

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.^{168,14}

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
- bergament orange. *Citrus bergamia*, a source of bergament 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 rhabonticum*, a vegetable
- Tobago nutmeg: *Viola 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



Breadfruit, Artocarpus altilis.

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 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 *Assistant*, 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.

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Painting by John Tyley, protege of Alexander Anderson, of fruits said to have been introduced by the St. Vincent Botanic Garden.

Professor of Dendrology, Emeritus, Harvard University, and former director of the Arnold Arboretum, Dr Richard A. Howard is the author of the six-volume *Flora of the Lesser Antilles*

An earlier version of this article was published in *Harvard Papers in Botany* (1996) 8: 7–14.