garden produced a large crop. This will appear the more surprising as the half left here were the smallest and the most sickly looking plants. The largest and most healthy in appearance went to Jamaica. In this division there appeared partiality; however, I conceived it just and could not with propriety object to it, as there was still the risk by sea of ten or twelve days passage from St. Vincent to it. Therefore necessary for the preservation, the weakest and the most probable to suffer by continuing them in their confined situation should be landed as soon as possible, and I was confident that out of the number of 300 plants I should be able to preserve sufficient as a nursery for the Windward Islands.

Anderson collected not only on St. Vincent but also in the other Lesser Antilles, the Spanish Main, Trinidad, Tobago, and the Guianas, sometimes traveling on the schooner of William Lochhead of Antigua.¹⁴ The garden's collection was also augmented by plants Anderson received from sea captains, from other gardeners, and from Kew. In return, as noted in its Garden Record Book, Kew received several shipments from Anderson between 1787 and 1798, of which the largest and best known was the one containing the breadfruit trees, *Artocarpus altilis*, brought by Captain William Bligh on his return from the *Providence* expedition in 1793.^{17,19}

The Introduction of Breadfruit

Bligh had been a lieutenant on the first of Captain James Cook's expeditions to the Pacific in 1768, the voyage on which Joseph Banks traveled as a naturalist. When Cook's enthusiastic report on the role of breadfruit in the diet of Polynesians induced planters in St. Vincent and Jamaica to ask for breadfruit trees of their own, Banks persuaded King George III to order a collecting expedition and was instrumental in choosing Bligh to command the *Bounty*.¹⁷ St. Vincent was to be the first stop for dropping off breadfruit on the return trip, but the infamous mutiny occurred only a few days out of Tahiti, and the *Bounty* never reached St. Vincent.

On the second attempt Bligh commanded the H.M.S. *Providence*, with the armed brig *Assis-tant*, manned by twenty marines, as escort to prevent another mutiny. When the *Providence* arrived in St. Vincent in 1793, it carried about 1,300 Polynesian plants, of which it left 559 plants (including 331 breadfruit trees) for the Botanic Garden. Anderson noted that many of these were in poor condition; Bligh had kept the healthiest for Jamaica and Kew. The arrival of the *Providence* caught Anderson unprepared, but he hastily potted 350 plants from his garden to send with it to Jamaica and Kew. As Bligh was preparing to leave Jamaica for England, he received orders to join a Honduras convoy. When he finally left Jamaica for England several months later, he carried a large number of plants, but the list of those delivered to the Royal Gardens at Kew does not identify the ones

from Anderson and many were mistakenly credited to the horticulturists at Jamaica.^{16,18,19}

In his *Hortus St. Vincentii* Anderson described eight varieties of breadfruit trees received from Bligh. He propagated these and other plants brought by the *Providence*, distributing them throughout the Caribbean from the Bahamas to Trinidad and the Guianas.

The Unpublished Manuscripts

In addition to his work in the Botanic Garden and his voluminous correspondence, Anderson also made time to write a number of unpublished manuscripts; they are all now in the archives of the Linnean Society of London. Two of these have been transcribed by the author and Elizabeth Howard and were published in 1983. *The St. Vincent Botanic Garden* is the history of the early years of the development of the garden, and *The Geography and History of St. Vincent* is a firsthand account of Anderson's travels around the island.^{13,14} Also of great interest to botanists and horticulturists are the manuscripts that describe the plants of St. Vincent and the garden. Anderson may have had two separate publications in mind: a *Flora Caribbea* as well as the *Hortus St. Vincentii* already mentioned. In many cases the plant names used by Anderson differ from the modern names: he named, but did not publish, plants that were new to him. This author has identified most of the plants in the *Hortus* by their modern names and organized them into families and genera, aided in some cases by watercolor illustrations made by Anderson's associate John Tyley (which are now preserved at the Linnean Society or, in a few cases, at the Hunt Institute for Botanical Documentation). Though as yet unpublished, this transcription may be useful to botanists.

The textual material of the *Hortus*, still untranscribed, gives brief descriptions of each plant as well as its origin or source. Many of the botanical specimens prepared by Anderson and shipped to Forsyth in London are now in the herbaria of the British Museum (Natural History) or the Royal Botanic Gardens, Kew. While it is often difficult to associate the specimens with Anderson's descriptions, the *Hortus* remains valuable as the earliest record of



This temple houses a fountain in the form of an allamanda flower. The garden still maintains many historical medicinal plants such as the source of chaulmoogra oil, which is used in treating leprosy, and the *lignum vitae*, long thought useful in treating symptoms of syphilis. The collection of palms is especially notable, and a new inventory is much desired. The garden's largest breadfruit trees represent three of the varieties introduced by Bligh on the *Providence*. All are vegetative propagations of an earlier plant. The original superintendent's house is now a museum that specializes in artifacts of the Caribs and other indigenous groups.

plants introduced into cultivation in the British Caribbean.

The last printed inventory of the plants in the garden was one drawn up by Anderson in 1806 and published in 1825 as part of the *History of the St. Vincent Botanic Garden* compiled by

the local chaplain, Lansdown Guilding. It also included letters and other lists of plants that may have been among the Anderson manuscripts.^{8,12}

Anderson died in St. Vincent in 1811 and was succeeded for a short time by his friend and associate William Lochhead, who died unexpectedly in 1815 and was in turn succeeded in 1816 by an Australian, George Caley. Caley's tenure on St. Vincent was marked by his constant dissatisfaction with everything on the island, including the garden, and upon his departure in 1822 the garden was returned to local administration and began a long decline.

So great a wealth of plant material has never again been assembled in the American tropics. Anderson was a master plantsman, to be remembered for his dynamic program of introduction, propagation, and distribution. He is commemorated in the names of one genus—*Andersonia* of the Epacridaceae was named for Alexander and two other Andersons—and at least six species. However, although over 100 of the plants he collected were new to science, none was published under the name he applied to it; had the *Hortus* been published in his lifetime, many common plants of the Caribbean flora—perhaps as many as 75—would now carry the names he proposed. One

hopes that the botanical information in his manuscripts and his records of plant introduction will one day be salvaged and published as a tribute to this worthy man of science from the King's Botanical Garden of St. Vincent, once the horticultural capital of the Western Hemisphere.

The Arnold Arboretum

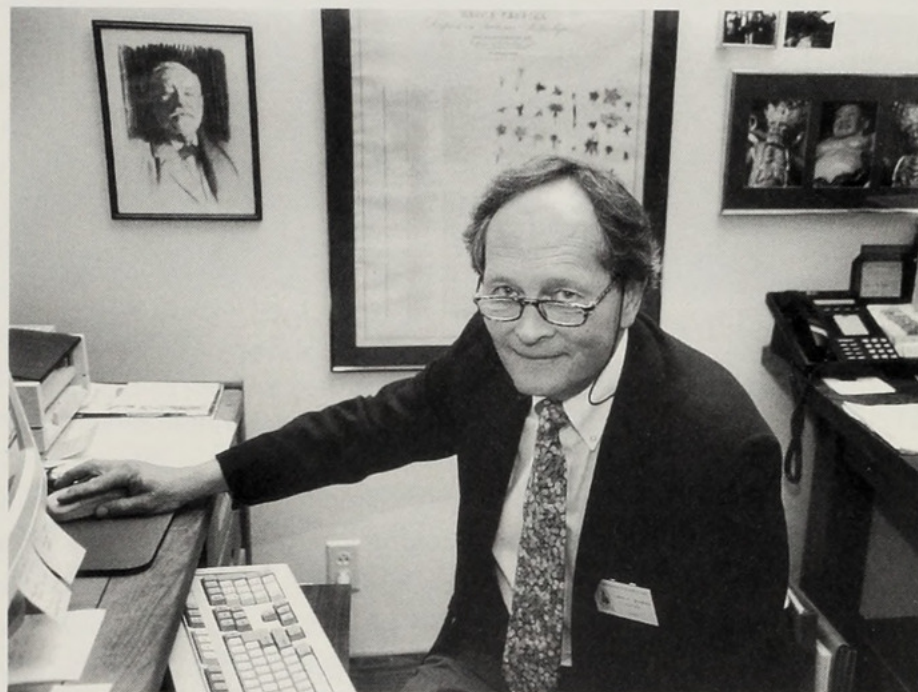
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A New Director for a New Arboretum

Robert E. Cook, Director

In January, Dr. Stephen Spongberg, who for twenty-seven years has been the horticultural taxonomist at the Arboretum, announced his retirement at the ripe young age of fifty-five. Steve is not planning to collect sand between his toes on the beaches of St. Barbados. His early retirement was prompted by an offer few could refuse: he has been appointed director of a new botanical organization on Martha's Vineyard, the Polly Hill Arboretum. Here he will have the opportunity to create a horticultural and educational institution built on the extensive private collections of the legendary and deeply revered horticulturist Polly Hill, who for decades has been establishing a unique landscape of plants around her home in West Tisbury. Visited by thousands of friends and lovers of plants since she began collecting in the 1950s, Barnards Inn Farm became the Polly Hill Arboretum in 1997, with plans to formally open to the public in 1998.

Steve will be greatly missed at the Arboretum, though he will retain a research appointment here and we anticipate calling upon his botanical expertise often. Steve began his career at the Arboretum in 1970 when he worked on the *Generic Flora of the Southeastern United States* project as a postdoctoral graduate of the Uni-



Karen Madsen

versity of North Carolina. Over the next two decades he edited and published numerous taxonomic review articles in the *Journal of the Arnold Arboretum*, now published as part of the *Harvard Papers in Botany*. He became especially interested in the close evolutionary relationship between the flora of eastern Asia and that of eastern North America, and he developed deep taxonomic expertise in the genera *Magnolia* and *Sorbus*. These interests culminated in three great achievements.

In 1980 Steve participated in the first cooperative venture between Chinese and American scientists, the Sino-American Botanical Expedition to western Hubei Province. Among its many collections, this excursion brought back *Magnolia zenii*, *Heptacodium miconioides*, and *Sorbus yuana* as new introductions to North

America. In 1990 Steve published *A Reunion of Trees*, a rich and detailed history of the search for new botanical species around the world and the critical role of the Arnold Arboretum in discovering the botanical treasures of Asia. Seven years later he was honored by the Royal Horticultural Society with the award of the Gold Veitch Memorial Medal for contributions to horticulture. With this honor he joined previous staff members Ernest Henry Wilson, William Judd, and Donald Wyman, four of only fifteen Americans who have received the distinguished British award.

Steve will be greatly missed at the Arboretum and by his many colleagues and friends at the Harvard University Herbaria. We all wish him the greatest success in this challenging and exciting new endeavor.

Campaign Tops \$5 Million

Lisa Hastings, Director of Development

The Campaign for the Arnold Arboretum passed the five-million-dollar mark as of January 31, 1998, a significant milestone in this first major fundraising effort at the Arnold Arboretum since 1927. Total cash and commitments reached \$5,140,000 toward the campaign goal of \$8.2 million, which was publicly announced last June. The campaign will end when the university-wide campaign concludes on December 31, 1999.

The five-million-dollar figure reflects several large gifts received during the last eighteen months and significant, steady growth in both the membership and annual appeal programs. In the category of gifts over \$10,000, the Arboretum has received \$1,468,334 from twenty-one donors since July 1, 1997. This compares with \$285,000 received from ten donors in FY97 and \$330,000 received from seven in FY96. The number of gifts ranging from \$1,000 to \$10,000 has also increased significantly. In this category, the Arboretum received 49 gifts totaling \$120,000 in FY97, an increase of 80 percent over 27 gifts with a total of \$67,000 in FY96. To date this year, we have received 36 gifts for a total of \$96,861.

Flora of the Lesser Antilles

Copies of the six-volume *Flora of the Lesser Antilles*, a long-term project of Richard A. Howard, former director of the Arnold Arboretum, are still available in limited quantities.

These six volumes constitute the first comprehensive flora of the area, and the treatments present keys to the genera as well as the species for easy identification. For each genus and species a complete modern description is provided; it includes coloration as well as measurements of floral parts. The descriptions are followed by geographic distribution both within and without the Lesser Antilles. All volumes are abundantly illustrated with line drawings that are botanically correct and highly artistic. All species known in the Lesser Antilles, both native and introduced, are included.

The six volumes are available either individually or as a complete set. For the complete set a special

ANNUAL APPEAL APPROACHES \$100,000

In his annual, year-end letter to members, Director Bob Cook admitted that his appeal—which didn't ask for money—left the Arboretum's director of development "turning white." Nonetheless, the 1997 annual appeal has raised \$88,000, an increase of 31 percent over total dollars received at this time last year. The number of gifts has increased 38 percent.

In spite of, or perhaps because of, Bob's unorthodox approach to fundraising, the 1997 annual appeal has grown in several categories: The most notable growth is in the \$100 to \$999 bracket, with total dollars up 46 percent and the number of gifts at this level up 28 percent. Like membership dues, annual appeal dollars provide important unrestricted, current-use funds that support the Living Collections and other Arboretum programs and initiatives.

We are much encouraged by these generous responses. Bob Cook said, "The increase in overall giving on the part of both our most loyal members and many new supporters this past year represents a tremendous vote of confidence in the current work of the Arboretum. While the campaign has been a major undertaking, the success of this effort to date reflects a deep interest in the future of this unique institution."

price of \$260 is offered that includes shipping and handling within the U.S.A. (Add \$5 for shipping outside the U.S.A.) For volumes 4, 5, and 6 only, the special price is \$205.

Individual volumes may be purchased at the prices given below, plus \$2 per volume for shipping and handling:

Volume 1: Orchidaceae	\$20
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Volume 5: Dicotyledoneae 2	\$85
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Checks should be made payable to the Arnold Arboretum, and all orders should be addressed to the attention of Frances Maguire, Arnold Arboretum, 125 Arborway, Jamaica Plain, MA 02130, U.S.A.

A New Outlook on Peters Hill

Peter Del Tredici

Director of Living Collections

The drought of 1997 delayed the planting phase of the improvements to Peters Hill that have been underway since last May, but it is at the top of the list for the spring planting season. The plan is to enhance the pastoral character of Peters Hill as a passive public open space in the Olmstedian tradition of "scenery in the natural style." Following the recommendations in the master plan prepared by the landscape architecture firm of Sasaki Associates in 1992, a series of short- and long-range views will alternate on the approach to the summit, with broad expanses of greensward broken occasionally by groves of trees and islands of mound-forming shrubs. The effect will be naturalistic, consistent with both the Olmsted/Sargent plan for the core area of the Arboretum and with Beatrix Farrand's unrealized 1949 plan for Peters Hill. The visitor's experience at the top of the hill, with its views of the Boston skyline and local surrounds, will affirm Olmsted's goal of a spiritually restorative, "enlarged sense of freedom."

Three distinct "communities," or spatial/ecological types that refer to existing natural and planted groupings, will form the structure of the four-acre-plus hilltop. In keeping with Farrand's recommendation that "no plants should be set out which are incapable of fighting their own battles against wind, cold and drought," we have chosen a combination of native and imported species for their likely adaptability to the rigorous site conditions. As indi-



Karen Madsen

This yellowwood, *Cladrastis kentuckea*, which grows near Faxon Pond, was moved to the Arboretum from the Harvard Botanic Garden at Cambridge in 1881. A new generation of yellowwoods will be planted on Peters Hill this spring.

vidual plants thrive or decline over time, dynamic interactions will gradually lead to a blurring of the edges.

- A mixed deciduous forest of trees and understory/edge shrubs will march up the southeast slope from the existing natural forest. Trees will include several species of oak, sassafras, sweet birch, hackberry, American hornbeam, and common persimmon. Some of the root-suckering understory and edge shrubs will be native vibur-

nums, witch hazel, shadblow, meadowsweet, and low- and highbush blueberries.

- Mound-forming shrubs and groundcovers—all sun-loving and stoloniferous or root-suckering—will include sweet-fern, bayberry, several sumacs, and bottlebrush buckeye.
- Woody legumes will fill out a savannah of leguminous trees. Among them will be American yellowwoods, Kentucky coffee tree, *Amur maackia*, and the Japanese pagoda tree.

New England Grows!

The annual convention of New England's green industry, called New England Grows!, gives Living Collections and other Arboretum staff a welcome break in the midwinter routine. Held near the end of January at the Hines Auditorium in Boston's Back Bay, it offered three days of lectures, demonstrations, and exhibits. Among this year's lecturers were Arboretum Senior Propagator Jack Alexander, on lilacs, and Director of Living Collections Peter Del Tredici on "The Radical Underground: The Myths & Realities of Tree Root Systems." The Membership staff set up a display and, along with other Arboretum staff, dispensed information on the programs of the Arboretum.



Howard, Richard A. 1997. "The St. Vincent Botanic Garden- The Early Years." *Arnoldia* 57(4), 12–21.

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