

Imperial Intervention: Botanic Gardens, Science, and Colonial Administration  
in the British Empire, Late Eighteenth and Early Nineteenth Centuries

By

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*To the memory of my parents, Paul and Rita Williams.*

*To Saphina,  
I thank the universe every day that you are my sister.*

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## ABBREVIATIONS

British Library	BL
East India Company	EIC
India Office Records	IOR
India and Pacific Correspondence of Sir Joseph Banks	IP Corr JB
Royal Botanic Gardens, Kew	RBGK
Royal Botanic Gardens, Sydney – Daniel Solander Library	RBGS
State Library of New South Wales	SL NSW
State Record Authority New South Wales	SRA NSW
The National Archives, Kew	TNA

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## INTRODUCTION

On May 14, 1785, Alexander Anderson arrived in St. Vincent to take his new post as superintendent of a royal botanic garden. The garden had been founded in 1765 by Governor Melville and had relied on the inconstant support of successive governors until the French annexed the island in 1779 as part of the American Revolution. With the Treaty of Versailles, St. Vincent became British again, and imperial government decided to give the garden an official existence, including recognition by the crown and funding from imperial government in London. This arrangement made the superintendency, which came with a salary and a house in the garden, a plum position for a man like Anderson, a naturalist of modest means. However, when Anderson arrived, he found some of island governor's family living in the superintendent's house, and the governor's cattle were grazing freely on the garden grounds. Anderson's letter to his superiors in London sparked a battle between Governor Lincoln and Anderson over the fate of the St. Vincent botanic garden.

In the late eighteenth and early nineteenth centuries, British officials created botanic gardens throughout the empire. Botanic gardens were symbols of a king's authority over nature, and through experiments on agricultural improvement, they could also increase the holdings in his treasury. In the colonies, they were symbols of improvement with clear economic value.<sup>1</sup> The St. Vincent site was the first British colonial garden and a result of the growing alliance between science and empire. The empires of Europe associated the gathering of information about their colonial territories with the ability to effectively manage the populace and capitalize on natural

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<sup>1</sup> Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000).



resources.<sup>2</sup> Imperial powers funded investigations into the flora, fauna, and geography of their colonial possessions to better fit them into their imperial systems.<sup>3</sup> The metropolitan public's appetite for glimpses of the unfamiliar plants, animals, and people from other parts of the world fueled networks of commercial, personal, and governmental exchanges.<sup>4</sup> Historians have investigated the intertwined pursuits of science and empire and have uncovered the networks that made them both possible.<sup>5</sup>

The British colonial gardens were a bid for imperial and local governments to use scientific workers to exercise greater oversight over Britain's colonial possessions. However, Anderson's first days as superintendent demonstrate that this transition was not smooth and the relationships between the garden workers, government, and colonial communities were shaped by more than botanical or agricultural concerns. The superintendents and garden workers had to carefully maneuver through alien social and political environments to do their work, and their path to scientific recognition was difficult. Our understanding of empire and scientific knowledge production benefits from scholarship on the relationships and networks that colonial gardens and affiliated workers shared with people and institutions in metropolitan centers. However, narratives which focus on those connections miss the accommodations that local governments and communities had to make to accept the new institutions and specialists in their

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<sup>2</sup> John Gascoigne, *Science in the Service of Empire: Science, the British State, and the Uses of Science in the Age of Revolution* (New York: Cambridge University Press, 1998); Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge: Harvard University Press, 2001); Daniel Headrick, *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (New York: Oxford University Press, 1981); Thomas R. Metcalf, *Ideologies of the Raj* (Cambridge, UK: Cambridge University Press, 1995).

<sup>3</sup> Daniela Bleichmar, *Visible Empire: Botanical Expeditions & Visual Culture in the Hispanic Enlightenment* (Chicago: The University of Chicago Press, 2012); D. Graham Burnett, *Masters of All They Surveyed: Exploration, Geography, and a British El Dorado* (Chicago: The University of Chicago Press, 2000); Matthew H Edney, *Mapping an Empire: The Geographical Construction of British India* (Chicago: University of Chicago Press, 1997).

<sup>4</sup> Sarah Easterby-Smith, *Cultivating Commerce: Cultures of Botany in Britain and France, 1760-1815* (Cambridge, Cambridge University Press, 2018); Harold Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven, CT: Yale University Press, 2007).

<sup>5</sup> Zaheer Baber, *The Science of Empire: Scientific Knowledge, Civilization, and Colonial Rule in India* (Albany, NY: State University of New York Press, 1996); C.A. Bayly, *Empire & Information. Intelligence Gathering and Social Communication in India, 1780-1870* (Cambridge: Cambridge University Press, 1996).

midst as the British empire became more centrally governed. Instead of recognizing regional variations, prior literature often advances an argument of centralized control because all network nodes connected to mainland Britain. However, this dissertation uses the local story of the botanic gardens in British India, Australia, and the Caribbean to examine imperial intervention and the pursuit of colonial botany from the perspective of people in the empire during the late eighteenth and early nineteenth centuries. These case studies of individual gardens reveal that the British imperial government could not simply send a naturalist out into the empire with orders to develop agriculture, collect plants, and run a botanic garden, with any hope of success. Furthermore, no matter what the official orders may have been, distance and local knowledge gave actors in the empire the ability to shape government policy. People in the colonies experienced the centralization of imperial rule and increasing use of scientific workers in the empire much differently than people did in London, and this difference becomes clear once the colonial gardens are analyzed as a part of their communities.

In examining a different part of the botanic gardens' stories, this dissertation spotlights individuals, including garden workers, government officials, botanical enthusiasts, and elite patrons, in the colonies and in Europe, and shows how their actions shaped the aims of the botanic gardens. It pushes against older narratives of centralized control in colonial governance, and it joins the body of work which disputes that science was a purely European product. Besides the embedded cultural assumptions about the colonies being "other," the botanic garden workers faced a few structural difficulties in their bids to earn reputations as men of science. In the eighteenth and early nineteenth centuries, social status was important for creating scientific authority, particularly in natural history. Botany was taught in some universities as part of medical training, but there was no official credential to certify anyone's botanical knowledge.

The men working as botanic garden superintendents, naturalists, and plant collectors in the colonies often took those jobs because they were interested in botany but lacked the financial resources to study it the way wealthy men could. Elites could finance their own trips around the world to collect specimens, then return to Europe and write tomes on their findings. Sir Joseph Banks' travels in the South Pacific with Captain Cook and Alexander von Humboldt's travels in South America are archetypes of this sort of scientific travel. Their social status made them credible, and since their work was self-financed, the scientific public would assume that it was also disinterested and unbiased. Naturalists in the colonies were men without rank who had to work for pay, therefore they challenged the model of men of science. This dissertation recognizes that the colonial garden superintendents relied on patrons in Europe for help in the course of their work, but demonstrates that superintendents in the colonies did everything that naturalists in Europe were doing, and more. In focusing locally, this study illustrates how botanical workers came together to produce scientific botany in the British empire, though only some received recognition for their efforts.

Though they shared many characteristics, the colonial botanic gardens had variations in their establishment and their ongoing programs which reflect the differences in their colonial environments and societies. This dissertation uncovers the differences between gardens which also suggest differing styles of colonial governance. However, these differences also force a reevaluation of what features comprise a colonial botanic garden and how they differ from botanic gardens in Europe. Scholars have examined the concept of a botanic garden in terms of primarily European models.<sup>6</sup> The local approach adopted in this study reveals that the colonial gardens were profoundly shaped by empire; contemporaries believed that colonial gardens

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<sup>6</sup> See John Prest, *The Garden of Eden: The Botanic Garden and the Recreation of Paradise* (New Haven, CT: Yale University Press, 1981).

should not correspond in form and function to their counterparts in Europe, and they worked to realize their vision. The chapters of this dissertation show that colonial gardens were instruments of government coercion. They provided education and free plants to their communities, and as sites for monoculture projects with some proportion of forced labor, they shared similarities with farms and plantations. Garden projects used these tools to try to change local patterns of agriculture and engagement with plants. These programs were produced through the cooperation of many individuals in Britain, and the colonies yet deployed on colonial populations with varying freedom to resist or decline to participate.

## **Review of Literature**

The existing narratives of botanic gardens in the British colonies posit them as part of a network of gardens run from London. The literature suggests that in the eighteenth century, the gardens were linked by personal relationships and run by Sir Joseph Banks for the benefit of the empire. Banks was an elite man of science with extensive political connections, including a friendship with King George III. This royal access allowed Banks to become the unofficial director of the Royal Botanic Garden at Kew and advisor for government supported scientific projects in Britain and the colonies. The institutional histories for Kew Gardens place it at the center of a worldwide network of plant exchanges and de facto head of the colonial botanic gardens.<sup>7</sup> Works on Banks place him at Kew, pulling the strings in this network.<sup>8</sup> The literature on individual gardens also plays homage to Kew or other metropolitan connections.<sup>9</sup> Kew was

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<sup>7</sup> Ray Desmond, *The History of the Royal Botanic Gardens Kew* (Kew, United Kingdom: Kew Publishing, 2007).

<sup>8</sup> John Gascoigne, *Science in the Service of Empire: Science, the British State, and the Uses of Science in the Age of Revolution* (New York: Cambridge University Press, 1998); John Gascoigne, *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture* (Cambridge: Cambridge University Press, 1994).

<sup>9</sup> Richard A. Howard, "The St. Vincent Botanic Garden – The Early Years," *Arnoldia* (Winter 1997-1998): 12-21; Jim Endersby, "A Garden Enclosed: Botanical Barter in Sydney, 1818-1839," *British Journal of the History of Science* 33, no. 118 (2000): 313-334; Richard Howard, "Plant Capitalism and Company Science: The Indian Career

no doubt an important node in the global exchange of plants, and plant collectors were sent out specifically to gather plants for Kew, but a view from the center has overstated both Banks' and Kew's influence. The idea of a botanic garden as an entity for agricultural development, resource management, and extensive plant introduction was a colonial creation with limited input from the metropole.

Kew itself transformed in 1841, when it ceased to be a private, royal garden and became a public garden, run by government for the British people. Literature on colonial botany or the colonial gardens adopts Kew's periodization, suggesting that the colonial gardens went into decline after Banks' death in 1820, only to revive under the guidance of first, William Hooker, and later, J.D. Hooker, the botanists who took the helm at Kew after 1841.<sup>10</sup> The history of the colonial gardens in the second half of the nineteenth century appears in literature on the major imperial botanical projects, such as the development of an Indian tea industry, the cultivation of sisal, rubber, and cinchona, and imperial resource management.<sup>11</sup> Some of these more recent works complicate the "network" model, suggesting that there was not a formal network in the last few decades of the nineteenth century, and colonial gardens answered to the Colonial Office, India Office, Foreign Office, or even private agricultural societies. In this new model, informal connections and influence with imperial government allowed Kew to provide advice, staff, and

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of Nathaniel Wallich," *Modern Asian Studies* 42, no. 5 (2008): 899-928; Adrian Thomas, "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science and the East India Company, 1786-1806," *Journal of the Royal Asiatic Society of Great Britain & Ireland* 16, no. 2 (July 2006): 165-177; Richard Axelby, "Calcutta Botanic Garden and the Colonial Re-ordering of the Indian Environment," *Archives of Natural History* 35, no. 1 (2008): 150-163.

<sup>10</sup> Donal P. McCracken, *Gardens of Empire: Botanical Institutions of the Victorian British Empire* (London: Leicester University Press, 1997).

<sup>11</sup> Lucile Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New York: Academic Press, 1979); Erika Rappaport, *A Thirst for Empire: How Tea Shaped the Modern World* (Princeton: Princeton University Press, 2017); Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism 1600-1860* (Cambridge: Cambridge University Press, 1995), Grove's work includes a wide swath of time, including the early days of the British colonial gardens

even patronage to the colonial gardens.<sup>12</sup> Prosopographies that present William and J.D. Hooker as exemplars of the new breed of scientific worker also mention the colonial gardens as planets in their orbit.<sup>13</sup>

These histories of the botanic garden were influenced by models of imperial change and scientific development which stress the role of imperial centers for organizing activities occurring in the colonies. C.A. Bayly sees the period from the 1780s to the 1830s as one of relatively coherent colonial development because a powerful landed class pushed for unified and centralized rule in the colonies while also expanding government power at home.<sup>14</sup> Though he disagrees on periodization, P.J. Marshall also argues that when British politicians became preoccupied with maintaining authority at home, they became keen to exercise greater, even despotic, authority in their colonies and require strict obedience from subjects abroad. Furthermore, once people began to envision wider powers for the government at home, the colonies were sites for experimentation and enlargement of areas under government purview.<sup>15</sup>

Colonial governance from the mid-eighteenth century to the late nineteenth was anything but uniform. Sweeping changes in the composition of the colonies and their relationship with Britain during that period have hindered attempts to create comprehensive narratives that explain British imperial developments all over the world. The sheer variability of empire has pushed some scholars to suggest that a coherent imperial strategy never existed. However, some of these scholars look to economic considerations to provide some unity to the period, though they

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<sup>12</sup> Donal P. McCracken, "Fraternity in the Age of Jingoism: The British Imperial Botanic and Forestry Network," in *Science across the European Empires, 1800-1950*, ed. Benedikt Stuchtey (Oxford: Oxford University Press, 2005), 49-53.

<sup>13</sup> Jim Endersby, *Imperial Nature: Joseph Hooker and the Practices of Victorian Science* (Chicago: University of Chicago Press, 2008); Mea Allan, *The Hookers of Kew: 1785-1911* (London: Joseph, 1967).

<sup>14</sup> C.A. Bayly, *Imperial Meridian: The British Empire and the World 1780-1830* (London: Longman Group Ltd., 1989), 1-32.

<sup>15</sup> See P.J. Marshall, "Empire and Authority in the Later Eighteenth Century" in *'A Free though Conquering People'* (Aldershot, UK: Ashgate Publishing Limited, 2003), 105-122.

disagree on the points of inflection and change. P.J. Cain and A.G. Hopkins argue that no successful narrative of empire in the eighteenth century exists. While some point to the loss of the American colonies as inflection point of the old empire of conquest and the new empire of trade and markets, Cain and Hopkins suggest that mercantilism drove imperial policy well into the 1850s.<sup>16</sup> Bernard Porter also emphasizes the role of economic concerns in the development of empire. Speaking of the latter part of the nineteenth century, Porter suggests that the British imperial agents only did what was necessary to secure British access to trade and markets, and they tailored their response to local conditions.<sup>17</sup> The colonial botanic gardens were expected to be engines of economic development and therefore subject to the economic makeup of the empire.

Mainland politics and ideology no doubt influenced the style of rule in the colonies, but local studies can help us see how colonial dynamics helped produce their own forms of governance.<sup>18</sup> For example, in her case study on contagious disease laws across the British colonies in the latter nineteenth century, Philippa Levine argues that though debates in Britain affected colonial policy, colonial policy went much further than domestic policy, and local customs, race, and ideologies of difference helped determine the forms of colonial governance.<sup>19</sup> There may have been similarities between governance in the domestic and imperial spheres, but changing imperial ideology shaped by racial beliefs caused great variation in the form of rule across the empire. Attitudes toward the governed necessarily shape local and imperial

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<sup>16</sup> P.J. Cain and A.G. Hopkins, *British Imperialism, 1688-2000* (Harlow, UK: Pearson Education, Limited, 2001), 87-88.

<sup>17</sup> Bernard Porter, *The Lion's Share: A Short History of British Imperialism 1850-2004* (Harlow, UK: Pearson Education Limited, 2004), 1-37.

<sup>18</sup> For instance, Richard Price, *Making Empire: Colonial Encounters and the Creation of Imperial Rule in Nineteenth-Century Africa* (Cambridge: Cambridge University Press, 2008) for discussion of the centralization of rule in South Africa.

<sup>19</sup> Philippa Levine, *Prostitution, Race & Politics: Policing Venereal Disease in the British Empire* (New York: Routledge, 2003).

government's interventions in arenas from public health to agricultural development. As a consequence, local studies are necessary to capture these variables at work.

After a period of decline, several works have introduced new methods to the study of imperial law and governance by investigating connections between several different sites, revealing the early nineteenth century as a period of transition. In *Imperial Underworld*, Kirsten McKenzie provides a picture of governance, legal regimes, and reform in the empire by following a man with two identities and a criminal past during his transportation to New South Wales, escape, involvement with reform movements, and re-transportation to New South Wales. Zoë Laidlaw's *Colonial Connections, 1815-45*, examines London, the Cape Colony, and New South Wales in the same frame to push against narratives about the decline of the personal style of imperial rule in the early nineteenth century. McKenzie's and Laidlaw's works pay close attention to the importance of personal connections for colonial reform, imperial rule, and the flows of information that made both possible.<sup>20</sup> Though focusing on the development of international law from imperial law, Lauren Benton and Lisa Ford's *Rage for Order* also offers a history of imperial governance in the first half of the nineteenth century by uncovering its legal underpinnings. This scholarship identifies the early nineteenth century as a period of flux for imperial rule and gives people maneuvering in the colonies a starring role; any work evaluating governance in this period must take these themes into account.

As scientific institutions, the colonial botanic gardens have spawned scholarship influenced by early models of scientific development, which were concerned with the role of imperial centers for organizing activity throughout colonized spaces. The earliest of these, by George Basalla, was a model of scientific diffusion. Basalla's work argues that science was

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<sup>20</sup> Kristen McKenzie, *Imperial Underworld An Escaped Convict and the Transformation of the British Colonial Order* (Cambridge: Cambridge University Press, 2015); Zoë Laidlaw, *Colonial Connections, 1815-45: Patronage, the Information Revolution and Colonial Government* (Manchester, UK: Manchester University Press, 2012)



initially a practice of European nations, and colonies first provided raw material for scientific production, then progressed to a period of dependent science in which scientists worked in the colonies but relied on European metropolitan centers for support. In Basalla's final stage of development, the colonial states had developed their own infrastructures and were able to produce science on their own.<sup>21</sup> Basalla's model was influential for many years, but theorists like Bruno Latour and Roy MacLeod have set forth models which focus on the movement of information with greater attention to power imbalances in the production of science. MacLeod's model includes stages of development, but also describes the coercive measures of the metropole to maintain the upper hand once a colony begins growing in importance to scientific research. MacLeod also argues that scientists in the colonies had an interest in federating their colonial scientific organizations with those in the metropole because this relationship raised the perceived legitimacy of their own scientific work.<sup>22</sup> Latour's model disregards stages entirely in favor of "cycles of accumulation" wherein knowledge is created through repeated encounters with the object of investigation.<sup>23</sup> However, all of these models retain a sense of a "center" where knowledge is collated or abstracted.

The turn in the history of science to include subaltern groups in the narratives of scientific development has yielded scholarship that directly contradicts the models with clear center and periphery divides. For instance, Mark Harrison argues that the colonies were actually the site of the bulk of scientific activity, rather than empty spaces waiting to accept Western practices.<sup>24</sup> Furthermore, Harrison suggests that British men paid by government to do scientific

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<sup>21</sup> George Basalla, "The Spread of Western Science" *Science* 156, no. 3775 (1967): 611-622.

<sup>22</sup> Roy MacLeod, "On Visiting the 'Moving Metropolis': Reflections on the Architecture of Imperial Science," in *Scientific Colonialism: A Cross-Cultural Comparison: Papers from a Conference at Melbourne, Australia May 1981*, ed. Nathan Reingold and Marc Rothenberg (Washington, D.C.: Smithsonian Institution Press, 1987), 217-249.

<sup>23</sup> Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge: Harvard University Press, 1987).

<sup>24</sup> Mark Harrison, "Science and the British Empire," *Isis* 96, no. 1 (March 2005): 56-63.

work in the empire could have quite subversive ideologies that shaped the way they pursued research and shared the information they acquired, thereby diminishing the importance of European metropolitan areas to the prosecution of their work.<sup>25</sup> However, historians of science remain sensitive to the importance of place, travel, and connections to metropolitan centers for those who wanted to create and maintain a scientific reputation.<sup>26</sup>

Greater attention to the various groups in the process of producing science has led scholars to question the nature of science itself and focus on the importance of the connections. Chambers and Gillespie have argued that science is “a polycentric communications network.”<sup>27</sup> Mark Harrison and Kapil Raj argue that scores of people normally not considered scientific actors were part of networks that were crucial for scientific production. Harrison writes about the diverse array of people creating medical knowledge in this period, with networks stretching from indigenous individuals to Sir Joseph Banks in Britain.<sup>28</sup>

Historians of empire have similarly moved to examine networks, information flows, and imperial relationships. David Lambert and Alan Lester have written about the assumptions implicit in earlier geographical conceptions of Britain’s imperial relationships in the literature on empire. The centers and peripheries of the earlier literature suggest unidirectional flows of commands, goods, and information. Lambert and Lester suggest that the field is moving toward a

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<sup>25</sup> Mark Harrison, “Networks of Knowledge: Science and Medicine in Early Colonial India, c. 1750-1820,” in *India and the British Empire*, ed. Douglas Peers and Nandini Gooptu (Oxford: Oxford University Press, 2012), 191-210.

<sup>26</sup> See Endersby, *Imperial Nature* and Janet Browne, “Passports to Success: The Correspondence of Charles Darwin by Charles Darwin,” *Journal of the History of Biology*, 21, no. 2 (Summer 1988): 343-349; Dorinda Outram, “New Spaces in Natural History,” in *Cultures of Natural History*, ed. N. Jardine, J.A. Secord, and E.C. Spary (Cambridge: Cambridge University Press, 1996), 249-265; David N. Livingstone, “Science and Place,” in *Wrestling with Nature: From Omens to Science*, ed. Peter Harrison, Ronald L. Numbers, and Michael H. Shank (Chicago: The University of Chicago Press, 2011), 377-401.

<sup>27</sup> David Chambers and Richard Gillespie, “Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge,” *Osiris* 15, no. 1 (January 1, 2000): 221-240.

<sup>28</sup> Kapil Raj, “Go-Betweens, Travelers, and Cultural Translators,” in *A Companion to the History of Science*, ed. B. Lightman (Chichester, UK: Wiley Blackwell, 2016), 39-57; Kapil Raj, *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe* (Houndmills, UK: Palgrave Macmillan, 2007); Mark Harrison, “Networks of Knowledge: Science and Medicine in Early Colonial India, c. 1750-1820,” in *India and the British Empire*, ed. Douglas Peers and Nandini Gooptu (Oxford: Oxford University Press, 2012), 191-210.

narrative of multiple imperial projects and ideologies, therefore historians should try to determine how the various discourses and projects came together by looking at connections between individuals, institutions, places, *etc.*<sup>29</sup> One could also look at failures to connect, like C.A. Bayly in *Empire & Information*, wherein he describes the limited British success in tapping into extant communication and intelligence networks in India.<sup>30</sup> But while looking at connections, it would be a mistake to believe that the places involved were static. Lester argues that one might consider places as “juxtapositions of multiple trajectories.” No part of these networks is static; only the connectedness is constant.<sup>31</sup>

This study brings these new methods in the history of science and empire to the colonial botanic gardens to explore the colonial experience of empire. Previous work has shown how the gardens related to the metropole. This dissertation shows how the gardens related to the colonies, while bearing in mind the changing ideas about colonial governance and the pursuit of science. Though this project moves beyond the core and periphery distinction to answer different questions, it remains sensitive to unequal distribution of power, social privilege, and wealth.<sup>32</sup> Situating the botanic gardens within their local communities provides an opportunity for including the subalterns laboring in the gardens in the history of scientific work. The value of botanical information gave subalterns a bit of social power, however, their ability to capitalize on their knowledge was severely limited by the race and class distinctions that structured their societies.

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<sup>29</sup> David Lambert and Alan Lester, “Introduction: Imperial Spaces, Imperial Subjects,” in *Colonial Lives Across the British Empire: Imperial Careering in the Long Nineteenth Century*, ed. David Lambert and Alan Lester (Cambridge: Cambridge University Press, 2006), 3-9; Alan Lester, “Spatial Concepts and the Historical Geographies of British Colonialism,” in *Writing Imperial Histories*, ed. Andrew S. Thompson (Manchester, UK: Manchester University Press, 2013), 118-142.

<sup>30</sup> Harrison, “Networks of Knowledge: Science and Medicine in Early Colonial India, c. 1750-1820,” 191-210 and C.A. Bayly, *Empire & Information. Intelligence Gathering and Social Communication in India, 1780-1870.*

<sup>31</sup> Alan Lester, “Imperial Circuits and Networks: Geographies of the British Empire,” *History Compass* 4, no. 1 (January 2006): 135.

<sup>32</sup> Lester, *Writing Imperial Histories*, 130-131.

Historians of science have examined how social distinctions were built into scientific practice at this time, with lower class Europeans and people of color providing specimens and expertise, usually for payment. Anne Secord has shown that correspondence and exchanges between different social groups were important for the practice of botany, and these interactions were shaped by existing social codes.<sup>33</sup> This dissertation brings this sort of analysis to the colonial botanic gardens, yet includes the interactions of garden workers with colonial officials, who were not necessarily within the botanical community. Garden superintendents are particularly ripe for this sort of analysis because they were not from the elite groups who patronized the prestigious learned institutions of the time. Payment for scientific work usually eliminated the chance for scientific credit because it was thought to destroy the disinterested mien required for scientific authority. Empire and the changing nature of scientific work opened new opportunities for these men, who were eager to solidify their scientific reputations. Professionalization is not comprised only of the decisions that made governments and institutions seek out a class of people with standardized training for paid scientific positions. Professionalization also includes the social and political maneuvering that paid workers did to carve out a spot for their new scientific institutions, solidify their reputations as men of science, and help create “professional scientist” as a category. With the support of their elite patrons in Britain as their only claim to social notice outside the scientific community, the superintendents faced an uphill battle with local elites when intervening in colonial affairs.

The turn to networks and relationships in science and empire has brought new actors into the conversation. Though much scholarship on science and empire speaks of systems or

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<sup>33</sup> Anne Secord, “Corresponding Interests: Artisans and Gentleman in Nineteenth-Century Natural History,” *British Journal for the History of Science* 27, no. 4 (Dec 1994): 383-408; Anne Secord, “Science in the Pub: Artisan Botanists in Early Nineteenth-Century Lancashire,” *History of Science* 32 (1994): 269-315; Steven Shapin, “The House of Experiment in Seventeenth-Century England” *Isis* 79, no. 3 (1988): 373-404.

networks organized by influential individuals, the new methods illustrate that one cannot not assume that there was a unity of purpose in either science or empire. The British in this period frequently left colonial expansion and scientific research to a hodgepodge of private individuals and semi-official organizations. As a result, some work on science and empire emphasizes this hybrid character of British scientific institutions and British empire building. In *The Empire Project*, John Darwin acknowledges the extreme variability of imperial forms, but suggests that unity came from the commercial, military, and political interdependence of its various formal and informal parts. Works on the varieties of people and institutions involved in scientific work show how they came together to solve imperial problems.<sup>34</sup> This dissertation pays homage to this work by incorporating the private and semi-private organizations that worked with the botanic gardens to manage colonial agriculture and plant acclimatization. “Science” is a particularly slippery term in the late eighteenth and early nineteenth centuries, and in the British context, “government” is as well. Colonial administration did not always come from a formal department of government.

## Chapter Outline

This study employs contemporary methods in the history of science and the British empire to present a history of botanic gardens in the British colonies. The story of these institutions in turn demonstrates the techniques of government-supported science and imperial governance at the local level in the late eighteenth and early nineteenth centuries. A model

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<sup>34</sup> See Felix Driver, *Geography Militant: Cultures of Exploration and Empire* (Oxford: Blackwell Publishers, 2001) and Michael S. Reidy, *Tides of History: Ocean Science and Her Majesty's Navy* (Chicago: The University of Chicago Press, 2008). As for empire, see John Darwin, *The Empire Project: The Rise and Fall of the British World-System, 1830-1970* (Cambridge: Cambridge University Press, 2009). Work on India necessarily discusses a non-governmental actor that helped create a colonial state, H.V. Bowen, *The Business of Empire: The East India Company and Imperial Britain, 1756-1833* (Cambridge, UK: Cambridge University Press, 2006); Philip J. Stern, *The Company-State: Corporate Sovereignty and the Early Modern Foundations of the British Empire in India* (Oxford: Oxford University Press, 2011).

empire run from London where scientific knowledge is a recognized good could send a naturalist to take up a post in a distant colony and seamlessly pursue government goals. Britain was not a model empire. The relationships between the colonial botanic gardens and their local communities detailed in this dissertation will show how colonies became more intensively managed, who drove the changes in oversight, and how scientific workers participated in these goals and pursued their own interests. By situating the gardens of India, the British West Indies, and Australia within their regional contexts, this study illustrates the conditions that shaped their development and demonstrate how elite patrons, garden superintendents, enslaved and free laborers, agricultural societies, colonial governors, and other government officials interacted to produce science and garden policy, including initiatives to shape agriculture and resource management. The first three chapters detail the history of the flagship gardens in India, Australia, and the Caribbean and place their founding in the context of events and processes occurring throughout the region. Chapters four and five are thematic; they focus on a theme and use episodes in the history of all of the colonial gardens as evidence.

Chapter one describes how the botanic garden established by the East India Company in Calcutta in 1787 coordinated major botanical projects in British India. Originally founded to help provide famine relief, the garden quickly moved to experiment with cash crops, which could ideally augment the East India Company's land tax receipts. After 1800, the EIC began to support other botanic gardens, and finally private agricultural and horticultural societies in India, which all worked together to advance EIC aims for agricultural and botanical improvement, with the superintendent of the Calcutta botanic garden as the leader. Though the Calcutta botanic garden flourished because it found a niche within the EIC administration, the hybrid public and private system it led was unsuited by the nature of its form to manage agricultural policy in

India. The devastating famines of the second half of the nineteenth century pushed imperial government to create a government department of agriculture to manage agricultural policy and consolidate rule. This chapter uncovers the cheap and flexible method used by imperial government to take on additional responsibilities before the creation of a centralized imperial state and the weakness of this method.

Chapter two chronicles the St. Vincent botanic garden from its founding in 1765 to the 1820s when it lost the funding and support of government in London. Whereas chapter one explains how a garden might flourish within a region, this chapter demonstrates why a garden might fail to maintain both local and imperial support. The St. Vincent garden faced several setbacks over its history, including occupation by the French, loss of its patron Sir Joseph Banks, and animosity from the local populace. Its abandonment by imperial government in 1822 has been blamed on the difficult personality of its last superintendent. However, an examination of the relationship between the botanic garden and its community over time illustrates how the political and social situation on the island allowed an unsympathetic governor and rapacious locals to harry the garden to death. This chapter demonstrates that on this sugar island, personal relationships with island elites were essential for the success of any administrative scheme. Jamaica offers a mild contrast, where the local assembly supported two botanic gardens on the island in hopes of emulating the royally sanctioned garden on St. Vincent. These gardens went into a period of decline in the early nineteenth century when Jamaica's assembly declined to continue supporting the gardens. Both of these cases demonstrate that the British West Indies lacked the strong bureaucratic structure of the East India Company, and botanic gardens there had little chance of weathering the inconstant support or outright antagonism of their local communities.

Chapter three explores the botanical initiatives undertaken in the New South Wales colony from its founding in 1788, to the development of its botanic garden in the 1820s, to the tenure of its long-lived superintendent, Charles Moore. This chapter advances a new story of the botanic garden's establishment. From the colony's inception, Joseph Banks, elite booster for government supported science, had sent men with gardening skills and botanical knowledge to New South Wales, funded by his own purse and government money. These men went out as supervisors of convicts, independent settlers, and government plant collectors, but Banks used all of them to perform many of the functions of a botanic garden. Instead of being founded to take control of the lucrative trade in Australian plants, as others have suggested, the colonial governors created and developed the garden on the advice of a commissioner of an official imperial investigation into the state of the colony. As such, the garden was a part of an empire-wide move toward reform. The haphazard imperial oversight exercised over the garden for much of the rest of the nineteenth century demonstrates that the garden was important primarily as a symbol that the despotically governed penal colony had become a proper British settlement with enlightened government.

Chapter four is thematic and focuses on the people active in the colonial gardens from the 1770s to the 1840s. In detailing their histories, this chapter engages with the themes of scientific professionalization, the role of non-Europeans, and the nature of "imperial" science. Around the turn of the century, scientific study was developing as a viable career, and scientific authority was created in part by social status. This chapter describes the working experiences of gardens superintendents, as well as those with even less social clout. The scarcity of skill in botanical knowledge in the colonies allowed some garden workers to leverage their expertise for greater social standing. Three major accounts of workers in the colonial gardens demonstrate this point,



with particular attention to variations in race and social standing. First, the battle of wills between superintendent Alexander Anderson and his local governor demonstrate how patronage connections allowed Anderson to successfully navigate the colonial social environment and keep his botanic garden intact. Second, botanical artists of color in India and the Caribbean struggled with the racial boundaries of their societies, even as their work contributed to the scientific reputations of the botanic gardens. Third, garden laborers, both free and unfree laborers, were implicitly recognized for their knowledge. Their contributions to the gardens led to a modicum of recognition and reward, both of which were shaped by the racial codes of their times.

Chapter five puts the colonial gardens' local programs into focus, situating them within the social life of their region and within the trends shaping social and cultural institutions and societies in Britain and the empire. When the colonial botanic gardens were founded, they immediately provided services to their local communities that European gardens did not routinely provide. Colonial gardens were open to the public much earlier and provided a range of educational opportunities and plant distributions on a wide scale. Though some of these garden programs, such as public access, seem benign, this chapter argues that the garden initiatives were all designed to shape public behavior. Public visitation was intended to give colonial subjects a taste for rational leisure; educational programs tried to indoctrinate the public in government-sanctioned methods in gardening and agriculture; conservation programs were shaped by views on private property and designed to preserve materiel for the state. All these programs were based on assumptions about colonial societies, yet in some cases based on models in Britain. This chapter argues that the colonial botanic gardens were coercive institutions and ultimately shaped by views on race, class, and private property. Though the colonial botanic gardens were

founded after the first royal and medical botanic gardens in Europe, they were fundamentally different in form and function, reflecting the texture of their colonial societies.

## Chapter 1

### Botanic Gardens and Agricultural Societies: Ruling Plants in India

#### Introduction

Following the victory of the East India Company at the Battle of Plassey in 1757, which for many marks the British conquest of Bengal, the Bengal Presidency was rocked by a series of scandals and misfortunes. The region was affected by recurrent famines, including the particularly deadly Famine of 1770 which some attributed to faulty EIC tax collection driven by ignorance and misapplication of former Mughal policy. In the 1770s and 1780s, EIC officials, including the hero of Plassey, Robert Clive, and former Governor General Warren Hastings, were called before Parliament to answer for their perceived corruption and mismanagement of the British possessions in India. Indeed, EIC policies had contributed to the severity of the famines, though much of the anxiety at home focused on the Company's finances, the personal fortunes made by EIC officials, and the EIC's appetite for territorial expansion.<sup>1</sup> Clive and Hastings were cleared of wrongdoing, but scandal and the EIC's financial difficulties led Parliament to pass the Regulating Act of 1773 and the East India Company Act 1784 to bring parliamentary oversight to the East India Company officials who governed India.<sup>2</sup> These acts

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<sup>1</sup> Bernard Cohn, *Colonialism and Its Forms of Knowledge: The British in India* (Princeton: Princeton University Press, 1996), 58-62; Zaheer Baber, *The Science of Empire: Scientific Knowledge, Civilization, and Colonial Rule* (Albany, NY: State University of New York Press, 1996), 161-165; for discussion of weaknesses of EIC tax policy prior to the 1784 settlement, see Ranajit Guha, *A Rule of Property for Bengal: An Essay on the Idea of Permanent Settlement* (Durham, NC: Duke University Press, 1996), 91-133; H.V. Bowen, *The Business of Empire: The East India Company and Imperial Britain, 1756-1833* (Cambridge, UK: Cambridge University Press, 2006), 12-18.

<sup>2</sup> Nicholas Dirks, *The Scandal of Empire: India and the Creation of Imperial Britain* (Cambridge, MA: the Belknap Press of Harvard University Press, 2006), 7-35 and 53-85, see entire work for British concern over scandal and corruption in India, which represented anxieties about empire in general. These anxieties diminished once India was no longer seen as the jurisdiction of an independent company; some argue that the 1773 Act was mainly a government extension of credit in exchange for reform, Bowen, *The Business of Empire*, 34-37.

were congruent with movements toward reform and greater government control in mainland Britain, which led to a desire for more direct management of the colonies.<sup>3</sup>

In this atmosphere of humanitarian crisis and concern over mismanagement, Colonel Robert Kyd, Secretary to the Military Department of Inspection in Bengal, proposed that something be done to aid the Indian people. In a letter to the Governor General, Colonel Kyd spoke of the EIC's obligations to its subjects with,

Revolving in Mind the Acumilated [sic] Riches which have accrued to Great Britain consequent to the acquisition of Our Territorial possessions in India; I have been sometimes betrayed into reflections on the comparative benefits we have conferred on the Natives of India whom the right of conquest has subjected to Our Government. In this comparison, I am afraid the Balance will stand generally against us, for setting aside the Protection which our Arms have afforded these Provinces from the desolation of War, a benefit in which we were equally interested, and the Introduction of Our constitutional Law for the Protection of their Persons and properties... I know not of any other benefit we can claim the merit of affording them.<sup>4</sup>

Kyd proposed famine relief through cultivation of sago trees as the solution to tip the moral balance of British accomplishments in India. His initially modest plan led to the establishment of a botanic garden for cultivating economically and medicinally valuable plants and disseminating them to locals and people in Great Britain.<sup>5</sup>

The botanic garden that Colonel Kyd started in Calcutta flourished and survived the Indian Mutiny and decolonization. It appears in histories of science within British India as an important institution for spreading useful plants locally and providing tropical novelties to

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<sup>3</sup> P.J. Marshall, "Empire and Authority in the Later Eighteenth Century," in *'A Free though Conquering People'* (Aldershot, UK: Ashgate Publishing Limited, 2003), 105-122; C.A. Bayly, *Imperial Meridian: The British Empire and the World 1780-1830* (London: Longman Group Ltd., 1989), 1-32; Bowen, *The Business of Empire*, 6-9 and 12.

<sup>4</sup> BL, IOR/H/799, letter dated April 15, 1786, from Robert Kyd to Governor General, f. 1-2.

<sup>5</sup> BL, IOR/H/799, letter dated June 16, 1786, from Robert Kyd to Governor General, f. 8-10.

gardens in Britain, particularly the king's pleasure garden at Kew.<sup>6</sup> It had two notable superintendents, William Roxburgh and Nathaniel Wallich, whose careers are good examples of the issues facing those who sought natural history work as science was professionalizing in the late eighteenth and nineteenth centuries.<sup>7</sup> The Calcutta Botanic Garden also figures in scholarship that describes the strong relationships that the Royal Botanic Gardens at Kew developed with colonial botanic gardens after 1841 when it became a public institution. These sorts of studies take an empire wide view, and discuss how the garden at Calcutta and gardens in other colonies cooperated to cultivate plants that were valuable to the British empire for financial or strategic reasons. Others reference the colonial botanic gardens as part of an empire wide project of 'improvement' that helped assuage the guilt of conquest.<sup>8</sup> These works provide valuable interventions about the Calcutta Garden from differing perspectives and provide ample proof of the importance of the garden both locally and for the British empire as a whole. However, they do not reveal the extent of the Calcutta Garden's local influence, nor do they explain why the garden survived despite the EIC's continuing financial problems.

The Calcutta Botanic Garden was not founded and maintained primarily because it was a site for plant exchange or a means to satisfy British elites' ideas about the nature of empire. In

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<sup>6</sup> For examples, see Adrian Thomas, "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science and the East India Company, 1786-1806," *Journal of the Royal Asiatic Society of Great Britain & Ireland* 16, no. 2 (July 2006): 165-177; D. Chatterjee, "Early History of the Royal Botanic Garden, Calcutta," *Nature* 161, no. 4088 (March 6, 1948): 362-364; Richard Axelby, "Calcutta Botanic Garden and the Colonial Re-ordering of the Indian Environment," *Archives of Natural History* 35, no. 1 (2008): 150-163.

<sup>7</sup> See T.F. Robinson, *William Roxburgh: The Founding Father of Indian Botany* (Chichester, UK: Phillimore, 2008); Richard A. Howard, "Plant Capitalism and Company Science: The Indian Career of Nathaniel Wallich," *Modern Asian Studies* 42, no. 5 (2008): 899-928; J.R. Sealy, "The Roxburgh Flora Indica Drawings at Kew," *Kew Bulletin* 11, no. 2 (January 1, 1956): 297-348.

<sup>8</sup> Lucile Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New York: Academic Press, 1979); see also Jayeeta Sharma, "British Science, Chinese Skill and Assam Tea: Making Empire's Garden," *Indian Economic Social History Review* 43, no. 4 (2006): 429-455 for discussion of the creation of India's tea industry with mention of the Calcutta Botanic Garden's role. See Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven, CT: Yale University Press, 2000) for discussion of British efforts to 'improve' the empire, which included the development of the plant wealth of empire in part through funding botanic gardens in the colonies.

this chapter I argue that, with its promise of agricultural improvement, the Calcutta Botanic Garden at its founding seemed like a viable way to increase tax revenues for the East India Company and help develop valuable new crops. Due in part to its activist superintendents, the botanic garden in Calcutta, with government support, began to coordinate plant policy in India. In the early nineteenth century, the EIC founded other botanic gardens in India that were affiliated with and subordinate to the garden at Calcutta. At the same time, private citizens began to found agricultural and horticultural societies within India. “Improving” agriculture in India through private societies dovetailed with ongoing efforts toward agricultural development in Britain, particularly Scotland, which included elements of Enlightenment rationality and agricultural patriotism.<sup>9</sup> In India, however, the societies were immediately drawn into group of botanic gardens dedicated to pursuing agricultural and botanical projects with the Calcutta garden as its head. The EIC provided some degree of financial support to all of these organizations and exercised a degree of official oversight. EIC officials were satisfied with the results of this arrangement until the turmoil of the Indian Mutiny led the British to question the success of their rule in India, and the famines of the 1860s revealed its shortcomings. Though the Calcutta botanic garden flourished because it found a niche within the EIC administration, the hybrid public and private system it led was unsuited to manage agricultural and botanical concerns in India for the benefit of the Indian people. Changing attitudes toward governance as well as the traumatic events within India led the British government to create formal departments to manage India’s resources and draw it more tightly into the imperial fold. The centralization of

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<sup>9</sup> Bayly, *Imperial Meridian*, 85-86, 121-126, and 155-160; Scots were active participants in empire, and Douglas Hamilton has suggested not that Scots brought the principles of improvement to the empire, but that profits in the empire (the Caribbean) allowed some Scots to return home, purchase land, and join the improvement movement, see Douglas Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820* (Manchester: Manchester University Press, 2005), 12-14 and 196-204.

the 1870s was not the creation of an agricultural and botanical policy where there had been none, but the pursuit of these policies by other means.

### **The Calcutta Botanic Garden: Motivations and Goals**

The Calcutta Botanic Garden's establishment in 1787 was not the East India Company's first foray into supporting botanical work in India. There had been limited patronage of botanical and agricultural projects by individual members of government before this period, including Governor Hastings' support for a plantation at Sooksagur devoted to agricultural experiments.<sup>10</sup> Kyd's initial plan was conservative; he asked only that the Presidency fund the collection of the edible sago tree from the Malay Peninsula for cultivation in a nursery near Calcutta. From there, the plants could be distributed all over the country where they would grow in villages with minimal maintenance and provide an emergency source of nutrition for Indians during famine.<sup>11</sup> Once Kyd began campaigning for a botanic garden, he found a strong supporter in Governor General MacPherson, who ordered him to move forward with the garden in 1787, without waiting for official approval from the Court of Directors in London.<sup>12</sup>

Though government officials in India established the Calcutta garden with a desire to benefit the community through famine relief and the distribution of useful plants, the botanic garden was supported by individuals across the empire, and it was envisioned as a site for a more extensive array of projects. Kyd wanted the garden to experiment with producing drought resistant crops. Local supporters also intended the garden to help with economic botany projects

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<sup>10</sup> George Francis Grand, *The Narrative of the Life of a Gentleman Long Resident in India* (Calcutta: Calcutta Historical Society, 1814), 289.

<sup>11</sup> BL, IOR/H/799, letter dated April 15, 1786, from Robert Kyd to Court of Directors, f. 3-5.

<sup>12</sup> Thomas, "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science and the East India Company, 1786-1806," 168; Donal P. McCracken, *Gardens of Empire: Botanical Institutions of the Victorian British Empire* (London: Leicester University Press, 1997), 212.

within the Bengal Presidency, projects which were more directly beneficial for the East India Company. The Court of Directors in London supported the local government in these goals, and had even considered establishing a botanic garden before Kyd suggested it.<sup>13</sup> The local government had discussed purchasing the experimental garden that Governor Hastings had started during his time in India.<sup>14</sup> The Calcutta Botanic Garden had government support on multiple levels, but it also attracted the interest of men of science such as Alexander Anderson, who was superintendent of the botanic garden in St. Vincent. In a routine report on the state of his garden, Anderson asked George Yonge to encourage Joseph Banks, the de facto champion of government promotion of natural history in Britain and the empire, to push for the creation of a botanic garden in Calcutta. Anderson envisioned a productive relationship between his garden and a prospective garden in India that could provide his garden with Indian plants.<sup>15</sup>

Influential people in India, Britain, and other parts of the empire supported the founding of the Calcutta garden due to the role they felt it would play in the pursuit of botany, the governance of India, and the support and justification of empire in general. These three activities were more intertwined than they might seem. The eighteenth and nineteenth centuries saw an explosion of interest in natural history and earth sciences, and scientific hopefuls traveled the globe collecting specimens and taking measurements of various phenomena in order to add to scientific knowledge. While aspiring men of science traveled the empire in pursuit of knowledge and recognition, Britain's ruling class articulated arguments in favor of acquiring and ruling an empire. Of these justifications, the concept of 'improvement' was one of the most pervasive. In Britain, faith in Enlightenment rationality led both private citizens and people in government to

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<sup>13</sup> Thomas, "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science, and the East India Company, 1786-1806," 168; Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600-1860* (Cambridge: Cambridge University Press, 1995), 335.

<sup>14</sup> BL, IOR/H/799, Extract of Bengal General Consultations, June 16, 1786, p. 9.

<sup>15</sup> Grove, *Green Imperialism*, 335-336.



believe that with the right knowledge, they could improve nearly anything and create a better life for everyone. Moral anxieties that the British had about taking over other lands could be assuaged if the empire was designed to uplift the inhabitants and improve the conquered lands. Many British believed that their culture and knowledge of natural history made them particularly suited for this type of empire. The imperative to pursue enlightened imperial governance helped spur government support for scientific research in the colonies.<sup>16</sup> Furthermore, there was concern in both Britain and India about East India Company mismanagement and corruption in the 1770s, both during and after Warren Hastings' term as governor.<sup>17</sup> It is likely that these fears of misgovernment contributed to the willingness of British officials to embrace 'improvement' in India with the stamp of rationality that science could provide. Colonel Kyd tapped into these fears in his pitch to the EIC by suggesting that not enough had been done for the Indian people since the EIC assumed power. By sponsoring botanic gardens that could stimulate agriculture and botanical research in India, the EIC could contribute to scientific knowledge and demonstrate their fitness to rule, while also reducing any qualms that EIC officials might have about their conquest in India.

Furthermore, other empires had already begun to intertwine the pursuit of science with their own imperial goals. The Dutch and French had established botanical gardens and experimental plantations to help them develop the plant wealth of the colonies they controlled. The British were aware of these developments and some began to feel that they were falling behind.<sup>18</sup> Kyd mentioned the success the Dutch had had with their spice industry on Ceylon in

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<sup>16</sup> Drayton, *Nature's Government*, 85-94.

<sup>17</sup> Guha, *A Rule of Property for Bengal*, 91-93.

<sup>18</sup> Scientific boosters like Banks were not shy of praising other empires as a way to press the urgency of British government support for botanical ventures in the colonies, see BL, IOR/R/4/134/2427, letter dated August 11, 1796, from Banks to Earl of Liverpool, f.63 "I enclose a list of the useful plants cultivated in the Royal Gardens at the Isle of France [Mauritius] in 1790, and at that time ready for distribution among the Colonists, the publication of such a document will not only show the attention paid by the French nation while under their ancient government to the

his letters to gain support for a botanic garden in India.<sup>19</sup> The French had established and richly funded a botanic garden at Pamplemousses in Mauritius. This investment repaid them with a spice industry in their West Indian territories.<sup>20</sup> The British knew that they had a unique opportunity in India. The territories where they had influence covered such a wide range of climates. Countless dispatches include references to the richness of the vegetation of India and the extent to which the plants were unknown to British science. In order to keep up with its imperial rivals in the region, the EIC would need to find ways to more effectively harness the plant wealth of its Indian territories. Kyd made use of this anxiety by suggesting that Britain could outdo its rivals in producing valuable agricultural products in India, if only there were government encouragement.<sup>21</sup>

Science and “improvement” provided some of the ideological basis for establishing botanic gardens in India, but the goals set by the garden’s founders would be shaped and sometimes limited by local conditions and both the realities of colonial administration. Scientific research might be the disinterested pursuit of knowledge, or it might be a way to gather information to better control a population and develop a colony for economic profit. After the loss of the American colonies, British officials wanted to support scientific research to complement British imperial aims, since at this point knowledge and power were associated, but they did not want to spend very much money on the enterprise.<sup>22</sup> Similarly, as Britain shifted away from the mercantilist view of empire, there was debate whether formal empire was worth

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transportation of useful plants from one part of the globe to another, but set an example to our Royal Garden at St. Vincents instituted for similar purposes, tho possibly not supplied with equal funds...”

<sup>19</sup> BL, IOR/H/799, letter dated June 1, 1786, from Robert Kyd to Governor General, p. 13-14.

<sup>20</sup> Thomas, “The Establishment of Calcutta Botanic Garden: Plant Transfer, Science, and the East India Company, 1786-1806,” 170; Grove, *Green Imperialism*, 337.

<sup>21</sup> BL, IOR/H/799, Robert Kyd to Board of Directors, June 16, 1786, p. 15-16.

<sup>22</sup> John Gascoigne, *Science in the Service of Empire: Science, the British State, and the Uses of Science in the Age of Revolution* (New York: Cambridge University Press, 1998), Francis Bacon was trying to wheedle money out of the Stuarts for scientific research in the 17<sup>th</sup> century by suggesting that knowledge equaled power.

the expense. In the long nineteenth century, the British did establish formal colonies in strategic but economically unprofitable areas, but an ideal colony would finance itself.<sup>23</sup> As a consequence, colonial government often operated on a tight budget. EIC officials would have wanted to financially support scientific research in India to be on a par with other empires, but they did not want to pay much for it.

India was a unique case financially because the first significant British presence in India was the East India Company, a trading firm that transformed from being a business entity to a territorial power. As a consequence, the EIC's administrative structure and governing principles had to change, though some argue that the changes were not part of a deliberate program but were instead piecemeal responses to the changing situation.<sup>24</sup> After a series of military engagements, Shah Alam II granted the Diwani, or right to collect taxes in Bengal, Bihar, and Orissa, to the EIC in 1764. The EIC used the Diwani rights as the basis for their sovereignty in India, and these rights gave the British government a reason to demand greater oversight over the Company's dealings. As a result of the East India Company Act 1784, an arm of British government called the Board of Control was created in London to provide oversight of the EIC's activities by supervising the EIC Court of Directors, which often included members of Parliament. This new oversight left the Court of Directors wary of any increase in expenditure because financial difficulties might result in more scrutiny from both the British government and the general public.<sup>25</sup>

The EIC's tax rights amounted to almost 50% of the gross product of Bengal around 1800, and by the middle of the nineteenth century, the tax revenues represented almost 40% of

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<sup>23</sup> Timothy Parsons, *The British Imperial Century, 1815-1914* (Lanham, MD: Rowan & Littlefield Publishers, Inc., 1999), 9-10.

<sup>24</sup> Douglas M. Peers, *Between Mars and Mammon: Colonial Armies and the Garrison State in India 1819-1835* (London: Tauris Academic Studies I.B. Tauris Publishers, 1995), 18-19.

<sup>25</sup> Peers, *Between Mars and Mammon*, 19-22 and 26.

the EIC's income.<sup>26</sup> With so much potential profit at stake, the British were incentivized to try to maximize agricultural yields, since taxes were assessed on the potential of the land. Safeguarding property rights and properly husbanding the land were also accepted elements of good governance, therefore the British remade the existing system of land tenure in Bengal to more closely resemble that of the country gentry in Britain. The EIC promulgated several land and tax policies, culminating in the Permanent Settlement of 1793, that gave private property rights to zamindars, the local elites in Bengal who had previously been tax collectors without absolute property rights to the land under their jurisdiction. EIC officials believed that ownership of the land would turn the zamindars into squires devoted to improvement.<sup>27</sup>

The codification of property rights happened across the empire as a way to create a colonial class. Even in places without significant British settlement, authorities created strong protection for property and expected indigenous landholders to become supporters of British interests.<sup>28</sup> These land tax settlements attempted to bring to India an ethos that existed in Britain. On the mainland, elite landowners were taken with efforts to make their lands more productive, selectively breed livestock, and the like. In India, spreading this ethos was seen as a way to relate to the elite population “non-antagonistically,” and bring notable Indians into alignment with the British regime.<sup>29</sup> Of course, any increase in the productivity of the land from the efforts of the zamindars would further enrich the EIC. The land and tax policies, modeled after the ideas of physiocrats, sought to rule by manners, and not by law. In other words, the settlements were

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<sup>26</sup> Parsons, *The British Imperial Century*, 37-40.

<sup>27</sup> Thomas Metcalf, *Ideologies of the Raj* (Cambridge: Cambridge University Press, 1995), 20; Guha, *A Rule of Property for Bengal*, 171-185.

<sup>28</sup> P.J. Cain, and A.G. Hopkins, *British Imperialism, 1688-2000* (Harlow, UK: Pearson Education, Limited, 2001), 64-88.

<sup>29</sup> Ranajit Guha, *Dominance without Hegemony: History and Power in Colonial India* (Cambridge, MA: Harvard University Press, 1998), 31-32; Land taxation was actually fairly new to Britain. Permanent, peacetime land taxation was first introduced in Britain in 1692, with fixed quotas assigned to each county. Unpaid Land Tax Commissioners were appointed for each county to collect the taxes.

designed to create an environment in which the desired result, increased land revenues, would come about almost naturally through the ambitions of individuals, and not due to government demands.<sup>30</sup> The tax settlements for Madras and Bombay tried codify property rights for the individuals actually cultivating the land, in a system called ryotwari. The cultivators paid taxes directly to the East India Company. In the Northwest Provinces and the Punjab, the mahalwari settlements gave property rights to the cultivators but tax obligations were set at the village level.<sup>31</sup> In all of these settlements, the assignment of clear property rights was expected to stimulate individual initiative toward agricultural improvement. These decisions about land tenure grew out of a larger EIC project to tie Indian agricultural communities more closely to the land and sedentarize others.<sup>32</sup>

The Calcutta Botanic Garden's founding came in the midst of the EIC's transformation from a trading outfit to an administrative body that obtained its greatest revenues from taxes funded by agricultural production. Though there may have been genuine humanitarian feelings motivating the push to create a botanic garden, the EIC stood to benefit from any improvement in resource management or crop production that might result from a botanic garden's efforts. As a consequence, the decision to create the Calcutta Botanic Garden should be considered as one plan in a group of measures, such as the Permanent Settlement, designed to improve resource management and demonstrate effective governance in India. These sorts of measures satisfied the EIC's parsimonious attitude toward expenditure by encouraging private citizens to improve the land themselves. The botanic garden would require financial support, but the EIC officials

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<sup>30</sup> Guha, *A Rule of Property for Bengal*, 91-106.

<sup>31</sup> Neil Charlesworth, *British Rule and the Indian Economy, 1800-1914* (London: The Macmillan Press, Ltd., 1982), 17-20; Richard Morse, "Land Tenure and Indian Society," *Far Eastern Survey* 19, no 22, (December 20, 1950): 233-239.

<sup>32</sup> Rosalind O'Hanlon, "Colonialism and Social Identities in Flux: Class, Caste, and Religious Community," in *India and the British Empire*, ed. Douglas Peers and Nandini Gooptu (Oxford: Oxford University Press, 2012), 107-119.

must have believed that whatever was spent on developing cash crops or distributing sago trees would bring rich returns.

In creating and funding the Calcutta Botanic Garden, the EIC was also setting out its general policy for managing the plant wealth of India. However, these policies were not created at the highest levels of the EIC and disseminated to functionaries in India. Though EIC officials and Governor Hastings had considered the utility of botanical establishments in India, it was the enthusiasm of Colonel Kyd, a mere secretary to the Military Department in Bengal, that pushed the plan to fruition. Though the EIC did have a defined decision-making structure, the material conditions of empire ensured that policy would come out of negotiation between local and metropolitan ideas. Before the middle of the nineteenth century when the telegraph would reduce the transit time of information to days, the lag time for directives from London could be a year after the initial request for guidance.<sup>33</sup> As a consequence, company functionaries were often able to act on their own discretion.<sup>34</sup> In the case of the Calcutta garden, there was remarkable consensus between the Court of Directors and Board of Control in London and the Bengal Presidency government in India on the Garden's mission. General agreement about the economic and moral purpose of empire, and the belief that scientific research could help imperial officials fulfill those expectations, led to the convergence of the plans for the Calcutta Botanic Garden developed by leaders in both India and mainland Britain.

Despite the humanitarian concerns of its Colonel Kyd, some of the early work of the Calcutta Garden was similar to that undertaken by individuals trying to make money from growing spices and other valuable plants. Kyd proposed introducing spices like cinnamon, pepper, cardamom, and other plants like cotton, indigo, tobacco, and teak, and when necessary,

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<sup>33</sup> Douglas Peers, *India Under Colonial Rule 1700-1885* (Harlow, UK: Pearson Education Limited, 2006), 11.

<sup>34</sup> Peers, *Between Mars and Mammon*, 37.

hiring native gardeners with the expertise to grow these items. He suggested that the resources of government would lead to success where private individuals had failed, and that government success would both encourage more private individuals to grow the crops and help them succeed in the endeavor.<sup>35</sup> By 1793, Kyd had introduced over 300 species of plants to the garden.<sup>36</sup> Kyd's ambitious program for the garden already exceeded the EIC approved budget of 200 rupees a month by four to five hundred rupees each month.<sup>37</sup> The EIC's acceptance of this increased expenditure is a likely signal of their satisfaction with the Garden's progress.

### **A Change in Outlook**

The tenure of Colonel Kyd's successor, William Roxburgh, was a turning point in the development of the Calcutta Botanic Garden, due in part to EIC support for an expanded role for the garden, but also in part to Roxburgh himself. William Roxburgh was the first of a string of superintendents of the Calcutta Botanic Garden who were military men trained as medical doctors. In the eighteenth and early nineteenth century, botany was generally taught in universities as part of the curriculum for medical doctors. Though the EIC did support a few company naturalists in India, the greatest pool of men with general scientific training in India would have been those in medical service with the military. Superintendence of a botanic garden would have been a unique opportunity for any of those men with an interest in natural history to create a reputation for themselves as men of science.

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<sup>35</sup> BL, IOR/H/799, letter dated June 1, 1786, from Colonel Kyd to the Court of Directors, f.12-15.

<sup>36</sup> I.H. Burkill, *Chapters on the History of Botany in India* (Calcutta: Botanical Survey of India, 1965), 21, including spices, teak trees, indigo, etc.

<sup>37</sup> Thomas, "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science, and the East India Company, 1786-1806," 171.

Roxburgh himself was a company naturalist and had already managed a small company garden in Samulcotta<sup>38</sup> prior to his promotion to the Calcutta garden in 1793.<sup>39</sup> In Samulcotta, Roxburgh managed nurseries of pepper plants for distribution to government plantations and distributed local plants to Joseph Banks, Kew Gardens, and EIC directors. He also pushed the EIC to enlarge the activities of his small nursery. He wanted to start plantations of sago palm in Samulcotta and expand awareness of the useful plants that were native to the region, and he petitioned the EIC to make these things happen. The Court of Directors had requested drawings and descriptions of the plants in the region just before Roxburgh took possession of the nursery. Roxburgh complied in September of 1790, but in December wrote, “there is still much to be done to render such an undertaking in any degree useful or Satisfactory...” and angled for instructions to do more.<sup>40</sup> Roxburgh made further investigations to this end and collated the work of others to produce *Plants of the Coast of Coromandel*, a practical flora of the region published in 1795, after he had become superintendent of the Calcutta garden.<sup>41</sup> This work contains systematic descriptions of the useful plants native to the area, along with botanical illustrations and instructions for their customary use in medicine or industry. Though a catalogue of regional plants might yield financial benefits, floras were aides to classification and thus belonged to a form of botany that had higher scientific status than economic botany. It seems that Roxburgh gained government support for his flora by including elements, such as a description of the thirteen day process for obtaining red dye from chay roots, which had more direct financial

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<sup>38</sup> Or Samalkota.

<sup>39</sup> BL, IOR/P/241/11, letter dated March 6, 1789, from William Roxburgh to Governor of Madras John Holland, f. 1-3, and Fort St. George Consultations, March 24, 1789, f. 3-4.

<sup>40</sup> BL, IOR/P/241/21, letter dated December 8, 1790, from William Roxburgh to Charles Oakeley, Governor of Madras, f. 1-2.

<sup>41</sup> William Roxburgh, *Plants of the Coast of Coromandel* (London: Printed by W. Bulmer and Co., Shakspeare Printing Office, For George Nicol, Bookseller to his Majesty, 1795), preface i-v.



implications.<sup>42</sup> Though Samulcotta was little more than a nursery, William Roxburgh used that position as a spring-board for his own scientific proclivities. He was able to convince the EIC to financially support projects even when they could not provide an immediate financial return.

Kyd had had a serious hobbyist's interest in natural history and was praised for his contributions to the Calcutta Botanic Garden, but he did not work to enlarge his scientific reputation by publishing floras or undertaking systematic experimentation on and exploration of Indian plant life. His work as superintendent was directed toward the practical goals originally outlined for the garden: economic botany and famine relief. The superintendents that followed him, starting with Roxburgh, were hired for the scientific reputation they already had, and during their tenure, they tried to further develop that reputation. Just as Roxburgh had done at Samulcotta, he pushed the EIC to include a wider array of projects in the purview of the Calcutta garden once he became superintendent. Roxburgh followed up *Plants of the Coast of Coromandel* with *Flora Indica*, and *Hortus Bengalensis*. His successor, Nathaniel Wallich, produced *Plantae Asiaticae Rariores* and *Tentamen Florae Nepalensis Illustratae*.<sup>43</sup> Roxburgh also made changes to the garden itself, increasing the number of species in the garden to over three thousand five hundred. Furthermore, in an experimental garden connected to the Botanic Garden, Roxburgh conducted experiments on cereal crops and tested plant fibers for durability.<sup>44</sup> These floras and systematic study of plants within the Calcutta Botanic Garden helped raise the scientific reputation of both the superintendents and the botanic garden itself.

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<sup>42</sup> *Oldenlandia Umbellata*, Roxburgh, *Plants of the Coast of Coromandel*, 2-7, Roxburgh also describes the process to obtain other colors from the same plant.

<sup>43</sup> *Hortus Bengalensis or a Catalogue of the Plants Growing in the Honorable East India Company's Botanic Garden at Calcutta*; parts of *Flora Indica* were edited and published by William Carey after Roxburgh's death, with some additions by Wallich, see J.R. Sealy, "The Roxburgh Flora Indica Drawings at Kew," *Kew Bulletin* 11, no.2 (1956): 297-298.

<sup>44</sup> William Roxburgh, *Hortus Bengalensis or a Catalogue of the Plants Growing in the Honorable East India Company's Botanic Garden at Calcutta* (Serampore, India: Mission Press, 1814), Introduction, ii, and iv-v.

Despite the increased scientific focus, the Calcutta garden's involvement in economic botany projects within the Bengal Presidency continued to expand after William Roxburgh became superintendent in 1793. Roxburgh oversaw experimental trials of teak tree and indigo cultivation and sent his gardener Christopher Smith on collecting expeditions to Malaysia to obtain cloves, nutmeg, pepper, mangoes, and other plants.<sup>45</sup> Some of these plants found their way to the Calcutta garden while others were destined for spice plantations in other colonies. Roxburgh's efforts to help the government develop spice plantations in Sumatra were praised in the *Transactions of the Society of Arts*. Despite these developments in spice propagation, it is not clear how far Roxburgh progressed in implementing programs to reduce the severity of famine. In 1793, he was bold enough to advise the Madras Presidency leaders to introduce plants to provide sustenance during famine in order to avoid the loss of life they witnessed in the famine of the northern Circars.<sup>46</sup> In 1814, Roxburgh suggested that the public granaries be shut down entirely due to their great expense and the difficulty in keeping the stored grain free from pests. To safeguard against the deadly effects of famine, he cited India's fertility and suggested that government encourage the cultivation of a variety of food crops. The Board of Revenue agreed with Roxburgh's verdict against the granaries and recommended that the government encourage farmers to produce a surplus of grain for the export market, which could be held back and distributed in India in case of famine.<sup>47</sup> In this period, the strategy for famine relief was famine prevention through greater cultivation of a variety of plants. In short, this commitment to more intensive cultivation reveals the continuance of government attitudes toward famine that led to the establishment of the Calcutta Botanic Garden in 1787.

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<sup>45</sup> Burkill, *Chapters on the History of Botany in India*, 22-23.

<sup>46</sup> "The Following Communication Relative to the Labours of the Late Dr. William Roxburgh..." *Transactions of the Society of Arts*, 33 (1815): 165-167 and 169-170.

<sup>47</sup> "The Following Communication Relative to the Labours of the Late Dr. William Roxburgh..." *Transactions of the Society of Arts*, 33 (1815): 165-167 and 170-181.

## One Garden becomes a Network

Though the Calcutta Botanic Garden was involved in projects with ramifications beyond the Bengal Presidency, as a single garden, its impact could extend only so far. While William Roxburgh was superintendent, a small botanic garden was established in Bangalore.<sup>48</sup> During the tenure of Roxburgh's successor, Nathaniel Wallich, the EIC supported the founding of several other botanical establishments, at Saharanpur in 1817, at Bangalore in 1819, and in the Bombay Presidency in 1828. A garden was founded in Madras in 1847, directly after Wallich's retirement.<sup>49</sup> These gardens were affiliated with or subordinate to the superintendent at Calcutta, who coordinated joint initiatives.<sup>50</sup> Nathaniel Wallich himself expanded the influence of the Calcutta Botanic Garden by taking a number of collecting trips after he became superintendent in 1815. He went on collecting expeditions within India and in other British territories in the region, such as Nepal, Singapore, and Malaysia. And on these trips, it seems that Wallich proselytized for botany. He spoke to William Edwards Phillips, governor of Penang, and Sir Thomas Stamford Raffles, lieutenant governor of the British settlement on Singapore, about establishing gardens in their region, and he quickly gained their support. After both the local governors and Wallich petitioned the EIC, gardens were established in both Singapore and Penang in 1822 under the leadership of the Calcutta Garden. Raffles was so thankful for Wallich's guidance that

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<sup>48</sup> BL, IOR/P/242/21, letter dated May 4, 1800, from Dr. Benjamin Heyne to Josiah Webbe, p. 1514-1516; letter dated May 17, 1800, from Josiah Webbe to Benjamin Heyne, p. 1523-1524, and letter dated May 30, 1800, from Benjamin Heyne to Lord Clive, p. 1576-1588.

<sup>49</sup> Wallich ran Bangalore as a satellite of the Calcutta garden, see Patrick Bowe, "Lal Bagh – The Botanical Garden of Bangalore and Its Kew-Trained Gardeners," *Garden History* 40, no. 2 (Winter 2012): 228-238; Dapuri and Ootacamund, respectively. BL, IOR/P/9/10, letter dated April 18, 1816, from George Govan to James Hare, superintendent, unpaginated, speaks of founding of Saharanpur to help improve life of "natives" there.

<sup>50</sup> BL, IOR/F/4/1761/72126, letter dated October 8, 1825, from Nathaniel Wallich to J Adam, Secy of Medical Board, p. 76; BL, IOR/F/4/760/20668, Bengal Public Consultations, February 13, 1823, p. 149; C. Stuart Gager, "Botanic Gardens of the World: Materials for a History," *Brooklyn Botanic Garden Record* 27, no. 3 (1938): 258-264.

he wrote to the Bengal Presidency government to note that if Wallich were to visit the Penang and Singapore gardens periodically, his visits would “...give them a life and vigour which would ensure their success...” Raffles had the deed for the land of the Singapore garden made “in the name of Dr. Wallich and his successors in the Superintendence of the Company’s Botanic Establishment under the Presidency of Bengal.”<sup>51</sup> Though the government did not wish to commit to maintaining the garden for all time with an inalienable deed, EIC officials reaffirmed their support for the garden.<sup>52</sup> There had already been spice plantations at Penang under supervision of the Calcutta superintendent in Roxburgh’s day.<sup>53</sup> If the EIC wanted greater oversight of botanical matters in that region, it made sense for administrative reasons to upgrade the botanical establishment there and draw it into the orbit of the Calcutta garden.

As the number of gardens grew, EIC officials asked garden staff to take on an increasing number of plant projects with strategic or economic value. Some of these projects were related to the other official affiliations of the superintendents. Wallich and his colleagues received the promotion and additional pay of a garden superintendent, but they were still military doctors. As a result, they were asked to continue performing duties attached to that position. For instance, in 1825, the Medical Board and the Company’s apothecary in Bengal petitioned the government for the establishment of a medical garden in a plot of land already rented by the Company.<sup>54</sup> The Governor General approved of the plan to grow and experiment with plants for both European and Indian remedies, yet suggested the Calcutta garden as a superior location for the medical

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<sup>51</sup> Fort Marlboro; IOR/F/4/760/20668, letter dated January 7, 1823, from Wallich to Lushington, p. 121; IOR/F/4/760/20668, letter dated November 19, 1822, from TS Raffles to C Lushington, Secy to Government, p. 78-82, quotations at p. 81 and p. 78 respectively.

<sup>52</sup> BL, IOR/F/4/760/20668, letter dated January 23, 1823, from Lushington to TS Raffles, p. 113-114.

<sup>53</sup> BL, IOR/F/4/134/2427, letter dated September 29, 1801, from Roxburgh to Secy to Government in the Public Department, f. 18-19; BL, IOR/H/375, letter dated October 11, 1798, from A. Fleming, Acting Superintendent to Duncan Campbell, Public Secy, p. 531-540 and BL, IOR/H/375, Extract Public Letter from Bengal, December 25, 1798, p. 543-546.

<sup>54</sup> At Titty Ghur, BL, IOR/P/11/54, No. 18, letter dated June 25, 1825, from G Procter, Secy Medical Board, to Lieutenant Colonel Casement, Secy to Government in the Military Department, p. 1-4 of letter.

garden. The Governor's favoritism for the Calcutta location was due in part to convenience; a plot within the garden would be close to individuals already on the EIC payroll who were well versed in the care of plants, much closer than a plantation outside Calcutta. Furthermore, as an experienced doctor, Wallich would have been familiar with the varieties of plants needed for the Company's dispensaries. Once Wallich affirmed the ability of the Calcutta garden to handle this additional duty, subject to an increase in budget and a few more workers, the medical garden was approved by the Bengal government. However, the hard bargain that the government drove in the funding increase suggests that the Governor preferred to attach the medical garden to the Calcutta garden for reasons of economy, too.<sup>55</sup> Despite the small budget, Wallich and the Medical Board successfully lobbied the government for permission to start a supplementary medical garden in the Saharanpur Garden in 1826, to take advantage of its more northerly climate.<sup>56</sup> Like his predecessor William Roxburgh, Wallich took on additional roles for the garden, and pushed himself and the EIC to do the job thoroughly. Wallich was very committed to this particular project and was still maintaining the medical gardens in 1836, though the EIC had eliminated their funding in 1830.<sup>57</sup>

The EIC also began to rely on the Calcutta garden to coordinate resource management across the British possessions in India. Roxburgh had requested permission to plant teak trees and "basturd sago" in the Calcutta Garden in 1803. A plot in the garden was planted with teak trees the next year, and the plot was extended in 1807. Further teak plantations were established

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<sup>55</sup> BL, IOR/P/11/54, No. 18, letter dated July 25, 1825, from Lt Col. W Casement, Secy to Govt Military Dept, to G. Proctor, Secy Medical Board, p. 1 of letter; BL, IOR/P/11/54, letter dated March 28, 1826, from Lt Col W Casement, Secy to Govt Military Dept, to G. Proctor, Secy Medical Board, p.1-2 of letter. Govt approved only half of the workers and funding that Wallich requested.

<sup>56</sup> BL, IOR/P/11/54, No. 18, letter dated February 23, 1826, from J Adam, Secy Medical Board, to Lt Col Casement, Secy to Govt Military Department, p. 4-6 of letter.

<sup>57</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836 from Nathaniel Wallich to HJ Prinsep, Secy to Govt, p.59; IOR/E/4/762, Bengal Public Department, September 7, 1836, p. 235-247. Wallich notes that he had even expanded the medical garden without additional funding.

in Sylhet and Bancorah in 1812 and 1814. At the time, Roxburgh and other EIC staff had been concerned that the demands on timber in India would soon leave the Marine Department without raw materials. The plantations were meant to be insurance against future shortage as well as a depot for distributing seeds all over the country.<sup>58</sup> In 1820, Wallich implored the EIC to continue support of the teak plantations, and recommended starting bamboo and Indian rosewood plantations as well. He noted the difficulty the government had had with safeguarding forests for future use, and argued that plantations would help ensure a supply of these materials for the Ordnance and Military Departments and private individuals. Garden staff and EIC officials agreed that any solution could not interfere with private property, nor did they wish to leave communities without access to timber.<sup>59</sup> With these restrictions, government plantations were one of the few viable solutions to the shortage. The government gave Wallich authority over all the plantations and a new title, "Superintendent General of Government Plantations."<sup>60</sup> By 1823, both Wallich and other EIC officials had petitioned the government for more Indian rosewood plantations because supplies were becoming more difficult to obtain. The present shortages along with the affordability of the plantations led Wallich to write the Company, "...it appears to me obvious that the proposed scheme cannot properly be considered any longer as an experimental one."<sup>61</sup> The government acceded to Wallich's suggestions to manage the supply of valuable timber in India, though Wallich had to ask that the government create a new government

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<sup>58</sup> BL, IOR/P/11/55, letter dated March 10, 1826, from Nathaniel Wallich to Lushington, Secy to Govt General Dept, p. 3-5 and 8-12 of letter

<sup>59</sup> BL, IOR/F/4/760/20668, Extract Bengal Public Consultations, July 17, 1823, Second Report of the Plantation Committee, p. 214, and BL, IOR/F/4/760/20668, letter dated May 29, 1823, from Nathaniel Wallich to Gerard, p. 249-258.

<sup>60</sup> BL, IOR/F/4/655/18040, letter dated May 24, 1820, from Nathaniel Wallich to C Lushington, Secy to Govt, p. 35-62; BL, IOR/F/4/760/20668, letter dated June 6, 1820, from C Lushington to Nathaniel Wallich, p. 63-64; BL, IOR/F/4/655/18040, letter dated June 6, 1820, from C Lushington to Wallich, p. 84-85.

<sup>61</sup> BL, IOR/F/4/20688, letter dated October 17, 1822, from I. Patton, Commissary General, to Lt Col Casement, Secy to Govt Military Dept, p. 67-74; BL, IOR/F/4/760/20668, letter dated January 29, 1823, from Wallich to C Lushington, p. 156-163, quotation p.158.

department for the bamboo and timber plantations, along with additional staff.<sup>62</sup> Richard Grove argues the EIC medical service was instrumental in providing “local and international environmental expertise” in these EIC efforts to manage India’s forests, which culminated in an ambitious state conservation program in 1865. Though Grove suggests that the surgeons involved in these conservation programs were concerned with climate change and soil and water conservation, when they wrote to the EIC, they spoke in terms of raw material needs.<sup>63</sup>

Once there was a network of botanic gardens in India, they became sites for vast programs to solve EIC problems where plants intersected with medicine and conservation. The Calcutta garden had always been a site for developing economic botany, and with the support of other Indian gardens, it launched a new industry. A species of tea had been discovered growing wild in India in 1824. At this time, the EIC enjoyed a monopoly on the tea trade with China, therefore there was little incentive for them to ask its botanic gardens to proceed any further. Growing tensions with China and the loss of the monopoly on the tea trade in 1833 made the creation of an Indian tea industry much more appealing to the EIC. The botanic gardens played a major role in smuggling tea plants and seeds out of China and creating a hybrid for cultivation in Assam.<sup>64</sup> Even in this venture with the possibility of great economic returns, the EIC did not commit their funds indefinitely. Once the government tea plantations had demonstrated that tea could be profitably grown in India, the EIC looked to sell them off to private buyers and only keep enough nurseries to provide private buyers with seeds.<sup>65</sup>

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<sup>62</sup> BL, IOR/F/4/760/20668, letter dated January 29, 1823, from Nathaniel Wallich to Lushington, p.166-169; they also made use of what staff they had – Superintendent of the Bombay Botanic Garden Alexander Gibson had to tour the Northern Forests at the behest of the Marine Dept, see H.J. Noltie, *The Dapuri Drawings: Alexander Gibson and the Bombay Botanic Gardens* (Ghent: Snoeck-Ducaju & Zoon, The Antique Collector’s Club in Association with the Royal Botanic Garden Edinburgh, 2002), 29-31.

<sup>63</sup> Grove, *Green Imperialism*, p. 381-472.

<sup>64</sup> Sharma, “British Science, Chinese Skill and Assam Tea: Making Empire’s Garden,” 429-455; Burkill, *Chapters on the History of Botany in India*, 57-63.

<sup>65</sup> BL, IOR/E/4/786, Bengal Revenue Department, February 4, 1846, p. 820-828.

These episodes suggest that the East India Company relied on the Calcutta Botanic Garden superintendent to coordinate a response to many of their botanical concerns. Furthermore, the EIC had the habit of assigning new responsibilities to the garden superintendents without necessarily creating new governmental structures or funding to support the additional work. The garden staff had to be flexible enough to take on these various additional projects and creative enough to find the labor to do the jobs with either little or no overall increase in the budget. When writing to ask for additional funding in 1827, Wallich wrote that the increase in work over the previous twelve years “has rendered the existing number of hands here, inadequate for the performance of the work continually required, while it has subjected all to an augmentation of their labour, in some instances strikingly disproportionate to the salary attached to it.”<sup>66</sup> And when garden superintendents themselves wheedled the EIC for permission to start up projects, they would minimize the expense involved. For instance, when petitioning the EIC to start the botanic garden in Singapore, the lieutenant governor suggested that the garden might be self-supporting through selling spices or receiving local donations.<sup>67</sup> Even though the Indian rosewood plantation scheme appeared to be a necessary measure to secure material resources, an EIC official in the Commissary Department assured the Bengal government that “it does not appear that such Plantations and attention to the future wants and interests of the State would entail on the Government any considerable difficulty or expense.”<sup>68</sup> Though the Company was using the botanic gardens to shape India’s plant life to an increasing degree, funding was a constant hindrance to expansion. However, in the 1820s and 1830s, the

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<sup>66</sup> BL, IOR/F/4/1068/29180, letter dated September 12, 1827, from Nathaniel Wallich to C Lushington, Chief Secy to Govt, p.63-64.

<sup>67</sup> BL, IOR/F/760/20668, letter dated November 19, 1822, from TS Raffles to C Lushington, p. 77-78.

<sup>68</sup> BL, IOR/F/4/760/20668, letter dated October 17, 1822, from I Paton, Commissary General to Lt Col Casement, Secy to Govt Military Dept, p. 68-71.



EIC began to fund a different type of organization devoted to botanical research and agricultural development.

### **Private Societies Join the Team**

Though the botanical gardens cooperated with EIC officials locally and in London to coordinate an array of plant activities in India, the EIC began to fund other organizations promoting plant dissemination and naturalization. The first of these organizations was the Agricultural and Horticultural Society of India, which was founded in Calcutta in 1820.<sup>69</sup> The Court of Directors immediately gave this society immediately a yearly grant of 1000 rupees with an advance gift of five thousand rupees. The society used these funds to buy seeds of agricultural crops from England, award prizes to Indian cultivators of superior crops, and rent a garden in Alipore for agricultural experiments.<sup>70</sup> Though the founders modeled their organization on similar societies in Britain, it was designed to be a joint British and Indian effort. The society's officers at times included Dr. William Carey, Baptist Missionary Society notable, an Indian attorney, and Nawab Saulat Jung. "Native" Secretary and Collector was also a permanent office. Rank and file members included zamindars, merchants and traders, indigo and other tropical agriculturists, military officers, medical officers, clergy, and law officers.<sup>71</sup> The proceedings of the society were published in English and two Indian languages since the Society's findings were intended to benefit both British and Indian farmers. The Court of Directors praised the efforts of

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<sup>69</sup> McCracken, *Gardens of Empire*, 7.

<sup>70</sup> BL, IOR/F/4/1230/40269, Extract Revenue Letter to Bengal, November 10, 1824, p. 6-13.

<sup>71</sup> Deepak Kumar, "The Evolution of Colonial Science in India: Natural History and the East India Company," in *Imperialism and the Natural World*, ed. John M. MacKenzie (Manchester, UK: Manchester University Press, 1990), 56; *Transactions of the Agricultural and Horticultural Society of India*, 2 (1836): ii-iii; It should be noted that in later years, the society kept track of "Asiatic" members as a class of members separate from other categories like the following: honorary, associate, corresponding, civilian, merchants and traders, indigo and other tropical agriculturists, military officers, medical officers, clergy, law officers, see BL, IOR/L/PJ/3/1073 no .4, Report of the Agricultural and Horticultural Society of India, January 15, 1858, p. 1-2.

the society to engage the local community, and noted that government support would encourage the Society and keep its attention “on the proper objects.”<sup>72</sup> The financial support and warm words suggest that the government in London expected the society to have a positive impact on Indian agriculture.

The initial impetus to support the Agricultural and Horticultural Society of India came from government in Britain, but the local government and botanical gardens quickly recognized the society as an ally. In the 1830s, the Bengal Presidency government granted the society a 20,000 rupee fund for prizes for the most successful improvements in cultivating cotton, tobacco, and other staple crops. When it came to cotton specifically, the Bengal government justified their actions to the Court of Directors with, “...we were of the opinion that any experimental Cultivation of Cotton in the manner suggested by your Hon’ble Court would be less effectual and less likely to produce results upon which any extensive improvements could be calculated than by leaving the cultivation to private capital and enterprise when stimulated and assisted by the proceedings of the Society and encouraged by the rewards which the grant made by Government would enable them to hold out for successful exertions.” The presidency board felt that the prizes, coupled with the society’s guidance, would spur private industry toward achieving government ends in agricultural improvement. The presidency government further demonstrated their trust in the society by providing them with a supply of specialty cotton seeds to distribute in their district.<sup>73</sup> Formerly, the botanic gardens would have been the organization to manage the distribution of seeds for desired cash crops.

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<sup>72</sup> *Proceedings of the Agricultural and Horticultural Society of India* 1 (1828): 1-9; IOR/F/4/1230/40269, Extract Revenue Letter to Bengal, November 10, 1824, p. 6-13, quotation p. 6.

<sup>73</sup> IOR/F/4/1240/40599, letter dated May 10, 1830, from the Territorial Department, Revenue to the Honorable the Court of Directors, p. 2-12, quotation at p. 5.

The EIC moved to support the Agricultural and Horticultural Society financially, and pared off a few of the Calcutta botanic garden's responsibilities in favor of this new institution. In William Roxburgh's tenure as superintendent at Calcutta, the garden included an experimental farm. Roxburgh used the land to grow jute, hemp, and other fibrous plants and test them for suitability. Roxburgh found success; jute became one of Bengal's exports once the price of freight decreased. However, once the EIC solidified its relationship with the Agricultural and Horticultural Society, the experimental farm attached to the botanic garden was discontinued. Hugh Falconer, superintendent of the Calcutta botanic garden in the 1850s, observed that the Agricultural and Horticultural Society allowed the Calcutta garden to narrow its focus to become a more "pure Botanical Garden, devoted to the cultivation and investigation of plants."<sup>74</sup>

By the 1830s and 1840s, the Agricultural and Horticultural Society was well integrated into the botanical establishment of the Bengal Presidency. In addition to the garden at Alipore, the government allowed the society to use a former Indian rosewood plantation at Poosa that they intended to discontinue. Wallich fought to keep the plantation within the network of the botanic garden because it contained other valuable plants, but he had to settle for its continuance under the auspices of the Agricultural and Horticultural Society, for as long as the society chose to maintain it. As the sometime secretary of the society, Wallich was involved in the negotiations regarding the transfer. Though land would move into private hands, the society was able to maintain the services of the sergeant major who had previously been caretaker of the government plantation.<sup>75</sup> In this case, the botanic garden and local community would continue to enjoy

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<sup>74</sup> BL, IOR/F/4/2595/157429, letter dated March 6, 1854, from Hugh Falconer to the Undersecy to Govt of Bengal, p. 33-35, quotation p. 35.

<sup>75</sup> BL, IOR/F/4/1191/30877, letter dated January 24, 1828, from Nathaniel Wallich to E Molony, Acting Secy to Govt General Dept, f.65-67, and BL, IOR/F/4/1191/30877 letter dated March 20,1828, from E Molony, Acting Secy to Government, to E Barnett, Secy of Agricultural and Horticultural Society, f. 72-73. Sergeant Major Watson of the Pension establishment; on another occasion, a Mr. James Kane who had worked at Calcutta Botanic Garden left its

whatever fruits there may have been from having a garden at Poosa, yet the government was spared the expense of maintaining it.

This exchange of garden space and personnel between the Calcutta Botanic Garden and the Agricultural and Horticultural Society of India was not an isolated incident. The society rented land from the Calcutta Botanic Garden in the 1840s, and the Calcutta garden superintendent generally occupied some elected position within the Society.<sup>76</sup> Society members coordinated with both the government and the Indian botanic gardens to experiment with different species and cultivation methods for cash crops. Members of the EIC civil service, such as the Commissioners of Revenue or district Collectors, helped superintend the Society's experimental plots, and government networks were used to distribute the Society's seeds.<sup>77</sup> Though the society routinely tapped its own network of correspondents, it also queried government officials to provide statistics and local expertise for government use.<sup>78</sup> In using district officials to provide local knowledge, the Agricultural and Horticultural Society of India mimicked the Calcutta Botanic Garden, which used civil servants to report on the status of forests during the push to start government timber plantations.<sup>79</sup> This blending of public and private efforts was a creative way for EIC officials to expand implementation of their goals for economic botany and resource management without expanding formal government.

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service to work for the agricultural and horticultural society at Lucknow, BL, IOR/F/1761/72126, letter dated June 28, 1834 from Wallich to Prinsep, Secy to Govt, General Dept, p.33-34.

<sup>76</sup> *Transactions of the Agricultural and Horticultural Society of India* 8 (1840): 334; BL, IOR/L/PJ/3/1073 no 4, p. xxv or f.72v which contains *Journal of the Agricultural and Horticultural Society of India* 10, part 2 (1858); the society would eventually rent a plot of land from the Calcutta Botanic Garden for an experimental farm, BL, IOR/W/F/4/2219/110061, Plan of the Botanical Gardens, December 1843, Plan No. 2 Vide Report 17, November 1846, f.1. Wallich and Thomas Thomson were both superintendents and officers in the Agricultural and Horticultural Society.

<sup>77</sup> *Transactions of the Agricultural and Horticultural Society of India* 8 (1840): 1-9.

<sup>78</sup> BL, IOR/F/4/1957/85401, Naturalizing Seeds and Plants from Other Countries in India, February 1839 to March 1841, p. 1-22; *Transactions of the Agricultural and Horticultural Society of India* 8 (1841): 338-339.

<sup>79</sup> BL, IOR/F/4/760/20668, letter dated March 25, 1823, from Nathaniel Wallich to C Lushington, transmitting First Report of the Plantation Committee, p. 179-181.

Though the agricultural society in Calcutta had correspondents all over India, other regions began to form their own organizations to pursue agricultural coordination. In 1830, interested parties in the Bombay Presidency met in the Bombay Native Education Society's rooms, read aloud the founding resolutions of the Calcutta society, and then adopted their own resolutions to form a society for Western India. Like the one in Calcutta, the Bombay society received financial support from the government. The Bombay Presidency agreed to the monthly stipend of 100 rupees requested by the society without waiting for approval for the Court of Directors.<sup>80</sup> The Bombay society also aimed to involve both European and Indian people, much like the Calcutta society. The minutes of the society were published in English, but the articles which "may be calculated to convey useful information to the Native Farmer or gardener be published also in the Mahratta and Guzeratee languages."<sup>81</sup> The general members and officers were composed of both British and Indian men. The spirit of cooperation was so enthusiastic that Framjee Cowasjee, an Indian merchant and landholder, was suggested by popular acclaim to serve as co-president along with the elected president, a Mr. Farish.<sup>82</sup> The founders of the Society for Western India and the Bombay government followed in the footsteps of the Bengal Presidency to pursue agricultural coordination that blended public and private efforts and attempted to engage multiple levels of Indian society.

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<sup>80</sup> BL, IOR/F/4/1410/55646, letter dated September 3, 1831, Examiner's Office, p. 1-11;

<sup>81</sup> BL, IOR/F/4/1410/55646, letter dated September 3, 1831, Examiner's Office, Bombay Native Education Society's Rooms, February 11, 1830, p. 5.

<sup>82</sup> BL, IOR/F/4/1410/55646, letter dated September 3, 1831, Examiner's Office, Bombay Native Education Society's Rooms, February 11, 1830, p. 5-11; Framjee Cowasjee "who has already shewn himself a Zealous promoter of Agriculture and Horticultural improvements in his estate in Salseth" should be associated with Mr Farish as a President of the Society." This man may be the same Framjee Cowasjee memorialized in the *Illustrated London News* as a builder of water tanks for public consumption, one of the first Indian men to serve on Commission of the Peace, and the first Parsee gentleman to educate his daughters. "The Late Framjee Cowasjee, Esq., of Bombay," *The Illustrated London News* 22, no. 911 (March 5, 1853): 179-180.

By 1836, the society in Calcutta maintained correspondence with eight other societies, five of which were considered “auxiliary institutions.”<sup>83</sup> The government continued to encourage these societies, with words of praise and varying degrees of financial support. Even newly acquired territory was ripe for this type of management. In 1851, shortly after Lahore’s annexation, Governor General Dalhousie agreed to financially support a newly formed agricultural society there on the condition that it would serve the entire region of the Punjab, rather than just Lahore. Dalhousie had already written to the Court of Directors about pursuing agricultural improvement in the Punjab.<sup>84</sup> His support for the society suggests that he expected that he could rely on this private society to achieve governmental aims in the Punjab, and he gave it orders, just as a Governor General might assign responsibilities to a government department.

Both East India Company officials in London and the presidency governments in India used the agricultural and horticultural societies to further government interests in agriculture and plant naturalization. This use of the agricultural societies began during the 1820s and 1830s, when the EIC’s finances were affected by the first Anglo-Burmese War, and the British government was still struggling to pay for costly wars against Napoleon. Economy in governance was valued more than ever.<sup>85</sup> The Calcutta Botanic Garden received a funding cut, and Nathaniel Wallich was asked to justify the garden’s expenses and account for its utility.<sup>86</sup> Richard Drayton has argued that this type of imperial reevaluation happened all over the world as the British government contracted. Government patronage of science was rolled back as the St. Vincent

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<sup>83</sup> *Transactions of the Agricultural and Horticultural Society of India* 3 (1836): 208-210; societies of the Western Provinces, Bombay, Madras, Lucknow, Meerut, Hooghly, Beerbhoom, Bangalore, and Burdwan

<sup>84</sup> BL, IOR/F/4/2429/132616, Minutes by Governor General, May 29, 1851, f. 3r-3v.

<sup>85</sup> McCracken, *Gardens of Empire*, 8.

<sup>86</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836, from Nathaniel Wallich to Prinsep, Secy to Govt, p. 37-73, monthly budget was reduced from 1569 to 1100; IOR/E/4/760, Bengal Public Department, August 21, 1837, p. 246-247.

Botanic Garden was closed and the Board of Agriculture, an organization founded in 1793 to improve agriculture in Britain, lost its funding. In the 1820s and 1830s, he argues, private individuals became instrumental to the support of science, and in some cases exceeded government efforts.<sup>87</sup> And yet, in India, the government expanded support for agricultural organizations that pursued an increasing number of schemes to improve cultivation, extend production of cash crops, and provide gardening education to European and Indian individuals. The stipends of these societies were negligible when compared to the budget of the garden at Calcutta. The 200 rupee monthly government stipend of the Punjab society was a bargain when compared to the monthly budget of the Calcutta Botanic Garden which at times exceeded 1500 rupees.<sup>88</sup> Semi-private organizations in Britain had promoted exploration and strategic interests as part of the informal structure of empire.<sup>89</sup> The EIC and local landowners were transplanting this strategy to India. The government probably chose to support the agricultural societies' work in tandem with the botanic gardens because this was a cost effective strategy for not only coordinating but also expanding the reach of the government's plant policy in India.

However, it is possible to assign too much influence to increasing budgetary constraints for changes in colonial governance and government support of science in the 1820s and 1830s. The hybrid public and private arrangement for agricultural management in India was not an entirely new method of government intervention. The ethos of improvement that the agricultural societies in India wished to instill in Indian elites originated with the landed classes in Britain, and private societies had allied themselves with public interests to pursue agricultural improvement in Britain as well. Private societies had been starting gardens and pursuing

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<sup>87</sup> Drayton, *Nature's Government*, 88 and 129-135.

<sup>88</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836, from Nathaniel Wallich to Prinsep, Secy to Govt, p. 37-73.

<sup>89</sup> Consider the African Association and the London Missionary Society, which Banks used to promote certain ventures and expand imperial reach, see Gascoigne, *Science in the Service of Empire*, 178-185.

improvement on the mainland since the early eighteenth century. The movement began in Scotland, spurred by the memory of famines of the late seventeenth century, and later spread throughout the island. Toward the latter half of the century, some societies had widened their focus to include the empire as well. The Society for the Encouragement of Arts and the Chelsea Physic Garden both worked to introduce new crops to North America, and the former society was involved in the mission to bring breadfruit to the British Caribbean.<sup>90</sup> Despite the influence that some of these societies had, their efforts were uncoordinated beyond what personal connections could do until Sir John Sinclair worked to establish the Board of Agriculture and Internal Improvement in 1793. The Board did not have to submit accounts to the Treasury, but it received a yearly budget of three thousand pounds, some of which was awarded as prizes for schemes for improvement. The Board's membership included elites who were active in other improving organizations, some of whom had real political clout, such as Sir Joseph Banks. In these two respects, the agricultural and horticultural societies that the EIC supported in India resembled the Board of Agriculture. The Board of Agriculture differs from the Indian societies in that it was the preeminent organization that organized the work of the other societies and advised government on agricultural matters.<sup>91</sup> There was no institution like the Calcutta Botanic Garden that took on these roles. Joseph Banks himself was frequently called upon to advise government in scientific and botanic matters and coordinate various projects, but that was a result of his societal position, personal connections, and acknowledged expertise. In India, the influence of the superintendents of the Calcutta garden was to a large degree vested in the title. As discussed earlier, when Raffles founded the botanic garden at Singapore, he had the deed made out to

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<sup>90</sup> John Gascoigne, *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture* (Cambridge: Cambridge University Press, 1994), 76-78 and 187-189.

<sup>91</sup> Gascoigne, *Joseph Banks and the English Enlightenment*, 191-198.



Wallich himself, and all succeeding to the superintendency, in tacit recognition of the authority tied to the position.<sup>92</sup>

The alliance of public and private resources for agricultural improvement was pioneered in Britain under different financial conditions than those in British India, where private societies and government botanic gardens were instrumental for EIC management of plant resources. Though this arrangement had financial benefits, and the EIC did wish for monetary returns from the projects of this system, financial considerations did not entirely dictate which programs would be pursued, and which would be discarded. In 1836, when Wallich answered the Bengal Presidency's request for a justification of the garden's activities, he warmly praised some expensive and expansionary programs. He lauded the efforts of the Agricultural and Horticultural Society and described the encouraging results of the government plantations. But he saved his highest accolades for a program that must have been costly for the garden: the distribution of free plants. Though the other botanic gardens and the agricultural and horticultural societies gave out free plants, the garden at Calcutta provided free plants to the public on a massive scale. It had been a practice of the garden since its inception, and the superintendents distributed the plant materials to both Indian and European people. In 1836, Wallich reported that he distributed 8,000 plants to 170 applicants in a four month period, including "the best fruits in the country, a larger series of valuable timbers or otherwise useful trees, and shrubs, a number of medicinal plants, besides a most extensive variety of elegant flowering or ornamental trees shrubs and herbaceous plants." He also kept over 1,200 species in constant cultivation in readiness for distribution. Wallich praised this expensive program for contributing to the growth of garden culture in India, amongst both Europeans and Indians of the upper and middling classes, particularly among "the middling classes both of Hindoos and Mahomedans." The

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<sup>92</sup> BL, IOR/F/4/760/20668, letter dated November 19, 1822, from TS Raffles to C Lushington, Secy to Govt, p. 78.

results were visible in new gardens attached to houses in town, in the suburbs, on the banks of the Hooghly River, and at country seats.<sup>93</sup> Though this program had survived the budget cut of 1830, Wallich warned that further reductions would affect plant these distributions.<sup>94</sup>

The plant distribution programs and other initiatives to provide agricultural and gardening training to locals received government support because they helped satisfy some of the cultural goals that the EIC had for India.<sup>95</sup> The British government had an interest in fostering the spread of British gardening and agricultural skills across the colony, both to create a pool of trained agricultural workers and to interest Indians in an aspect of British culture. Ignoring that gardening and systematic plant knowledge existed in India well before the British arrived, the EIC pushed British methods as a sort of cultural imperialism. In his defense of his garden, Wallich wrote, “No enlightened Government, least of all the British in this Country, can fail appreciating the beneficial influence which must result to the Governed from imparting to them a taste for agriculture and gardening – of all human occupations the most pure, useful and Civilized.” Wallich concluded that the promotion of British gardening could attract and conciliate the Indians.<sup>96</sup> The EIC’s delight that the agricultural societies included local zamindars was likely caused by a similar object – the EIC wished to bind Indian landowners to the government and implicate them in the project of improvement. Elites in Britain had pushed agricultural improvement in the Scottish Highlands as a way to suppress Gaelic customs and prevent further rebellion after the Jacobite rising of 1745, thus there was a precedent for British

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<sup>93</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836, from Nathaniel Wallich to HJ Prinsep, Secy to Govt, p. 50-57, quotations p. 51 and 57.

<sup>94</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836, from Wallich to Prinsep, Secy to Govt, p. 71-72.

<sup>95</sup> BL, IOR/F/4/655/18040, Extract Bengal Public Consultations, June 30, 1820, letter from Nathaniel Wallich to Lushington, p.88-96; BL, IOR/L/PJ/3/1073 no 4, India Public Department, Report of the Agricultural and Horticultural Society of India, January 15, 1858, p. 5-7, the society was making efforts to educate young Indian men in British gardening methods.

<sup>96</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836, from Nathaniel Wallich to HJ Prinsep, Secy to Govt, p. 55.

belief in the ‘civilizing’ power of proper plant cultivation.<sup>97</sup> The community projects of the botanic gardens and agricultural societies fed the conviction of the EIC officials that they were improving India, while also pursuing their economic interest. In 1837, the Bengal Presidency leaders were convinced by Wallich’s arguments and wrote to government in London, “Dr. Wallich has made a very favorable impression upon us with regard to the practical benefits enjoyed by *the community* through that establishment.” They decided not to make further cuts to the garden at that time.<sup>98</sup>

Though it may not have provided immediate financial return, the free plant distributions fit the spirit of the EIC’s usual methods with regards to agriculture, resource management, or botany. The EIC sometimes supported direct government intervention in agricultural or botanical pursuit; the botanic gardens and government plantations themselves are evidence of this behavior. However, the preferred method to achieve an end was to create conditions in which private citizens would choose to pursue the desired projects. The EIC was eager to spur private initiative and respect private property. For instance, when Roxburgh was overseeing the spice plantations in Penang, he also made spice plants available to Malay elites and private Europeans, in hopes that they would begin seriously cultivating them as well.<sup>99</sup> The Calcutta garden’s forays into growing and managing timber plantations was also characterized by a push and pull between the need for action and handwringing over property rights and individual initiative. When addressing the government about the teak plantations, Roxburgh wrote, “I do not consider enclosed plantations to be the best mode for an extensive propagation of this valuable tree, but rather that the proprietors of the land over those parts of our territories, where it is found to grow best, should do it at their own expense, being furnished with as many plants annually during the

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<sup>97</sup> Gascoigne, *Joseph Banks and the English Enlightenment*, 187-189.

<sup>98</sup> Emphasis mine, BL, IOR/E/4/760, Bengal Public Department, August 21, 1837, p. 246-247.

<sup>99</sup> *Transactions of the Society of Arts* 33 (1815): 165-167.

months of December, January, and February at the public expense...”<sup>100</sup> The EIC preference for individual initiative also explains the orders Wallich received to sell off the government tea plantations once they had demonstrated tea cultivation to be profitable and private cultivators had entered the field. Even the financial support for the botanic gardens and agricultural societies might be subject to censure since they were not private initiatives. In the Bengal Presidency council, Charles Metcalf complained of a request to make the Agricultural and Horticultural Society’s prize fund a yearly grant, and argued, “Let the productions of this Country meet these of others on equal terms in the Markets of England. Let British Enterprize [sic], Skill, and Capital have fair play in the Provinces of India. By those means all that can be done will be done...”<sup>101</sup> Though the EIC officials wanted improvement, they expected it to happen with only a light touch from government.

The EIC’s financial support of the agricultural and horticultural societies can be interpreted from more than just a financial angle, because the societies had social and cultural meaning for both the EIC and the society members. Elite men in Britain had long taken part in private societies directed toward agricultural improvement, science, and spreading useful knowledge, and these connections became part of the social identity of sections of the British upper classes. The agricultural and horticultural societies performed many of the same functions as the botanic gardens, yet they were staffed by private individuals and government officials in their leisure time. Encouragement of these societies would be a logical step for any government committed to spurring and supporting individual initiative, even if that government were not subject to financial pressures. Agricultural and botanical policy in India was only one of the arenas where the British government tried to use a mix of public and private initiative to achieve

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<sup>100</sup> BL, IOR/F/427/10478, letter dated November 4, 1811, from William Roxburgh to CM Ricketts, Secy to Govt, p. 15-16.

<sup>101</sup> BL, IOR/F/1240/40599, Extract Bengal Revenue Consultations, December 15, 1829, p. 38-39.

specific ends. Geographic discovery and British advances in understanding the tides and ocean science were both spurred by a fusion of public and private patronage.<sup>102</sup> Since this hybrid system helped satisfy British notions of economy and ideal governance, and filled a social role for the elite men who financed these endeavors, it was a common feature of British imperial expansion and scientific discovery.

In the case of botanical pursuits and agricultural policy, the joint efforts of government institutions and private societies led to very successful programs, most notably in forest management and the encouragement of tea cultivation in India. But the reliance on private initiative led to some astonishing failures, some of which became more apparent in the second half of the nineteenth century. For one, distributing free plants and pamphlets detailing modern agricultural methods did not necessarily mean that the recipients would use modern techniques to grow those plants on a wide scale. After seventeen years of existence, the Agricultural and Horticultural Society of India leaders discovered that despite their greatest efforts, they could not persuade local farmers to adopt new farming methods. The ryots said that “their fathers and grandfathers got on extremely well with the old agricultural implements and seeds, and they wished...to follow their example.” The suggested remedy for this impasse was another dose of individual initiative; the society mused that “no improvement will take place until the success of foreign skill and Capital prove to the natives the profits that may be derived from the improvements in Agricultural products.”<sup>103</sup> EIC officials had not realized that in order to spur the initiative of their Indian subjects, they would have to have a greater understanding of the

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<sup>102</sup> See Felix Driver, *Geography Militant: Cultures of Exploration and Empire* (Oxford: Blackwell, 2000); Michael S. Reidy, *Tides of History: Ocean Science and Her Majesty's Navy* (Chicago: University of Chicago Press, 2008), Reidy and Driver mention this public and private fusion, though they see it in terms of incomplete professionalization and do not theorize it as a government method for expanding imperial reach cheaply by encouraging private or loosely affiliated citizens to achieve government ends. Gascoigne, *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture*, discusses how elite individuals participated in improvement societies as an extension of their social role.

<sup>103</sup> BL, IOR/E/4/749, Bengal Revenue Dept, March 22, 1837, p. 162 and 166-167.

situation that many of the Indian cultivators found themselves in. Land taxes were an important source of revenue for the EIC, and the burden on the Indian cultivators was very high. In Bengal, the tax was equal to one half of the produce of the land, or nine tenths of the landowner's rent. The EIC held the cultivators to those rates, and was not in the habit of adjusting them during famine. This behavior was consistent with the path the EIC took during the famine of 1770, when the EIC met its tax collection goals in 1770, and exceeded its goals in 1771.<sup>104</sup> With such an onerous tax obligations and serious penalties for default, the cultivators' decision to eschew experimental crops and methods for the proven methods of their forebears was entirely reasonable. The EIC's failure to appreciate the position of its farmers was a failure of information. Instead of thinking of the Indian lands holistically, the British chose to enjoy their tax revenues and see them as completely separate from the conditions on the farms that generated the taxes.<sup>105</sup>

Any system of governance might have an occasional breakdown in information processing, but the EIC's style of governance ensured that in some cases, such as in irrigation or public relief, British officials would simply fail to act.<sup>106</sup> From the eighteenth century to the middle of the nineteenth, the irrigation and canal infrastructure in India was wholly unsuited to the level of agricultural production. Existing canals and irrigation systems were undermaintained. At times, the EIC had supported canal building in order to reward certain provinces, but before the Mutiny, there had been limited canal building and insufficient

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<sup>104</sup> The EIC also levied an additional tax called the najay to make up for the shortfalls caused by the death and displacements of the 1770 famine, see Baber, *The Science of Empire*, 163-165.

<sup>105</sup> C.A. Bayly, *Empire and Information: Intelligence Gathering and Social Communication in India, 1780-1870* (Cambridge, UK: Cambridge University Press, 2000), 151-154.

<sup>106</sup> To see how EIC officials hesitated to fund cheap irrigation projects despite awareness that they were necessary in Tamil Nadu, Madras Presidency, see Arun Bandyopadhyay, "The Technology of Irrigation in a Colonial Agrarian Context: The Tamil Experience in the Early Nineteenth Century," in *Science and Empire: Essays in Indian Context*, ed. Deepak Kumar (Delhi: Anamika Prakashan, 1991), 87-100.

maintenance.<sup>107</sup> In Madras, some officials realized in 1852 that insufficient attention had been paid to maintaining the irrigation works, and they attempted to spend a greater proportion of tax revenue on maintaining irrigation. There was a period of amelioration, but after 1860, officials discovered that the irrigation works in Madras had been receiving less than half of the amount for upkeep recommended by the Public Works Commission.<sup>108</sup> After the Mutiny and the famines of the 1860s, the number of irrigation projects increased considerably under the direction of the new Public Works Department.<sup>109</sup> Constructing irrigation systems is a capital hungry task, precisely the sort of activity unlikely to be performed by private initiative on a wide scale without government intervention and encouragement.

The Indian Mutiny in 1857 led to the reevaluation of the British position in India and the reversion of rule to the Crown and Parliament. The government moved to consolidate rule, causing a turn toward support for material improvement in India, like famine relief and agricultural development.<sup>110</sup> But as we recall, these goals were part of the impetus to found the Calcutta garden in the 1780s, and the botanic gardens and agricultural societies had been pursuing agricultural improvement all along. The famines of the 1860s and 1870s, along with the reports of the commissions created to analyze these tragedies, revealed how far short the EIC had fallen in its goals. The push to consolidate the governmental apparatus for stimulating agricultural development began after the 1866 report of the Famine Commission on the extensive

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<sup>107</sup> Baber, *The Science of Empire*, 164-165. State supported irrigation projects caused great change in the Punjab. These projects were a reward to the province for providing soldiers and police officers for the EIC, see Peers, *India Under Colonial Rule*, 14-15.

<sup>108</sup> R.A. Dalyell, *Memorandum on the Madras Famine of 1866* (Madras: Printed for the Information of the Madras Central Famine Relief Committee, 1916), 133-137; David Washbrook, "The Indian Economy and the British Empire," in *India and the British Empire*, ed. Douglas M. Peers and Nandini Gooptu (Oxford: Oxford University Press, 2012), 51.

<sup>109</sup> Manu Goswami, *Producing India: From Colonial Economy to National Space* (Chicago: University of Chicago Press, 2004), 51-54; Baber, *The Science of Empire*, 165, here Baber disagrees with timing and argues "Organized and extensive repair of ruined irrigation systems and canals was eventually undertaken by the colonial administration after the constitution of the Public Works Department in 1854."

<sup>110</sup> Bernard Porter, *The Lion's Share: A Short History of British Imperialism, 1850-2004* (Harlow, UK: Pearson Education Limited, 2004), 51-57.

famines that decade, and culminated in the establishment of the Department of Revenue, Agriculture and Commerce in 1871 as part of the Government of India in London and the India Meteorological Department in 1875.<sup>111</sup>

In writing about EIC support for science in this transitional period, Deepak Kumar acknowledges the work of the Agricultural and Horticultural Society of India, but argues that the famines of the 1860s forced the government of India to create an agricultural policy.<sup>112</sup> However the extensive cooperation between government, botanic gardens, and agricultural societies in India suggests that the creation of a government department for agriculture did not represent a sudden development of an agricultural policy where there had been none. Instead, the famines revealed both the failure of the earlier program advanced by the botanic gardens and agricultural societies, and the emptiness of the rhetoric about improvement. The EIC had encouraged these organizations to improve and expand cultivation of cash crops, and their interventions did not prevent or relieve famine or substantially change the methods of agricultural production that Indian farmers used. Famines forced the government to try a different strategy for pursuing its plant interests, and thus a system of central authority replaced the hybrid public and private venture that existed before. The botanic gardens had already started to be drawn into a network affiliated with Kew, which began on a small scale after 1841 and accelerated in the 1860s.<sup>113</sup> The ties of the agricultural societies to government attenuated slowly, with the modern day

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<sup>111</sup> Deepak Kumar, "The Evolution of Colonial Science in India: Natural History and the East India Company," 56, Kumar argues that the famine forced government to develop an agricultural policy; K. Vijayaragavan, *Agricultural Administration in India: A Comparative Study* (New Delhi: Ashok Kumar Mittal Concept Publishing Company, 1994), 13-14 – The agriculture department was later folded into the Home Department for budgetary reasons, but in 1881 a Department of Revenue and Agriculture was established; Mike Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (London: Verso, 2001) shows that the colonial government followed ineffectual famine relief policies in the 1870s, leading to millions of deaths. The Meteorological Department was also founded under advice of the Asiatic Society, see Pratik Chakrabarti, *Western Science in Modern India: Metropolitan Methods, Colonial Practices* (Delhi: Orient Longman Private Ltd, 2004), 95-96.

<sup>112</sup> Kumar, "The Evolution of Colonial Science in India: Natural History and the East India Company," 54-56.

<sup>113</sup> Jim Endersby, *Imperial Nature: Joseph Hooker and the Practices of Victorian Science* (Chicago: The University of Chicago Press, 2008), 276-310; Brockway, *Science and Colonial Expansion*, and Drayton, *Nature's Government*.



Agricultural and Horticultural Society of India claiming that it “catered to the needs of the total Agri-horticultural functions of the country and acted as the de facto Agricultural Ministry of the Central Government till 1900.”<sup>114</sup> The published transactions of the various societies continue to reference government contact, joint agricultural experiments, and government grants into the twentieth century. The longevity of this patronage and these relationships suggest how important they were for botanical policy in India in the first half of the century.

## **Conclusion**

Beginning with the establishment of a botanic garden at Calcutta in 1787, the East India Company developed a network of loosely federated botanic gardens and encouraged their partnership with private agricultural and horticultural societies in India before the Indian Mutiny. These organizations worked together to develop and implement policy for economic and scientific botany, agriculture, and resource management in India.

Though there were powerful British political leaders and East India Company officials in India and London who encouraged the study of botany and natural history in the colonies, this support was not enough to ensure the survival of botanic gardens half a world away in a colony with a limited budget. The botanic gardens in India thrived because they were a means for managing the plant wealth of India and augmenting land taxes, which were a major source of revenue for the East India Company. The Company encouraged collaboration between the botanic gardens, which were government institutions, with private agricultural and horticultural clubs because these clubs could provide the EIC with the local expertise of plant enthusiasts for

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<sup>114</sup> “The Society” *The Agri-Horticultural Society of India*, <http://www.agrihorticultureindia.com/history.html> (accessed September 8, 2014)

minimal cost, and they could provide greater penetration for programs designed to achieve British aims for botany and agriculture in India.

The hybrid public and private network largely satisfied the desires of Company officials for economy and tapped into the agricultural improvement movement which flourished in Britain in the eighteenth century. However, its success in actually improving agriculture and furthering botany in India was mixed, depending on one's perspective. The British believed that these organizations were fighting ignorance and demonstrating British fitness to rule through improvement and good governance. The partnership among gardens and the agri-horticultural societies persisted after the Indian Mutiny, which implies that there had been relative satisfaction with some of the fruits of this system. But the severe famines in the 1860s revealed that this particular solution to the needs of governance led to the prioritization of certain goals over others and success only from the perspective of a select group of people, but not the bulk of the Indian population. Changing attitudes toward governance as well as the traumatic events within India after 1857 led the British government to create formal departments to manage the resources of India and draw it more tightly into the imperial fold. Centralization was not only a product of the Indian Mutiny or efforts to increase government reach. Centralization was, in part, the result of the failure of the existing style of rule to live up to its promises.

## Chapter 2

### Local Animosity and Elite Support: The Fall of the St. Vincent Botanic Garden

*“I agree fully with you that a garden established in the West Indies independent of the military establishment there & under the control of those here who knew the value which the Nation could derive from the well-directed exertions of the person entrusted with it would prosper much better & give proof of its real utility much sooner than an Establishment submitted to the orders of a Governor who however well he may wish cannot be supposed to know the means of making it flourish & in some cases may even find an interest in promoting its destruction.”<sup>1</sup>*

Sir Joseph Banks

### **Introduction**

The botanic gardens in India and their partnerships with local private organizations demonstrate one type of relationship that a botanic garden might have with its local community. The Calcutta botanic garden is an example of the way one garden in a region could encourage the formation of other gardens and become a node for colonial botany and agricultural development for that part of the British empire. Because the literature on the colonial botanic gardens is primarily one of success, it is easy to assume that the Indian case is representative of processes happening all over the empire. However, success at any particular location or any particular part of the empire was not guaranteed. The botanic gardens in India flourished because they found an important role to play within their region. These gardens had the support of both the local government and powerful people in London. British botanic gardens in India were also

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<sup>1</sup> TNA, WO 43/150, letter dated January 5, 1823, from George Caley to Lord Palmerston, quoting letter dated August 3, 1785, from Sir Joseph Banks to Alexander Anderson.

seen as an effective way to increase revenue from property taxes by improving agricultural production. Property taxes in India were the East India Company's biggest source of revenue, and therefore any increase in tax receipts would have a positive effect on the East India Company's balance sheet.

The origin story of the botanic garden at St. Vincent is not very different from its counterpart in Calcutta. It was founded in 1765, before the garden at Calcutta, by General Robert Melville, the governor of the region.<sup>2</sup> Melville tasked a local surgeon, Dr. George Young, to grow medicinal plants for the military and cultivate exotic and useful plants for the colony. St. Vincent had been ceded to Britain by France, along with Grenada, Tobago, and Dominica, as part of the Treaty of Paris in 1763, after the Seven Years War. Consequently, St. Vincent was a newly gained territory for the British and ripe for a program of natural history investigation, economic botany projects, and government-managed agricultural experimentation. The new botanic garden at Kingston could have taken the lead in managing these activities.

The botanic garden at St. Vincent initially had strong support from the local governor and seemed to be a logical response to regional needs, but the garden's history from 1765 to the 1820s contrasts with the success of the affiliated gardens in India. Instead of becoming *primus inter pares* of a regional group of botanical establishments and private organizations, in 1822 the Crown abandoned the garden at St. Vincent. Its moveable plants were transported to a younger garden in Trinidad. This chapter explains why the St. Vincent garden failed to carve out a lasting place for itself in the British West Indies. Uneven local support combined with an entrenched agricultural system led the Crown to see the garden as unwanted and unnecessary. At the beginning of the nineteenth century, the British sugar industry was in decline on some islands and could have benefited from botanical expertise, but the planters were resistant to change.

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<sup>2</sup> Richard A. Howard, "The St. Vincent Botanic Garden – The Early Years," *Arnoldia* (Winter 1997-1998): 12-13.

Eventually, these factors and the combination of a hostile governor and a superintendent unwilling or unable to curry favor with local elites led to the elimination of the St. Vincent Botanic Garden.

### **St. Vincent: Founding and Troubled Early Years**

Despite the enthusiastic support of its founder, war and uncertain funding shaped the early years of the St. Vincent botanic garden. Shortly after St. Vincent was ceded to the British in 1763, General Robert Melville, Governor of the southern British Caribees, toured the island and talked with the military surgeon, George Young, about establishing a botanic garden.<sup>3</sup> Melville ordered the commanding officer of the garrison at St. Vincent to set aside twenty acres of land for a botanic garden under Young's superintendence, with Melville bearing the garden's initial expenses.<sup>4</sup>

Melville's interest in botany and connections to botanical circles in Britain influenced his support for a botanic garden. He had been educated at Edinburgh and Glasgow, two universities that educated and employed several future superintendents of colonial botanic gardens and Kew Gardens. He was also a member of the London Society for the Encouragement of Manufactures, Arts and Commerce (also known as the Society of Arts, and later the Royal Society of Arts). This society had been founded in 1754 and offered prizes for tree planting and plant exchanges almost from its inception. Its members had some influence with the Board of Trade which

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<sup>3</sup> British Caribees were St. Vincent, Tobago, Grenada, and the Grenadines

<sup>4</sup> Lansdown Guilding, *An Account of the Botanic Garden in the Island of St. Vincent, from Its First Establishment to the Present Time* (Glasgow: Richard Griffin & Co., 1825, reprinted for the Arnold Arboretum, Forge Village, MA: Murry Printing Co., 1964), 5-6. Guilding's account was written around 1824, after the St. Vincent garden had been abandoned by the British government. He sent his little history and three illustrations of the garden to WJ Hooker for publication. Hooker was still a professor at Glasgow at that time. See *JStor Global Plants*, RBGK, Directors' Correspondence 43/51, letter dated February 5, 1825, from L Guilding to WJ Hooker, <http://plants.jstor.org/stable/viewer/10.5555/al.ap.visual.kmdc1726>, accessed July 18, 2017. See also Richard A. and Elizabeth S. Howard, "Introduction" in Alexander Anderson, *The St. Vincent Botanic Garden*, ed. Richard A. and Elizabeth S. Howard (Cambridge, MA: Arnold Arboretum, 1983), i.

handled colonial affairs at this time. The Society of Arts published a notice that if any colonial governments or corporations wished to establish botanic gardens, the Society would provide prizes for the plants raised there. It is possible that this advertisement was part of Governor Melville's impetus for starting the garden at St. Vincent.<sup>5</sup>

Melville and Young intended for the botanic garden to benefit the region by growing medicinal plants for the military and useful plants for distribution to settlers. In setting the introduction of new plants as a goal, the garden at St. Vincent was poised to become an asset to the entire British West Indies. Britain's other colonies in the region, including Barbados, Jamaica, and the Leeward Islands, had been important sugar producers since the latter half of the seventeenth century. Though the economies of these older colonies were heavily reliant on sugar and rum, there was a general desire throughout the British West Indies for the cultivation of a greater variety of plant products for export. In Jamaica specifically, there were large tracts of arable land that were not ideal for sugar production, and planters had tried to find other remunerative crops to grow.<sup>6</sup>

In the Ceded Islands, including St. Vincent, newly arrived planters had to pursue diversification as a matter of course. Existing settlements by the French tended to be smaller estates under 100 acres with only a few slaves. The presence of these smaller establishments made it difficult for new planters to gather together the large tracts of land needed for efficient sugar production.<sup>7</sup> Coffee and cocoa were already grown on some of the Ceded Islands, and both

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<sup>5</sup> Richard Grove, "The British Empire and the Origins of Forest Conservation in the Eastern Caribbean 1700-1800," in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*, ed. Robert S. Anderson, Richard Grove, and Karis Hiebert (Oxford: McMillan Caribbean, 2006), 135-136.

<sup>6</sup> Selwin H.H. Carrington, *The Sugar Industry and the Abolition of the Slave Trade, 1775-1810* (Gainesville, FL: University Press of Florida), 14-16.

<sup>7</sup> Kit Candlin, *The Last Caribbean Frontier, 1795-1815* (Houndmills, UK: Palgrave McMillan, 2012), 30-31; Hymie Rubenstein, "'Bush,' 'Garden' and 'Mountain' on the Leeward Coast of St. Vincent and the Grenadines, 1719-1995," in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*, ed.

remained significant exports for St. Vincent into the 1770s. The demand for sugar in Britain, Europe in general, and the American colonies encouraged the increase of production. These islands were developed to join existing sugar producing colonies like Barbados, Jamaica, and the Leeward Islands.<sup>8</sup> A government supported botanic garden could conduct agricultural trials and provide planters with information and seeds for successful crops, possibly helping diversify island economies and free them from the boom and bust cycle of sugar production.<sup>9</sup>

The botanic garden in St. Vincent had the potential to benefit the entire British West Indies, but it struggled to find funding and support. Melville expected that once the garden showed its worth by raising useful plants, the government in Britain would be willing to fund it. Unfortunately, he was mistaken. Until the 1780s, the garden remained at the whims of whoever happened to be the island's governor, and there were few legitimate avenues open for alternative funding. Dr. Young began to try for some of the Society of Arts' prizes in the late 1760s; he was awarded a gold medal in 1773 for his success growing spices. Melville recognized that Young's salary as a surgeon did not compensate him for his work in the garden, and he allowed Young to grow plants and produce for sale to help defray his expenses. This practice damaged Dr. Young's reputation.<sup>10</sup> Any men or institutions wanting a scientific reputation also needed to seem disinterested. Offering plants or vegetables for sale would have diminished the difference between Dr. Young and a common grocery or nurseryman in the eyes of the St. Vincent locals.

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Robert S. Anderson, Richard Grove, and Karis Hiebert (Oxford: McMillan Caribbean, 2006), 196-199. Ceded Islands were St. Vincent, Grenada, Tobago, and Dominica.

<sup>8</sup> Carrington, *The Sugar Industry and the Abolition of the Slave Trade*, 6 and 13-21. Carrington's figures show a falling off of exports of coffee and cocoa from St. Vincent to Britain after 1776.

<sup>9</sup> See Richard S. Dunn, *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713* (New York: W.W. Norton & Company, Inc., 1972), 188-223 for details of sugar production and the uncertainty of that business. Pages 46-116, 117-148, and 149-187 describe the rise of sugar in Barbados, the Leeward Islands, and Jamaica, respectively, with attention to the general cycle of consolidation, but discussion of local variations.

<sup>10</sup> Richard A. Howard, "The St. Vincent Botanic Garden – The Early Years" in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*, ed. Robert S. Anderson, Richard Grove, and Karis Hiebert (Oxford: McMillan Caribbean, 2006), 122-124, and Anderson, *The St. Vincent Botanic Garden*, 4-16, and Guilding, *An Account of the Botanic Garden in the Island of St. Vincent*, 6. See also Richard A. Howard, "The St. Vincent Botanic Garden – The Early Years," 12-21 for general history of the Saint Vincent Botanic Garden.

Though he was acting under the explicit orders of the governor in a bid to keep the garden alive, selling plants and produce obscured the garden's original purpose, and would have consequences for the garden and Dr. Young in the next decade.

The St. Vincent garden initially failed to gain wide support, but shouldered on with only the protection of Governor Melville. He facilitated correspondence between Young and gentleman who might assist his work in the garden. Melville also hired someone to collect plants on the mainland of South America, and got permission from the Spanish government for Young to botanize there as well. When he returned to Britain, Melville donated all of his natural history books and scientific instruments to the botanic garden. Melville directed Young to collect information on "indigenous medicines," including remedies employed by slaves and Native Americans on the island, offering to pay for any promising remedies from his own pocket. Though the garden lacked regular funding, Melville provided laborers to work the garden.<sup>11</sup> With Melville's backing, Young was able to cultivate a number of exotic plants, like cinnamon, turmeric, mango, rhubarb, nutmeg, and paper mulberry, including a number supplied by the East India Company and the War Office.<sup>12</sup>

Despite his best efforts, Melville's garden faced opposition and was early on subject to the sort of problems that would plague its entire existence. The second superintendent of the garden, Dr. Alexander Anderson, wrote an account of the garden's early years and explained away the garden's early difficulties, writing, "The institution was such a novelty in this part of

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<sup>11</sup> Anderson, *The St. Vincent Botanic Garden*, 5-6, 10-12, 14, and 16, quotation from a letter from Melville to Young, on p. 12. RBGK, Forsyth Correspondence, Foreign Letters, FOR/1/2 letter dated October 12, 1767, from Robert Melville to William Forsyth, f. 1-2, regarding the expedition to the Spanish Main.

<sup>12</sup> Howard, "The St. Vincent Botanic Garden – The Early Years" in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*, 124; John Ellis, *Some Additional Observations on the Methods 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* (London: 1773), 10-12.



the world, like every new scheme it had many enemies from ignorance or sinister views.”<sup>13</sup> When Melville departed for England at the end of his tenure as governor, the commanding officer of the garrison disputed with Young about the extent of the botanic garden land. The garden had been laid out on a plot of land set aside by the local King’s Commissioners for the garrison and general use for the public good. It was initially laid out on a plot of six acres earmarked for garrison use. Young and Melville soon realized that the garden could quickly outgrow the space. Considering the lack of official sanction, Melville knew that it might be difficult for the garden to annex neighboring land in the future, therefore he gave the garden control of twenty acres in total. Some of the officers of the garrison found this appropriation to be an unacceptable encroachment on their rights and pushed back. The garrison’s commanding officer took troops to stop Young from enclosing the allotted land. To safeguard the garden from being commandeered, Melville obtained an order from the king to secure its boundaries in 1771.<sup>14</sup>

The garden at St. Vincent had benefitted from Melville’s largess and won a level of official recognition from the king, but it was still absolutely dependent on the disposition of the incumbent governor for its continued existence. The superintendent continued to rely on the local governor for tools, laborers, and even funding, as he received no additional salary from Britain for his botanical work. As a result, the garden faced repeated attempts to take it over. After Melville’s departure, Governor Leybourne took control of garden land and used it for grazing his cattle. This attack forced Dr. Young to successfully petition the king for a reiteration of royal

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<sup>13</sup> Anderson, *The St. Vincent Botanic Garden*, 15.

<sup>14</sup> Anderson, *The St. Vincent Botanic Garden*, 7-9.

approval for the garden's boundaries in 1773.<sup>15</sup> At this point, the garden remained a "more nominal than a real institution," in the words of a future superintendent.<sup>16</sup>

In 1778, Dr. Young's departure to become superintendent of St. Lucia's hospital and the French takeover of the island did little to improve the health of the botanic garden at Kingston. When Dr. Young was ordered to St. Lucia for his new post, he entrusted the garden to the care of a Mr. Zwarts. When St. the French occupied St. Vincent as a result of the American Revolution, Zwarts petitioned the French governor for a grant of the barrack land, and according to him, the garden as well. He attempted to retain these lands once the British regained control in 1784. However, contemporary observers did not think it likely that the French actually gave the garden to Zwarts. The French government was very supportive of natural history investigation, therefore a French governor would be unlikely to simply give away a ready-made botanic garden. Zwarts did not seem to value his claim very highly; he left for Tobago before seeing the result of his suit. At any rate, Zwarts' claim gave the British governor, Lincoln, an easy excuse for not returning to the pre-occupation status quo. In 1784, Dr. Young returned to the island and brought his protégé, Alexander Anderson, for a visit, expecting to regain his post at the botanic garden. Instead, Governor Lincoln moved some of his family members to live in the superintendent's house in the botanic garden, and by all appearances, had no intention of reinstating that institution.<sup>17</sup>

The story of the first nineteen years of the St. Vincent botanic garden's existence exemplifies the difficulties that could beset a botanic garden in a British colony, difficulties

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<sup>15</sup> Anderson, *The St. Vincent Botanic Garden*, 14-17.

<sup>16</sup> Anderson, *The St. Vincent Botanic Garden*, 14.

<sup>17</sup> Anderson, *The St. Vincent Botanic Garden*, 17-23. Anderson instead argues that Zwarts was told to continue superintending the garden and may have received a grant of the barrack land next to the garden. Anderson points to the relatively healthy state of the garden upon British repossession in 1784 and the usual French practice of devoting a great deal of government funding for natural history to support his conviction that the garden was not granted to a private individual during French control over the island.

which were relatively absent from the history of the East India Company's gardens in India and southeast Asia. Observers in the 1770s and 1780s assumed that the garden's travails stemmed from the basis of its establishment, the backing or lack thereof from government locally and in Britain. Alexander Anderson, Young's protégé, wrote a history of the botanic garden sometime prior to 1809, and that was the conclusion he reached.<sup>18</sup> In this text, he described the garden in Dr. Young's time as "more nominal than a real institution from the foundation General Melville left it on," and acknowledged that it would have been impossible to put the garden on a firmer foundation that early, because the notion of a colonial botanic garden was too new for the British.<sup>19</sup>

Governor Lincoln's term in office could have marked the demise of the St. Vincent garden. Instead, this period marked a turning point. In the words of Lansdown Guilding, a local reverend and botanical enthusiast who also published a history of the garden, "at this period the Institution was taken under the protection of Government."<sup>20</sup> In 1785, imperial government appointed Alexander Anderson superintendent, and the garden was put on a firmer foundation, with funding coming from the War Office rather than the local governor, and protection coming directly from the Crown, with Sir Joseph Banks as an active patron. Once Anderson settled into his role, he recorded in his history of the garden that "the foundation of the establishment was so far fixed stable and permanent that it could no more be interrupted or set aside without the express desire of the King and those entrusted with the chief direction of it."<sup>21</sup> Thus, looking back on the St. Vincent garden's turbulent history from a period of relative prosperity, the reliance on local support seemed to be the cause for the early uncertainty.

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<sup>18</sup> Howard and Howard, "Introduction" in Anderson, *The St. Vincent Botanic Garden*, ii. 1809 is the last date mentioned in the manuscript.

<sup>19</sup> Anderson, *The St. Vincent Botanic Garden*, 14-15.

<sup>20</sup> Guilding, *An Account of the Botanic Garden in the Island of St. Vincent*, 6.

<sup>21</sup> Anderson, *The St. Vincent Botanic Garden*, 38.

With the gift of hindsight, Anderson saw that a garden dependent on local funding and support was doomed to instability. However, as shown in his letters written before his appointment, Alexander Anderson also felt at the time that such a garden was necessarily precarious, and he was well placed to make this judgment. After medical training in Edinburgh, he washed up on Caribbean shores after visiting a brother in New York. During the American Revolution, he was captured by an American privateer and imprisoned by the French on Martinique. Once he was released, he made his way to St. Lucia, where he came to the notice of Dr. Young through their shared interest in natural history. This connection led to a job as hospital mate at St. Lucia. Anderson was already known to William Forsyth, famed head of the Chelsea Physic Garden, and through his relationship with Dr. Young, he came to the attention of General Melville and Sir Joseph Banks. Anderson corresponded with Forsyth during this period, describing the progress of his natural history investigation in the islands he visited.<sup>22</sup> His demonstrated aptitude for botany, presence on the spot, and diverse connections made Anderson an interested observer in the St. Vincent garden's history and its future. These same qualities also made him a likely candidate to run a new botanic garden in the region.

As Anderson kept Forsyth abreast of the developments at St. Vincent, he also traveled to nearby islands, collecting plants with General Edward Mathew, governor of Grenada, who had a taste for natural history. Having taken a liking to Anderson, Mathew wanted him to head a botanic garden at Grenada. The possibility of this new appointment led Anderson to fill his letters to Forsyth with comments about the conditions necessary to induce him to take such a post. Anderson insisted that the king's patronage was essential for such a venture, because

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<sup>22</sup> The RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4 describe Anderson's early period in New York while he stayed with his brother, his capture and imprisonment on Martinique, and stay on St. Lucia. There he found a species of *Cinchona* and brought it to the attention of Dr. Young, thereby beginning that relationship, which likely brought him to the notice of Joseph Banks. See f. 1-40, which include letters from Alexander Anderson to William Forsyth dated May-July 1775 to December 17, 1783.

“without that it can never be on a proper establishment so as to answer the intention of it nor without it should I like to undertake it as it might be always liable to be disannulled by a governor of the assembly of the Island.” In Mathew’s scheme, Grenada’s local government would provide the land and slave labor; Anderson and Mathew hoped for the Crown to provide the superintendent’s salary, and thereby put the garden beyond the whims of successive colonial governors or local elites in an assembly.<sup>23</sup>

Despite the opportunity on Grenada, Anderson could not help but mourn the state of the St. Vincent garden. His visit with Dr. Young had left an impression on him. Anderson wrote to Forsyth about the St. Vincent garden’s good soil and situation, and admitted that if “put on some solid foundation, and not dependent on a governor,” the garden would “answer every intention,” and he would prefer it to a post in Grenada. He observed that “dependence on Governours here is precarious without being supported from home.”<sup>24</sup> Anderson had seen firsthand what could happen when a botanic garden was under a colonial governor’s sole control. With Governor Lincoln’s family in the superintendent’s house in the St. Vincent garden, Anderson thought it likely that Lincoln would keep the garden for his own use. He lamented to Forsyth, “As it was not on any establishment, I imagine it will be disannulled.”<sup>25</sup> Anderson’s letters reveal his preoccupation with the “establishment” and “foundation” of any garden that he might oversee. Governor Lincoln’s attitude toward the garden on his island was a clear warning to Anderson that though one governor might found a garden, a new governor could easily eliminate it. Only

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<sup>23</sup> Anderson, *The St. Vincent Botanic Garden*, 21-23 and RBGK, Forsyth Correspondence, FOR/1/4, letter dated June 1, 1784, from Alexander Anderson to William Forsyth, f. 50, which is the source of the quotation.

<sup>24</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated June 26, 1784, from Alexander Anderson to William Forsyth, f. 54v.

<sup>25</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated June 1, 1784, from Alexander Anderson to William Forsyth, f. 50-51.

botanic gardens supported from Britain and put on the foundation of a royal institution would have the strength to survive and fulfill the goals of its well-wishers.

Anderson was not alone in his belief that a garden superintendent supported from home would be more likely to successfully introduce new plants and explore the flora of his region for scientific, medical, and economic reasons. Sir Joseph Banks agreed with him, writing,

A garden established in the West Indies independent of the military establishment there & under the control of those here who knew the value which the Nation could derive from the well-directed exertions of the person entrusted with it would prosper much better & give proof of its real utility much sooner than an Establishment submitted to the orders of a Governor who however well he may wish cannot be supposed to know the means of making it flourish & in some cases may even find an interest in promoting its destruction.<sup>26</sup>

Banks saw that a locally supported garden would lack the tools for success. Governors were not picked for their knowledge of natural history. They could not be expected to know how to run a botanical establishment, judge the work of its superintendent, or understand why it might be worthwhile to have one.

In 1784, the St. Vincent garden's demise seemed assured, but as Anderson hoped, the Crown stepped in to secure the garden's future and award him the superintendency. Joseph Banks had determined that it would be better to take the St. Vincent garden in hand rather than establish a new one on Grenada.<sup>27</sup> Anderson and the plan to revive the St. Vincent garden had the support of several valuable patrons. General Melville still took an active interest in his

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<sup>26</sup> TNA, WO 43/150, letter dated August 3, 1785, from Sir Joseph Banks to Alexander Anderson quoted in letter dated January 5, 1823, from George Caley to Lord Palmerston f. 327r.

<sup>27</sup> Anderson, *The St. Vincent Botanic Garden*, 23.

creation, and William Forsyth continued to assist Anderson in his botanical endeavors.<sup>28</sup> Dr. Young had warmly recommended Anderson as his successor and stood ready to advise him.<sup>29</sup> Thus, with the support of the Crown and the personal interest of elite men of science in Britain, Alexander Anderson set off to St. Vincent to fill his post as superintendent in 1785, no doubt certain that now, with the garden beyond the governor's power, things would be different.

In the short term, the garden's change of status was not enough to counter the desires of the local governor. When Anderson arrived on St Vincent on May 14, 1785, things were as he had left them during his visit with Dr. Young. Governor Lincoln's family continued to use the botanic garden house, and his livestock continued to graze in the garden. In chapter four, I discuss the contentious early relationship between Anderson and Governor Lincoln and Anderson's difficulty in taking full possession of the botanic garden as outlined in his orders. The difference in social status between the two men and the relative novelty of scientific appointments contributed to the shared animosity and misunderstandings. Those conditions led to a lack of clarity about the role that each man was to play and the mode in which they should address each other. Here, I suggest that Lincoln was also following the previously established model of the relationship between the governor and the garden. The new orders placed the garden under the direction of a superintendent who reported solely to Sir Joseph Banks and Sir George Yonge, secretary at war. The governor of St. Vincent only approved the garden's accounts. Previously, the governor had had supreme authority over the garden.<sup>30</sup> Governor Lincoln seemed reluctant to relinquish his total authority and continued to behave as if the garden were under his purview.

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<sup>28</sup> "Forsyth MSS" in *Cottage Gardener*, 9 (March 3, 1853): 417, letter dated February 8, 1785, from Melville to Forsyth, <http://www.biodiversitylibrary.org/item/82720#page/429/mode/1up>, accessed July 18, 2017.

<sup>29</sup> Howard, "The St. Vincent Botanic Garden – The Early Years," in *Islands, Forests and Gardens in the Caribbean*, 125-126.

<sup>30</sup> Anderson, *The St. Vincent Botanic Garden*, 29-30.

Prior to Anderson's arrival with orders, Lincoln handled the botanic garden lands similarly to his predecessors. Governor Melville had spent some of his own money on the garden's upkeep. Governor Lincoln did as well. Not expecting outside claims on the garden from either Zwarts or Anderson, Lincoln had repaired the superintendent's house in the garden at his own expense, presumably to make it suitable for the family members who later moved in. He put his grazing animals on some garden land nearby that was distinct from the fenced and more heavily cultivated parts of the garden.<sup>31</sup> Governor Leybourne had similarly used the garden to graze his animals in 1773 until Young successfully petitioned the Crown to certify the garden's boundaries.<sup>32</sup> As governor, Lincoln had the right to control personnel at the garden. When Dr. Young appeared, hoping to regain his post as superintendent, Lincoln rejected his request, claiming that Young had abused his office in former times by raising cabbages to sell in town.<sup>33</sup> Melville had hired Young; Lincoln could fire him. Lincoln's actions were not helpful from the perspective of those interested in botany, but he was legally allowed to appoint officers and turn the garden into his own private domain if he wished. The botanic garden was established on Crown lands, and thus at the disposal of the Governor, barring notice from the government in London. Anderson's orders upset this status quo.

Governor Lincoln's actions after the garden's reestablishment are comprehensible from the perspective of someone trying to retain control. On being notified by the War Office of the Kingston establishment's new chain of command, Lincoln expressed to government his wish to

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<sup>31</sup> TNA, WO 40/4, letter dated May 29, 1785, from Governor Edmund Lincoln to Alexander Anderson, p. 3-4; TNA, WO 40/4, letter dated June 1, 1785, from Governor Edmund Lincoln to Sir George Yonge, p. 3. Here, Lincoln admits to Yonge that he would not have used his own money to fix the house if he'd known that Zwarts would make claim to the garden or that the garden would be re-established by the Crown. Lincoln also claimed to have immediately given up the house when he received orders about the new garden; this claim is simply false.

<sup>32</sup> Anderson, *The St. Vincent Botanic Garden*, 16-17.

<sup>33</sup> TNA, WO 40/4, letter dated May 29, 1785, from Governor Edmund Lincoln to Alexander Anderson, p. 5. Melville had allowed Young to grow plants for sale because he received no salary for tending the garden. Unfortunately, as noted earlier in this section, it led to the appearance of impropriety.



have some authority over the garden, not of course, to enlarge his own power, but to ensure its utility and indulge his interest in science.<sup>34</sup> Though he failed in that request, Lincoln decided that Zwarts' pending court case gave him the right to suspend the orders that both he and Anderson had received from the War Office.<sup>35</sup> His actions after Anderson arrived must be interpreted through this lens.

Anderson had to fight for everything he gained relative to the garden, but the governor was conciliatory, at least in appearance. On Anderson's arrival on May 14, 1785, Lincoln warned him of the legal limbo over garden lands, but kept his family in possession of the botanic house. The governor offered Anderson a seat at his dinner table and a room in his home until the matter was settled, though Anderson declined.<sup>36</sup> Since Anderson's appointment included the use of the house, the suspension of his orders may have left him with real financial hardship. Lincoln's offer may have been motivated by common courtesy, but it may have also been a ruse to obtain some control over Anderson by conferring a favor. In accepting such a favor, Anderson would have been in Lincoln's debt. Instead, the superintendent continued to request permission to take his post, and Lincoln eventually moved his family out of the house and allowed Anderson to move in. However, the governor only gave up the original six acres of the garden and kept his animals pastured in the rest, again citing Zwarts' claim.<sup>37</sup> Lincoln used this occasion to reiterate

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<sup>34</sup> TNA, WO 40/4, letter dated April 4, 1785, from Governor Edmund Lincoln to Sir George Yonge, Secy at War, p. 1-3, Here Lincoln both expresses his wish to oversee the garden and informs government of Zwarts' claim. He argued that the previous garden had been ineffective, which is why he wanted direct control. In this same letter, he notifies Yonge of Zwarts' claim, saying that he would not be able to hand over the garden to Anderson.

<sup>35</sup> TNA, WO 40/4, letter dated May 30, 1785, from Governor Edmund Lincoln to Alexander Anderson, p. 1. This message got through to Anderson because he wrote to Forsyth, incredulously, that Lincoln claimed he gave up the house and six acres not in response to the instructions from government but "of his own good will." RBGK, Forsyth Correspondence, FOR/1/4, letter dated June 1, 1785, from Alexander Anderson to William Forsyth, f. 75v.

<sup>36</sup> TNA, WO 40/4, letter dated May 30, 1785, from Alexander Anderson to Edmund Lincoln p. 3; and TNA, WO 40/4, letter dated May 29, 1783, from Edmund Lincoln to Alexander Anderson, p. 1.

<sup>37</sup> TNA, WO 40/4, letter dated May 29, 1785, Edmund Lincoln to Alexander Anderson, p. 2-6, Lincoln wrote to Anderson that he only had orders to give up the house and surrounding lands, which "amount to about Six Acres as I am told..." on p. 5; TNA, WO 40/4, letter dated May 22, 1785, from Edmund Lincoln to Alexander Anderson, p. 1, this letter tells Anderson that the house is vacant.

what he saw as the balance of power. Lincoln wrote to Anderson and told him in person on multiple occasions, “in giving you leave to reside in the Botanic House & to use the Gardens I did it from my own good will, & not in obedience to your instructions.”<sup>38</sup> Lincoln had suspended the government’s orders because of Zwarts’ claim, and in the vacuum left behind, he posited that all action was at his discretion. Lincoln wanted Anderson to know that anything he received was not due to the power of Anderson’s patrons or government in London. Lincoln made the decisions in St. Vincent.

Though colonial governors had a great deal of power, they were answerable to government in Britain. Lincoln knew this, but he continued to try to carve out areas for his own authority with regard to the botanic garden. He told Anderson that he did not expect censure from government in London for this behavior.<sup>39</sup> However, perhaps tellingly, he also did not inform government of his use of the land when initially reporting Zwarts’ claim to Sir George Yonge. Anderson tried to gain possession of the entire garden, writing to Lincoln that they had both seen the plan of the garden sent by the War Office, therefore they both knew that the garden included the pasture land.<sup>40</sup> Here, Lincoln had used his own discretion to modify the garden’s size. He wrote to the War Office to defend his action, providing a litany of arguments. He claimed that six acres was all that Dr. Young ever cultivated and that most of the pasture land was so poor that it could barely support grass. He argued that the poor soil quality made him surprised that the garden was reestablished at all. He suggested that Anderson could not possibly

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<sup>38</sup> TNA, WO 40/4, letter dated May 30, 1785 from Governor Edmund Lincoln to Alexander Anderson, p. 1. This message got through to Anderson because he wrote to Forsyth, incredulously, that Lincoln claimed he gave up the house and six acres not in response to the instructions from government but “of his own good will.” RBGK, Forsyth Correspondence, FOR/1/4, letter dated June 1, 1785, from Alexander Anderson to William Forsyth, f. 75v. He reported Lincoln’s statements about his “good will” to Sir George Yonge as well. WO 40/4 letter dated May 30, 1785 from Alexander Anderson to Sir George Yonge, p. 1.

<sup>39</sup> TNA, WO 40/4, letter dated May 30, 1785, from Governor Edmund Lincoln to Alexander Anderson, p. 3.

<sup>40</sup> TNA, WO 40/4, letter dated May 30, 1785, from Alexander Anderson to Edmund Lincoln, p. 1. Anderson wrote to Sir George Young reporting that he and Lincoln had seen the same garden plan, TNA, WO 40/4, letter dated May 30, 1785, from Alexander Anderson to Sir George Young, p. 2.

cultivate more than six acres at that time, with no workers and the title to the land unsettled.<sup>41</sup> Though he had to muster excuses for the War Office, Lincoln had felt free to alter government orders. It is entirely possible that Lincoln did not expect Anderson to report on his conduct to the War Office in the first place. But a single batch of orders and an activist superintendent were not enough to make Lincoln immediately submit to a revision of his authority. He still expected control. At this stage, Lincoln wrote to the War Office that Anderson importuned him “with a heat of temper at his outset which leaves me little hopes of being ever able to exercise any useful control over his pursuits.”<sup>42</sup> He seems completely unaware that the reestablishment of the garden under Crown protection was designed in part to reduce the St. Vincent governor’s control over it.

Lincoln may have used Zwarts’ suit on the land as a means to prolong his own authority over it, but he could only delay that exchange of power. Sir Joseph Banks and the secretary at war were serious about reestablishing the St. Vincent garden, and in 1786 the secretary of state determined that Zwarts had no right to the land. Yonge ordered Lincoln to turn over the entirety of the garden, the original six acres and subsequent grants, to Alexander Anderson’s care. Lincoln continued to throw around what authority he could, keeping Anderson ill-informed about the garden’s budget, but Anderson himself acknowledged that after the final ruling on the Zwarts case, his relationship with Governor Lincoln slowly improved, and Lincoln proved to be genuinely interested in natural history.<sup>43</sup>

Lincoln’s change in behavior suggests that the orders of the imperial government were effective in altering the relationship between the local governor and the botanic garden, at least in the short term. However, his struggle with Alexander Anderson demonstrates that this change

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<sup>41</sup> TNA, WO 40/4, letter dated June 1, 1785, from Edmund Lincoln to Sir George Yonge, p. 2-4

<sup>42</sup> TNA, WO 40/4, letter dated June 1, 1785, from Edmund Lincoln to Sir George Yonge, p. 4.

<sup>43</sup> Anderson, *The St. Vincent Botanic Garden*, 35-37; RBGK, Forsyth Correspondence, FOR/1/4, letter dated April 12, 1786, from Alexander Anderson to William Forsyth, f. 95r.

was not immediate, and even with the backing of the imperial government, a botanic garden was vulnerable to the caprice of local governors. Sir Joseph Banks and the War Office in London might decide one thing, but they required the participation or at least the acquiescence of local power in order to put their plans into action. Without that acceptance, their plans could be hindered, if not by outright disobedience, by careful legal obstruction.

### **Golden Age with Alexander Anderson**

The St. Vincent botanic garden had struggled to find its footing, but after receiving the unequivocal support of the Crown, Governor Lincoln and a few of his successors adapted to the presence of a ripple in their power. With the garden's status more assured, the superintendent could take on projects that required time to come to fruition. The garden continued to be a site for acclimatizing spices and exotic plants, but Anderson was able to indulge in activities more clearly akin to scientific botany. The garden also participated in the transplantation of breadfruit trees, an ambitious undertaking that directly used botanical knowledge and imperial links to try to answer an immediate need in the Caribbean. Anderson and the St. Vincent garden took on more distinctly local initiatives, too, but despite his efforts, Anderson failed to build a lasting local appreciation for the garden. Difficult times would return to the garden after 1811, and Anderson's tenure as superintendent could be seen as the garden's golden age.

Under Governor Melville and Dr. Young's supervision, the garden gained its first collection of exotic plants, with spices, fruits, and medicinal plants heavily represented. Young had some success with cultivating these spices and distributing them to interested parties. Young had the chief magistrate of St. Vincent certify that the garden contained 140 healthy specimens

of cinnamon in 1772.<sup>44</sup> He cultivated enough of the turmeric that he was able to send some to a Mr. Robley in Tobago. Before the French occupation, Robley had been sending “several thousand weight of it annually” to Britain. A grower in Barbados who had also obtained his turmeric plants from the St. Vincent garden had similar success growing and exporting the rhizomes.<sup>45</sup> These vignettes suggest that the garden was able to supply a few exotic plants to local landowners for cultivation, even on its limited early budget.

In Anderson’s time, the goals for the garden were similar to those envisioned at its inception, though the garden’s reestablishment gave the new and former superintendent the opportunity to articulate what they saw as the garden’s aims. On hearing in 1785 that the garden would be revived with Anderson at the helm, Dr. Young wrote to Melville about possible plans for the garden moving forward. He suggested more medicinal plants and spices from the East Indies. Breadfruit, canes, and the cochineal insect (*Opuntium maximum* plants were already in the garden) were also deemed worthy objects. Young offered to help by drawing up a list of desired plants to circulate amongst friends of the garden, in case they had varieties that they could spare.<sup>46</sup> Anderson and Young were friends, therefore Anderson likely knew of Young’s views, but he also had his own ideas about what the garden should be. In the general sense, Anderson believed that the garden could not conform to the usual standards of botanic gardens in Europe. He surmised that the basis for European botanic gardens was to maintain one individual of various species to display as a novelty. However, Anderson concluded that in St. Vincent,

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<sup>44</sup> Howard, “The St. Vincent Botanic Garden – The Early Years” in *Islands, Forests and Gardens in the Caribbean*, 124, this was likely to win a Society of Arts prize; Ellis, *Some Additional Observations on the Methods of Preserving Seeds*, 10-13.

<sup>45</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated February 8, 1785, from Dr. Young to Robert Melville, f. 165-166. A Joseph Robley, President and Commander in Chief of Tobago, would later receive breadfruit plants from Anderson, and had an account of his method of culturing them printed in *Transactions of the Society of Arts* 20 (1802): xxii-xxiii, 357-370, and 391, <https://hdl.handle.net/2027/nyp.33433110031006>, accessed Sept 14, 2017.

<sup>46</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated February 8, 1785, from Dr. Young to Robert Melville, f. 165-166.

many duplicates of a single species had to be cultivated in order to determine if they could be “substitutes for those imported from distant Countreys with great expences to the Nation.” Once the superintendent had ascertained the medical and commercial viability of the various species, the garden would continue to rear a number of each plant in order to distribute them among the various British possessions in the West Indies.<sup>47</sup> He also wanted to obtain many plants from the other islands and introduce them on St. Vincent.<sup>48</sup> In short, Anderson planned for the garden to be a nursery for various useful plants.

Trial and error were a large component of the process for determining which useful plants could grow in the St. Vincent garden and become the basis for new cash crops in the region, and Anderson availed himself of whatever plants and information came to hand. Anderson asked for published works on the natural history of the East Indies so that he could better know the soil and weather that would suit the Indian plants he received. He also sought information on the time of harvesting and methods for curing the various spices.<sup>49</sup> He tried to think of new uses for the waste products of existing agricultural production, such as whether the leaves of cinnamon trees growing in the garden could be turned into a product. He consumed them himself as a tea with favorable results.<sup>50</sup> Though he received seeds and plant materials from the Board of Trade and the Board of Agriculture, the botanic garden’s correspondents in Britain and the government were not the only parties facilitating the transfer of these plants to St. Vincent.<sup>51</sup> Anderson himself reached out to his correspondents locally to try to obtain the cochineal insect, cloves, and

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<sup>47</sup> TNA, WO 40/4, letter dated May 30, 1785, from Alexander Anderson to Sir George Yonge, p. 3.

<sup>48</sup> RBGK, Forsyth Correspondence, FOR 1/4 letter dated November 4, 1875, from Alexander Anderson to William Forsyth, f. 85v.

<sup>49</sup> TNA, WO 40/4, letter dated May 4, 1790, from Alexander Anderson to Sir George Yonge, p. 2.

<sup>50</sup> TNA, WO 40/4, letter dated May 4, 1790, from Alexander Anderson to Sir George Yonge, p. 2-3.

<sup>51</sup> Guilding, *An Account of the Botanic Garden in the Island of St. Vincent*, 11.

cinnamon.<sup>52</sup> He also tried to introduce mulberry trees and silkworms without success.<sup>53</sup> The spices of the trades controlled by the French and Dutch were particular objects of interest, and when it came to cloves and nutmeg, Anderson acquitted himself well and kept parcels of land with a thriving colony of each species. However, overall, Anderson had varying levels of success cultivating foreign plants in the St. Vincent Botanic garden.

Commercially and medicinally viable plants would help justify the Crown's investment in the botanic garden, but it was not Anderson's only object. He envisioned himself as the locus for all sorts of botanical exchanges on the island. Anderson was interested in fulfilling the garden's official purpose, but he also wanted to encourage garden culture in the local populace. He asked William Forsyth for flower seeds to distribute among some women of his acquaintance, noting that many "common flowering shrubs" of Britain would do well for that purpose.<sup>54</sup> He asked Forsyth more than once, writing, "I wish to encourage the Idea in those who have an inclination that way."<sup>55</sup> Wallich, the superintendent of the Calcutta garden in a later period, justified his extensive free plant distributions by extolling the benefits of introducing garden culture to the middle classes of India, both European and Indian. He suggested that agriculture and gardening were "pure" and "Civilized" occupations for the "Governed" to practice.<sup>56</sup> Anderson, over thirty years earlier, seems to have also believed in the improving effects of gardening, though he did not articulate his specific reasons. He may not have been

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<sup>52</sup> TNA, WO 40/4, letter dated May 4, 1790, from Alexander Anderson to Sir George Yonge, p. 3; TNA, WO 40/4, letter dated June 29, 1790, from Alexander Anderson to Sir George Yonge, p. 1; TNA, WO 40/4, letter dated June 5, 1790, from Alexander Anderson to Sir George Yonge, p. 1-4, Anderson had received clove plants from a French gentleman with property on St. Lucia, who he hoped might provide other French plants he desired. Guilding, *An Account of the Botanic Garden in the Island of St. Vincent*, 6.

<sup>53</sup> TNA, WO 40/4, letter dated October 6, 1793 from Alexander Anderson to Sir George Yonge, p. 1.

<sup>54</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated November 4, 1785, from Alexander Anderson to William Forsyth, f. 86r.

<sup>55</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated August 17, 1786, from Alexander Anderson to William Forsyth, f. 102v.

<sup>56</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836, from Wallich to HJ Prinsep, Secy to Govt, p. 55.

seeking to civilize the white settlers and creoles, but instead hoped that the botanic garden would become the source for all sorts of plant related services for the local community.

The community of St. Vincent likewise recognized that the garden could provide a range of plant materials. Inhabitants were unafraid to approach Anderson and ask specifically for what they wanted, and Anderson did not necessarily use his official links to British government, namely Sir George Yonge and Sir Joseph Banks, to try to procure these items. He may have avoided his official connections to obtain flower seeds for local women since it was an unofficial errand. However, Anderson used the same personal connections when answering requests for agricultural seeds. Some gentlemen on the island asked Anderson to obtain European grass seed for them. Anderson wrote to his friend Forsyth, requesting clover seed and “Lucern” to be sent out to St. Vincent on the first ship.<sup>57</sup> In asking specifically for grasses, these local gentlemen probably had sizeable herds of livestock and were looking for familiar grazing materials. It is not clear whether Yonge and Banks would have sanctioned government support for presents of this sort of plant material. Cattle fodder was not a cash crop. Anderson may have opted to use his private correspondents to obtain the grasses and flower seeds because such favors to local notables could put him on a better footing in local society. A garden with strong support among local elites might be better able to weather an unfriendly governor.<sup>58</sup>

Anderson encouraged the planters around him to call on him when they needed plant materials, and this reputation extended outside the island of St. Vincent. Planters belonging to the Society for the Improvement of Plantership on Barbados wrote to him in 1808 and requested

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<sup>57</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated August 20, 1786, from Alexander Anderson to William Forsyth, f. 104r. “Lucern” here might be alfalfa.

<sup>58</sup> Anderson consciously cultivated people for the benefit of the garden, such as making friends with naval officers to help plant shipments go more smoothly, see TNA, WO 40/4, letter dated October 18, 1791, from Alexander Anderson to Sir George Yonge, “My opinion is, that little attentions of civilities to the Captain who once brought anything in a thriving state have the desired effect – One or two Captains that command ships in the Trade to this Island, are Lieuts in the Navy. I will try what can be done with them, as they have more liberal ideas than the others they may be more attentive to these matters...”



some of the rice planted in Sierra Leone, upland rice, to grow on Barbados. Anderson's reply was very solicitous. He provided some seed and apologized for the time it took him to obtain it. Anderson told the planters that he had more on the way which he would send on to them when possible, noting that the rice grew well on dry, elevated land. He also wrote to the planters, "Any articles you may conceive in my power useful for the intentions of your Society, or yourself, individually, I beg you will lay your demands on me."<sup>59</sup> Anderson was eager to assist the planters' societies which sought to improve agricultural practices on Barbados. His appeal to them to come to him with their personal requests for plant materials suggests that he wanted to be the region's source for plants and seeds that were not easy to obtain. The Calcutta botanic garden's close relationship with local societies for agricultural improvement suggests that these sorts of relationships were not uncommon. However, Anderson's willingness to respond to individual requests suggests a desire to use personal favors to secure a reputation for usefulness for the botanic garden.

Barbados is a neighboring island to St. Vincent, therefore it is not surprising that the planters' society had some contact with Anderson. He carried on a correspondence with botanically minded individuals in that island, including Lord Seaforth, who was governor from 1800 to 1806.<sup>60</sup> However, this interaction falls short of the net of relationships between the botanic gardens in India and the local private agricultural and horticultural societies. In India, the superintendent of the local botanic garden was a member of the society, sometimes a founding member, and usually an officer. As such, he could help direct the society's objects. Furthermore,

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<sup>59</sup> Many thanks to Chris Blakley for this reference, *Minutes of the Society for the Improvement of Plantership in the Island of Barbados, instituted December 8<sup>th</sup>, 1804* (Liverpool: 1811), 54 and 68-69.

<sup>60</sup> Other correspondents on Barbados include Joshua Steel and a Mr. Elcock, both of whom asked Banks to request plants from Anderson. See *The India and Pacific Correspondence of Sir Joseph Banks*, Vol 4, Letter 109, letter dated December 29, 1793, from Alexander Anderson to Sir Joseph Banks, p. 187-188, and R.A. Howard, "Early Botanical Records from the West Indies, Particularly Barbados: Ligon (1657) to Lord Seaforth (1806)," *Botanical Journal of the Linnean Society* 79 (July 1979): 77-78.

the colonial government, the EIC, supported the societies by providing money for prizes. In the Caribbean, the Barbados society saw Anderson as an ally, since they wrote him for seed, but he was not a member or insider. This lack of regular correspondence shows that the botanical enterprise in the Caribbean did not follow the pattern of interaction demonstrated in India. There was little coordination between government and private societies here.

Anderson's search for grass, rice, and flower seeds were small projects with primarily local effects. However, as a Crown-supported institution, the garden became a part of larger initiatives that represented a joining of local desires and imperial objectives. One of these was the King's Hill Forest Reserve, created on the initiative of Anderson and a local assemblyman. Local planters resisted the measure because the preserve foreclosed land to sugar production and might have provided shelter to the indigenous Caribs who occasionally harried the British settlements. Despite uneven local support, the Crown stepped in to preserve the tract of forest in 1791.<sup>61</sup> The St. Vincent Botanic Garden's largest imperial project, the transplantation of breadfruit trees throughout the Caribbean, had a similar mix of local support, Crown involvement, and local ambivalence. In 1775, the planters of the Standing Committee of West Indian Planters and Merchants offered to pay the costs of anyone who would import breadfruit plants. The Society of Arts in London had offered a prize starting in 1777 for anyone who introduced breadfruit to the British West Indies.<sup>62</sup> Planters and botanical notables in the Caribbean had spoken of the benefits of introducing breadfruit trees to Caribbean islands prior to the first voyage of Captain Bligh to collect breadfruit plants from Tahiti. Some planters hoped breadfruit trees would provide an inexpensive source of nutrition for their slaves. Since the economies of the British holdings in the Caribbean were primarily based on sugarcane

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<sup>61</sup> Grove, "The British Empire and the Origins of Forest Conservation in the Eastern Caribbean 1700-1800," 154-159.

<sup>62</sup> *Transactions of the Society of Arts*, 12 (1794): xii-xiv.

cultivation, planters devoted the bulk of their land to growing sugarcane rather than food crops. The British West Indies heavily relied on imported food from North America, but importing food was costly, and planters wanted to minimize the expenses of maintaining their slave work force. The breadfruit trees were expected to meet this demand by providing an abundant food source requiring relatively little labor. Recurrent famines brought on by repeated hurricanes and supply disruptions from the American Revolution made them eager to have a local emergency food crop.<sup>63</sup> Thus, Dr. Young wrote to Melville about the desirability of growing breadfruit on St. Vincent when the garden was reestablished in 1785.<sup>64</sup> And Hinton East, a planter with a large botanical garden in Jamaica, wrote to Banks in 1784 about the benefits of introducing breadfruit to the West Indies as food for slaves. He felt it would be a better food source than the plantains on which slaves heavily relied.<sup>65</sup>

Once the idea gained the approval of Sir Joseph Banks and others in government, Captain Bligh was sent in 1787 to achieve several ambitious plant transfers. The plan for the voyage was not simply the transplantation of breadfruit trees. After satisfying that portion of the mission, Bligh and his gardeners had instructions to collect rice seed, fruit trees, and a number of spices from Java, Prince's Island, and Isle of France. They were ordered to leave breadfruit and some of the other plants in the East India Company's garden at St. Helena, but deliver the bulk of the cargo to St. Vincent and Jamaica. Sir Joseph Banks ordered Anderson to take control of the plants for St. Vincent and organize their distribution. The crew would pick up any plants Anderson or people on Jamaica had collected and transport those and the remnants of the

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<sup>63</sup> Dulcie Powell, "The Voyage of the Plant Nursery, H.M.S. *Providence*, 1791-1793," *Economic Botany* 31 (October-December 1977): 387-431. Powell shows that Jamaica suffered horrible loss of life at this time from famine.

<sup>64</sup> RBGK, Forsyth Correspondence, Foreign Letters, FOR/1/2, letter dated February 8, 1785, from Dr. Young to Robert Melville, f. 165-166.

<sup>65</sup> *IP Corr JB*, Vol 2, Letter 48, dated July 19, 1784, from Hinton East to Sir Joseph Banks, 62.

breadfruit and other plant cargo back to Britain. Some of these plants were destined for Kew, others for the newly formed East India Company Botanic Garden at Calcutta.<sup>66</sup> The failure of the first mission due to mutiny did not lead to the abandonment of the plan. Bligh survived his loss of command and harrowing voyage to a Dutch settlement in Timor after his crew set him adrift during the mutiny near Tonga. After his return to Britain and day in court, he was chosen to captain the second, successful mission to bring breadfruit to the British West Indies. The instructions for this second mission were largely the same. Bligh and his gardeners were instructed to gather the same plants as before, along with any curious plants they might find, and make the same stops. Breadfruit would be left at the St. Vincent botanic garden for the benefit of the Windward Islands and in Jamaica for the Leeward Islands.<sup>67</sup>

Bligh's second voyage was considered a success in the general sense, though locally, the response was mixed. Inevitably, plants were lost on the voyage, but enough made it to St. Vincent and Jamaica to be planted on those islands. Anderson reported to government periodically about the health of the trees.<sup>68</sup> Anderson planned to distribute the plants among the islands, but the ongoing war with France hindered the project. He gave breadfruit trees to most of the planters in St. Vincent soon after their arrival in the island.<sup>69</sup> Though a few locals enthusiastically supported the whole breadfruit plan, the general response to the live plants was lukewarm. Anderson's letters suggest that people accepted the plants, but were indifferent to their fate once planted. When Anderson spoke to some of the planters about the benefits of the breadfruit trees, they replied, "The plantain was the best Breadfruit." Anderson concluded, "West

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<sup>66</sup> *IP Corr JB*, Vol 2, Letter 150, dated August 20, 1787, from Sir Joseph Banks to David Nelson, 224-227; TNA, PRO 30/11/13, letter dated June 21, 1787, from Sir George Yonge to Earl Cornwallis, f. 324-325.

<sup>67</sup> *IP Corr JB*, Vol 3, letter 168, dated June 25, 1791, from Sir Joseph Banks to James Wiles, 228-233; Windward Islands included Grenada, St. Lucia, St. Vincent, the Grenadines, Barbados, and Tobago; Leeward Islands included Antigua, Barbuda, Montserrat, St. Christopher, Nevis, Anguilla, and the Virgin Islands.

<sup>68</sup> See, for instance, TNA, WO 40/4, letter dated March 9, 1793, from Alexander Anderson to Sir George Yonge, and TNA, WO 40/4, letter dated July 12, 1792, from Alexander Anderson to Sir George Yonge, p. 1.

<sup>69</sup> TNA, WO 40/4, undated letter received on June 3, 1793, from Alexander Anderson to Sir George Yonge.

India planters have hardly a view beyond the Sugar Cane, or what does not yield immediate revenue.”<sup>70</sup> However, later in the 1790s, he informed Banks there was great demand for the plants and claimed that slaves liked the fruit, as well as whites who tasted it two or three times.<sup>71</sup>

Though some elite landowners in the British Caribbean were open to testing the breadfruit as food for slaves, others were happier with the status quo. The plan was designed with planters in mind, but if they declined to avail themselves of the tropical fruit, Anderson could not force them to change their minds. From 1777 to 1802, the Society of Arts offered a prize every year for breadfruit cultivation. First, the prize was offered to anyone introducing breadfruit to British possessions in Africa or the West Indies, and after Bligh’s voyage, to the individual in the British West Indies who cultivated the greatest number of breadfruit.<sup>72</sup> It is unclear whether these prizes stimulated greater interest. The society announced a winner of a silver prize in 1799 and a gold prize in 1802. The society concluded in 1802 that breadfruit were well spread about the islands.<sup>73</sup> However, two winners of the thirty guinea prize in the course of twenty-five years does not suggest that many planters devoted much time or money to cultivating the fruit. In 1801, a traveler on St. Vincent observed that Anderson was “the only person who...obliges his Negroes to eat it.”<sup>74</sup>

The imperial projects in which the St. Vincent Botanic garden played a role had local effects and received a mixed reaction from local notables. However, Alexander Anderson also

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<sup>70</sup> *IP Corr JB*, Vol 4, Letter 60, dated June 3, 1793, from Alexander Anderson to Sir Joseph Banks, 131-132.

<sup>71</sup> *IP Corr JB*, Vol 4, Letter 276, dated September 12, 1796, from Alexander Anderson to Sir Joseph Banks, 417.

<sup>72</sup> *Transactions of the Society of Arts* 12 (1794): xii-xiii and 91-92. See also volumes 1-20.

<sup>73</sup> Archibald McLeish in service of Samuel Mure of Jamaica, *Transactions of Society of Arts*, 17 (1799): 355-357 and 367. Archibald McLeish of Jamaica claimed to have prepared a plot with trees and distributed plants among gentleman on the island. Won only silver medal since he did not send a sample as required for prize. Joseph Robley, Governor of Tobago, won a gold medal and had an account of his method of culturing them printed in *Transactions of the Society of Arts* 20 (1802): xxii-xxiii, 357-370, and 391. Alexander Anderson won Gold Medal in same volume for cultivating cinnamon and clove, see p. 391.

<sup>74</sup> Douglas Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820* (Manchester: Manchester University Press, 2005), 132.

undertook projects that were more akin to scientific botany. Dr. Young had struggled with nonexistent funding, but with an ample budget, Anderson was able to go on collecting trips to bring useful and curious plants back to St. Vincent. During his time as superintendent, he visited the Spanish Main and made tours of other Caribbean islands.<sup>75</sup> He brought these plants not only to cultivate them in the garden, but to exchange with correspondents in the region and donate to Kew. It is not clear how many plants were exchanged locally, but some of Anderson's collecting trips and botanical exchanges had a lasting effect on the local landscape. When noted botanist Richard A. Howard was working on his *Flora of the Lesser Antilles*, he found that St. Vincent "contained more plants from South American than seemed reasonable," including plants that were not present on neighboring islands. After work at the Linnean Society and other archives, Howard discovered that Anderson was responsible for introducing these plants. One of them, the *Solanum Seafortianum*, became such an iconic plant on St. Vincent that it is called St. Vincent Lilac despite its South American origin.<sup>76</sup>

Anderson himself was eager to document the new plant life he found on St. Vincent and in the lands around him. Sometime before 1791, he had the good fortune to gain an assistant, John Tyley, who was adept at botanical illustration. Tyley, a man of color from Antigua, was also a self-taught artist. Anderson excitedly wrote to friends and patrons about his assistant and all of the drawings he was having made of the plants he encountered. Having a botanical artist at the garden was beneficial for many reasons. Botanical illustrations were one of the early steps to producing a flora of a region. As discussed in chapter one, the floras that the superintendents of the Calcutta botanic garden produced were likely a bid to raise the scientific reputation of both

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<sup>75</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated July 16, 1788, from Alexander Anderson to William Forsyth, f. 124-125; Linnean Society, MS 614, Account of Anderson's 1803 trip to Trinidad.

<sup>76</sup> New York Botanical Garden, Mertz Library, Hanging File, Anderson, Alexander. "Botanist finds 200-Year-Old Plant Study" *Harvard University Gazette*, July 22, 1988, Vol. 83.

the botanic gardens and the superintendents themselves. Chapter four discusses John Tyley and the importance of botanical illustration and floras, which help garden workers create a more permanent record of delicate and perishable plant materials for later identification and study. Botanical illustrations were useful not only for documenting what plants Anderson encountered, but also for generating goodwill from long distance supporters of the garden. Just as Anderson exchanged seeds locally to delight planters and elite women of the colony, he sent some of Tyley's illustrations to his long-time friend and patron, William Forsyth. Banks was also a recipient of Tyley's work. Governor William Bentinck later spoke highly of Tyley's skill.<sup>77</sup> It is likely that others close to the garden received samples of Tyley's drawings. For the garden's patrons, these drawings were visual evidence that Anderson was doing his part to acquire new and useful plants when it was not possible to send the plants themselves.<sup>78</sup>

Unlike Roxburgh and Wallich at the Calcutta botanic garden, Alexander Anderson never published a flora of the region. However, he did aim to produce and share scientific work. Anderson wrote pieces which were later shared at Linnean Society meetings. In the year before he became superintendent, he made drawings and wrote an account of his ascent of La Soufrière which he sent to William Forsyth for presentation to the Linnean Society. The account was read in front of the society, and Anderson told Forsyth of the honor he felt to the members "voting me their unanimous thanks for it." At that time, Anderson also spoke of writing a natural history of all the islands and a "Flora Carribea."<sup>79</sup> Anderson never completed any of these works, but on his

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<sup>77</sup> TNA, WO 40/4, letter dated April 11, 1798, from William Bentinck to William Windham, p. 1; RBGK, Forsyth Correspondence, FOR/1/4, letter dated February 17, 1794, from Alexander Anderson to William Forsyth, f. 155-156; *IP Corr JB*, Letter 109, dated December 29, 1793, from Alexander Anderson to Sir Joseph Banks, 187-189.

<sup>78</sup> For more about the way that botanical drawings could serve as mobile advertisements for patronage, see Daniela Bleichmar, *Visible Empire: Botanical Expeditions & Visual Culture in the Hispanic Enlightenment* (Chicago: The University of Chicago Press, 2012), 100-122.

<sup>79</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated August 22, 1784, from Alexander Anderson to William Forsyth, f. 56; RBGK, Forsyth Correspondence, FOR/1/4, letter dated March 26, 1784, from Alexander Anderson to William Forsyth, f. 48-49.

resignation from the garden and death in 1811, he left several manuscripts. One was a history of St. Vincent and the botanical garden. Another can loosely be called a natural history of St. Vincent. Richard Howard, a botanist, who with E.S. Howard published transcriptions of these two works, called the second “Alexander Anderson’s Geography and History of St. Vincent, West Indies.” Fragments of other less finished works also survive, including some observations on medical treatments, “Miscellaneous observations, Queries and Memda,” and a group of papers about the origin of the earth, or the “Deluge papers.” Anderson, under Banks’ suggestion, also completed a manuscript called *Hortus St. Vincentii* detailing all of the plants in the garden, each with its Latin, English, and French names. When information was available, Anderson also included the Carib and “Negroe” names for the plants.<sup>80</sup> Banks himself advised Anderson that his English plant descriptions were useful and sufficient because his unsophisticated Latin might bring undeserved criticism.<sup>81</sup> Anderson may have lacked the skills necessary to meet the highest standards of learning, but a scientific audience still valued his work. Of all the superintendents, he came the closest to putting the St. Vincent garden on the map for scientific publication.

Anderson’s leadership of the Royal Botanic Garden at St. Vincent coincided with the period of its greatest prosperity, as noted by both himself and local reverend Lansdown Guilding, who wrote an early history of the garden.<sup>82</sup> By his term of office as superintendent, the St. Vincent garden had royal notice and official status. Anderson himself worked very hard to carve out a place for the garden within the region by both meeting the expectations of government in Britain and making himself useful to the planters of St. Vincent and neighboring islands.

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<sup>80</sup> See Linnean Society, MSS 616, MSS 617, and Howard, “The St. Vincent Botanic Garden – The Early Years,” *Arnoldia* (Winter 1997-1997): 17.

<sup>81</sup> *IP Corr JB*, Vol. 4, Letter 128, dated c. summer 1794, from Sir Joseph Banks to Alexander Anderson, 212.

<sup>82</sup> Guilding, *An Account of the Botanic Garden in the Island of St. Vincent*, 19-20; Anderson, *The St. Vincent Botanic Garden*, 52 – of course, Anderson could not speak for the period after his death in 1811, but in his own history of the garden, which he wrote while superintendent, he wrote “Since the year 1786 the Garden has flourished without opposition or hindrance, except during the insurrection of 1795-1796 it experienced a partial interruption in its progress.”



However, Anderson also happened to rule at St. Vincent in a period of relative enthusiasm for botanical gardens in the British Caribbean. Yet at the same time, St. Vincent remained the sole “royal” garden; it was the only one that the home government directly supported. The unrealized plans and failed gardens demonstrate the British Caribbean’s unstable support for botanical projects. The St. Vincent garden was unique for surviving for nearly sixty years.

### **“Publick” versus Local Gardens**

Before Anderson came to St. Vincent, the garden there had struggled along with the funding provided by the governor and the occasional Society of Arts prize. The Crown stepped in from time to time to resolve boundary disputes, but the hard, financial support for the garden was primarily local. Though the Crown eventually elevated the St. Vincent garden to royal status, the other short lived gardens in the British West Indies labored under the inferior, local footing that marked the St. Vincent garden’s early years.

Anderson himself was involved in two proposed gardens that never came to fruition. In 1784, when he was collecting plants around the Caribbean with General Mathew, governor of Grenada, Anderson was offered a post to help found a botanic garden on that island. Had he accepted that post, he would have taken on a botanic garden created by the interest of the governor, and guaranteed only by his patronage. The post would have had no salary beyond what Anderson already received as a military hospital mate, but the island assembly would have voted him a plot of land and laborers. Mathew hoped that the Crown would support the project by voting a salary, but the Crown opted instead to fully support the St. Vincent garden, and the

Grenada plan crumbled.<sup>83</sup> Grenada's assembly was willing to do more than St. Vincent's ever did by providing slave labor, but it was not enough for that garden to take shape.

While the Grenada project had warm local support but failed to receive the gift of funding from Britain, a project in the Bahamas had support from Britain which failed to create local action. In 1793, the Society of Arts offered a prize of a hundred guineas for anyone who would enclose and cultivate a botanic garden in the Bahamas before January 1, 1795 "for the purpose of making experiments in the culture of those articles which are the peculiar production of the tropical climates, and which may tend to promote the commerce and manufactures of this country."<sup>84</sup> This offer was repeated in the society's *Transactions* for every year until 1802. The *Transactions* was not able to announce a prize winner in the contest to create a botanic garden in the Bahamas. George Caley, the last superintendent at St. Vincent, reported that that despite the attention of Sir Joseph Banks' botanical faction and support from the Society of Arts, the plan came to naught. Garden records showed that Alexander Anderson hired one hundred and forty slaves to transport one hundred and eighty five boxes of plants from the garden for shipment to the Bahamas to form the nucleus of the new garden. Caley questioned a gentleman of the Bahamas who claimed to remember the arrival of the plants, but reported that they all died because there was no ground prepared to plant them.<sup>85</sup> Starting a public botanic garden in the Caribbean could be a tricky business. Local government support helped, but might not be able to produce the requisite funding. Support from Sir Joseph Banks and other elite men of science helped, but did little good if a colony lacked sufficient local interest.

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<sup>83</sup> Anderson, *The St. Vincent Botanic Garden*, 21-3; RBGK, Forsyth Correspondence, FOR/1/4, letter dated June 1, 1784, from Alexander Anderson to William Forsyth, f. 50.

<sup>84</sup> *Transactions of the Society of Arts* 11 (1793): xiii and 358-9. Also see volumes 12-23, years 1794-1805.

<sup>85</sup> TNA, WO 43/150, letter dated April 8, 1822, from George Caley to William Merry, Deputy Secy at War, f. 279.

Sometimes local interest was sufficient to lead to the establishment of a botanic garden, such as St. Vincent in its early years. Jamaica had two such gardens, though both struggled along without consistent funding or interest, mirroring the history of the St. Vincent garden prior to 1785. The secondary literature indicates that the two gardens on Jamaica were established in the late eighteenth century, but the record is unclear as to the conditions of their founding. Sometime in the 1770s, a private individual, Hinton East, founded the earliest botanic garden in Jamaica in an area called Liguanea. East was an attorney who served as register in the court of vice-admiralty, receiver general, public treasurer, and house of assembly member at various points in the 1770s and 1780s as he developed his garden from a typical flower garden to one that might deserve the designation “botanic.” East’s term as receiver general put him in a good position to collect plants, since he was responsible for approving all cargo ships that entered the island. In June 1782, when a French ship traveling from Mauritius to Hispaniola with mango and many spice plants on board was captured by Captain Marshall of the *Flora*, the bulk of the plants were planted in East’s Garden.<sup>86</sup> The Liguanea garden would eventually be a repository for breadfruit plants from Captain Bligh’s successful voyage. East in fact maintained a correspondence with Joseph Banks and wrote to him about the desirability of growing breadfruit on the island.<sup>87</sup> East died in April of 1792, and therefore did not see the breadfruit planted in his garden. Edward Hyde East, Hinton’s nephew, inherited the garden and offered it to the Jamaica Assembly for use as a public garden. In 1793, the Assembly appointed Trustees to purchase the garden, which became the Botanic Garden, Liguanea.<sup>88</sup>

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<sup>86</sup> Dulcie Powell, *The Botanic Garden, Liguanea (with a revision of Hortus Eastensis)*, (Kingston, Jamaica: Institute of Jamaica, 1972), 5-10; William Fawcett, “The Public Gardens and Plantations of Jamaica,” *Botanical Gazette* 24, no. 5 (November 1897): 347. There’s some disagreement about where the *Flora*’s prize plants were deposited; Dr. Dancer claimed that the garden at Bath received all of those plants, as noted in Powell.

<sup>87</sup> *IP Corr JB*, Vol 2, Letter 48, dated 19 July 1784, from Hinton East to Sir Joseph Banks, 62-63.

<sup>88</sup> Powell, *The Botanic Garden, Liguanea*, 11-12. Like many aspects of the Jamaican gardens’ history, the date of East’s death and the purchase of the garden are unevenly reported in the secondary literature. Some sources report

Besides East's garden, some secondary literature indicates that from 1775 to 1779 there was a small botanic garden at Enfield, next to East's garden. An island botanist, Dr. Thomas Clarke, was hired by the local assembly in 1775 in response to the activities on St. Vincent. The assembly directed him to oversee two "botanic" gardens, one "European" and one "tropical." However, it appears that the European garden never materialized, and the tropical garden site (Enfield) was found to be unsuitable.<sup>89</sup> Some sources also claim that Clarke did not actually arrive in the island until 1777.<sup>90</sup> After the Enfield site was deemed unacceptable, plants were moved to a garden at Bath, founded in 1779, in connection with Dr. Clarke.<sup>91</sup> In 1788, a Dr. Thomas Dancer was chosen to manage the botanic garden at Bath.<sup>92</sup>

Despite the existence of a garden supported by local government at Bath, it remained a marginal institution. While Hinton East lived, he was the man on the island that both the local assembly and government in Britain looked to for managing botanical matters. Hinton East exchanged plants with Sir Joseph Banks, and in the 1780s, assemblyman Matthew Wallen gave him a list of useful plants to introduce to the island with instructions to appeal to Sir Joseph Banks for help.<sup>93</sup> Since the assembly was the financial backer for the Bath garden, an

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that East died in 1790 and the garden was purchased thereafter, see Fawcett, "The Public Gardens and Plantations of Jamaica," 347; Donal P. McCracken, *Gardens of Empire: Botanical Institutions of the Victorian British Empire* (London: Leicester University Press, 1997), 5; and Thomas Dancer, *Some Observations Respecting the Botanical Garden* (Jamaica: His Majesty's Printing Office, 1804), 5 footnote.

<sup>89</sup> McCracken, *Gardens of Empire*, 5; Powell, *The Botanic Garden, Liguanea*, 5-6; Fawcett, "The Public Gardens and Plantations of Jamaica," 346.

<sup>90</sup> "Botanical Institutions of Jamaica," *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew)*, 1906, no 3 (1906): 64.

<sup>91</sup> McCracken, *Gardens of Empire*, 5-6; Duncan Taylor, "Botanical Gardens and their Role in the Political Economy of Empire: Jamaica (1846-86)," *Rural History* 28, no 1(2007): 47-49; Powell, *The Botanic Garden, Liguanea*, 5-6; R.A. Howard, "Modern Problems of the Years 1492-1800 in the Lesser Antilles," *Annals of the Missouri Botanical Garden* 62, no. 2 (1975), 371; and Ray Desmond, *The History of the Royal Botanic Gardens Kew* (Kew, UK: Kew Publishing, 2007), 122-123 and 263.

<sup>92</sup> Fawcett, "The Public Gardens and Plantations of Jamaica," 347-8, by 1788, Dr. William Wright wrote to Banks to say that Dr. Clarke had become a private druggist and apothecary, see Joseph Banks, *Scientific Correspondence of Sir Joseph Banks, 1765-1820*, ed. Neil Chambers, Vol. 3 (London: Pickering & Chatto, 2007), Letter 848, dated June 1, 1788, from Dr. William Wright to Joseph Banks, 405.

<sup>93</sup> Powell, *The Botanic Garden, Liguanea*, 8. Wallen had written to Sir Joseph Banks in 1784 to tell him that Dr. Clarke had turned into a plantation doctor and no longer did much natural history work; his salary had not been

assemblyman would have known of its existence. But instead of going through the publically funded garden, he chose to contact Hinton East for help about public business. This oversight suggests that the Bath garden was not of very high local importance.

Ignored at home, the Bath garden does not appear to have been highly regarded outside of the island, either. Sir George Yonge wrote to Joseph Banks in 1786 with an account from Alexander Anderson on the progress of the St. Vincent garden. In his letter, he wrote of a letter he had received from an informant in Jamaica, speaking of the holdings in the fantastic garden of Hinton East. Yonge also noted that some of the plants in East's garden were "Likewise [sic] in Dr. Clarke's Garden at a Place called Bath in Jamaica," and, "the Idea of a Publick Botanical Garden has roused them, and they are wishing for one at Jamaica."<sup>94</sup> In this letter, Yonge demonstrates that he has heard of the gardens run by Hinton and Clark on Liguanea and Bath respectively. However, this letter also implies that both he and the elites of Jamaica did not class the Bath garden with Saint Vincent, which was a "Publick Botanical garden." As secretary at war, Yonge's department directly funded the St. Vincent garden, and until 1811 provided military surgeons to superintend the garden. It is likely that the reliance of the Bath garden on the local assembly and not on the War Office made up part of this difference in status in Yonge's mind. To be a true public garden, the establishment at Bath needed the financial backing of government in Britain.

Friends of the Bath garden tried to make it more prominent, yet failed to raise its profile. Thomas Dancer, superintendent of the garden beginning in 1788, wrote to William Forsyth with news of the garden and asked him, "Pray give my Compliments to Sir Jos Banks and engage his

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regularly paid during the war. Banks, *Scientific Correspondence of Sir Joseph Banks*, Vol 2, Letter 515, 310. Wallen is also credited with introducing plants to the Bath botanic garden – see, for example, Thomas Dancer, *Catalogue of Plants, Exotic and Indigenous, in the Botanical Garden, Jamaica* (St. Jago de la Vega, Jamaica: 1792), 6-10.

<sup>94</sup> *IP Corr JB*, Vol. 2, Letter 88, dated June 29, 1786, Sir George Yonge to Sir Joseph Banks, 124-125.

interests for the Garden.”<sup>95</sup> Dancer wrote to William Forsyth complaining that he had a tremendous job ahead of him to put the garden in order after two or three years of neglect.<sup>96</sup> Two years later in 1790, the superintendent of the Bath garden wrote to Sir Joseph Banks himself. Dancer complained to Banks that he had not received any plants from England even though he had sought to start reciprocal exchanges.<sup>97</sup> By this time, the garden was at least eleven years old, yet it still had not developed durable relationships with other gardens and individuals for regular plant transfers. In his 1792 publication printed by the Jamaica House of Assembly, Dancer provided a list of plants growing in the botanic garden, and when possible, the individual responsible for their introduction. The majority of these introductions were credited to local individuals, such as Dancer himself, Dr. Clarke, Hinton East of the Liguanea garden, and local luminaries. Banks appears only once or twice, and Alexander Anderson at the St. Vincent garden appears about as often.<sup>98</sup> In 1796, Dancer confessed to William Forsyth that he was not acquainted with William Aiton, the superintendent at Kew Gardens.<sup>99</sup> Dancer’s lack of

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<sup>95</sup> RBGK, Forsyth Correspondence, Foreign Letters, FOR/1/2 letter dated January 7, 1788, from Thomas Dancer to William Forsyth, f. 28-9.

<sup>96</sup> RBGK, Forsyth Correspondence, Foreign Letters, FOR/1/2, letter dated January 7, 1788, from Thomas Dancer to William Forsyth, f. 28.

<sup>97</sup> Banks, *Scientific Correspondence of Sir Joseph Banks*, Vol. 3, Letter 977, dated March 24, 1790, Thomas Dancer to Sir Joseph Banks, 541-542. Dancer wrote to Banks again in 1793 about a consignment of plants he was ordered to send to Kew by a Committee of the House of Assembly of Jamaica, and took the opportunity to beg Banks for plants again. See *IP Corr JB*, Vol 4, Letter 61, dated June 5, 1793, from Thomas Dancer to Sir Joseph Banks, 133; *IP Corr JB*, Vol 4, Letter 41, letter dated March 28, 1793, from Thomas Dancer to Sir Joseph Banks, 97-98.

<sup>98</sup> Dancer, *Catalogue of Plants, Exotic and Indigenous, in the Botanical Garden, Jamaica*. Others, like Mr. Hylton (p. 110, or 119), Kemeys (p. 98), Pinnock (p. 109) were likely local individuals, see *The New Jamaica Almanack, and Register, Calculated to the Meridian of the Island for the Year of Our Lord 1791*, Kingston, Jamaica: 1792, (<https://play.google.com/store/books/details?id=zfusT42AtLkC&rdid=book-zfusT42AtLkC&rdot=1>, accessed August, 21, 2017). Lord Effingham had been a governor of Jamaica. Mr. Wallen had run a garden of his own, see Hamilton, *Scotland, and the Caribbean and the Atlantic World, 1750-1820*, 132.

<sup>99</sup> RBGK, Forsyth Correspondence, FOR/1/2, letter dated February 1, 1796, from Thomas Dancer to William Forsyth, f. 99; The secondary literature gives Sir Joseph Banks credit for running Kew Gardens, but the directorship was actually held by William Aiton from 1759 until his death in 1793, when the office passed to his son William Townsend Aiton. Presumably, Dancer was remarking on his lack of acquaintance with the younger Aiton in 1796. Despite the change in office, someone regularly exchanging plants with Kew would have been familiar with both Aitons. Anderson at St. Vincent had been on terms with both men. For William Aiton, see, for example RBGK, Forsyth Correspondence, FOR/1/4 letter dated November 20, 1788, from Alexander Anderson to William Forsyth, f.

acquaintance suggests that the Bath garden's primary support remained local. It was not well integrated into the network of plant exchanges like the gardens at St. Vincent or Calcutta, who after 1787 had received official sanction to correspond freely with each other as well.<sup>100</sup>

The nominal status of both of the botanic gardens in Jamaica can be read in their roles in the biggest imperial botanic project of the 1780s and 1790s in the region, the transplantation of breadfruit plants. This project was an ambitious plan to purchase breadfruit trees from the islanders of Tahiti and transplant them to the British West Indies where they would provide a cheap source of food for slaves on the islands. Captain Bligh led the first failed voyage and survived a mutiny to captain the successful second voyage that landed in the Caribbean in 1793. With a project of this nature, one would expect the government supported botanists and botanical establishments to play a role.

The instructions issued to the crew of the breadfruit voyages reveal who was involved in the project and to what degree. On the first expedition to obtain the breadfruit, gardener David Nelson was to sail with Captain Bligh and safeguard the plants en route. Sir Joseph Banks, doyen of government supported science, authored the instructions for Nelson, which ordered him to leave plants in Jamaica but did not refer to a botanic garden. The orders note that Nelson should leave breadfruit plants in St. Vincent "to be cultivated in His Majesty's Botanical Garden upon that Island, and after that shall be done, the Ship will proceed to Jamaica, where the remainder of the cargo is to be deposited in a place which is preparing for their reception." Banks further instructed Nelson to "take charge of such [plants] as may be prepared for You by Mr. Anderson, Intendant of His Majesty's Botanical Garden at St. Vincent, Mr. East of Jamaica or others..."

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131-132. For William Townsend Aiton, see, *IP Corr JB*, Vol 4, Letter 276, dated September 12, 1796, from Alexander Anderson to Sir Joseph Banks, 418.

<sup>100</sup> TNA, PRO/30/11/13, letter dated May 15, 1787, from Sir Joseph Banks to Sir George Young, f. 326-328.

This second group of plants was destined for Kew.<sup>101</sup> Banks's letter mentions the garden at St. Vincent, referring to the superintendent by name. Hinton East is also named, but in a way which suggests that he is not receiving plants on Banks' orders or in an official capacity. Earlier in this same letter, Banks identified St. Helena as a planned port of call and the "Garden of the East India Company" as a site for plant exchange. The absence of the botanic garden at Bath in the instructions demonstrates that it was not part of the trusted circle of either Sir Joseph Banks or British government in general. It is entirely possible that the Bath garden was not named because it was too small to receive the plants, but one would still expect the local government supported botanist or botanic garden superintendent to be involved. We can see from the Indian case and St. Vincent itself that the London-backed botanic garden superintendent on site took the lead in botanical matters in his region, and yet, Bath's superintendent is unmentioned in Bank's letter. As an official paid with local funds to head a local botanic garden, Bath's superintendent was not under Banks' command.

During the second breadfruit voyage, Sir Joseph Banks prepared instructions to be left at St. Helena for Bligh to collect on route to the West Indies. These instructions acknowledge a botanic garden on Jamaica, but highlight that it was on a different footing from St. Vincent. In these revised instructions, Banks confirmed the amount of plants to be delivered to the "Superintendent of His Majesty's Garden" on St. Vincent, who would use his discretion to select plants to send on to Kew. Banks ordered Bligh to continue on to Jamaica and leave plants with "the Director of the Botanical Garden instituted by the House of Assembly there."<sup>102</sup> This sentence probably refers to the Jamaica Assembly's purchase of Hinton East's garden at Liguanea. Since Banks did not identify the "Director" by name, either one had not been selected

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<sup>101</sup> *IP Corr JB*, Vol. 2, Letter 150, dated August 20, 1787, from Sir Joseph Banks to David Nelson, 224-227.

<sup>102</sup> *IP Corr JB*, Vol. 2, Letter 275, dated January 30, 1789, from Evan Nepean to Philip Stephens, enclosure "Instructions to Lieut. Bligh of the Bounty Store Ship," 391.



or this man was unknown to him. Banks had also provided instructions to James Wiles, the head gardener, on the second breadfruit voyage. These instructions show the usual courtesy to the St. Vincent garden, but order that in Jamaica, the plants should be deposited wherever the governor and assembly directed him.<sup>103</sup> This missive accurately describes the division of labor that came to pass. A local committee on Jamaica decided how to divide up the plants, opting to send them to different counties, depending on population, and create a public nursery near “Dr Dancer’s Botanic Garden.”<sup>104</sup> Henry Shirley, a member of the committee established to manage Jamaica’s two botanic gardens wrote to Joseph Banks to update him on the progress of the breadfruit trees the next year.<sup>105</sup> In the absence of a true public garden, Jamaican elites had opted to take botanical matters into their own hands. As a result, they had two that they could directly command.

The low profile of the Jamaican gardens was due in part to their legal foundation, but the reputations of the superintendents may have also played a role. The breadfruit voyagers were unimpressed by the botanists in Jamaica. The expedition’s head gardener, James Wiles, commented on the plants that the Bath superintendent was gathering to send to Kew. Wiles wrote Banks, “I expect a good Part of Dr Dancer’s Collection will die before they reach England because in my opinion they are neither dug up or planted with judgment.”<sup>106</sup> William Bligh also expressed his lack of confidence in the botanists on Jamaica. He wrote to Sir Joseph Banks, “I am confident Wiles & Smith would do more in one month than all the Botanists in & about Kingston would do in twelve.”<sup>107</sup> Sensing the value of his skills in Jamaica, Wiles stayed behind

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<sup>103</sup> *IP Corr JB*, Vol 3, letter 168, dated June 25, 1791, from Sir Joseph Banks to James Wiles, 228-233.

<sup>104</sup> *IP Corr JB*, Vol 4, Letter 35, dated March 5, 1793, from James Wiles to Sir Joseph Banks, 89-90.

<sup>105</sup> *IP Corr JB*, Vol. 4, Letter 156, dated December 20, 1794, from Henry Shirley to Sir Joseph Banks, 246-248.

<sup>106</sup> *IP Corr JB*, Vol 4, Letter 35, dated March 5, 1793, from James Wiles to Sir Joseph Banks, 89-90.

<sup>107</sup> *IP Corr JB*, Vol. 4, Letter 46, dated April 13, 1793, from William Bligh to Sir Joseph Banks, 111. However, Bligh had only praise for Anderson’s garden at St. Vincent and actually stayed with him in his house, see *IP Corr JB*, Vol. 4, Letter 25, dated January 27, 1793, from William Bligh to Sir Joseph Banks, 67-68.

and was hired by the assembly first to care for the breadfruit, then in 1794, to manage the Liguanea botanic garden, which had been under the direction of a Mr. Thame. A committee appointed by the local assembly continued to supervise the garden. Despite having a man of acknowledged skill at the helm, the garden ran into funding troubles, and three acres of land were used to grow coffee for several years, in hopes of generating some revenue for the establishment. In 1810, however, the assembly tired of financially supporting the garden and sold off the garden's 44 slaves, 94 acres, and associated buildings. According to the report of Mr. Simms from the committee, the garden had distributed 1169 plants that year, "together with a large quantity of seeds."<sup>108</sup> The garden had been a site for local plant distributions, but that was not enough to save it.

The Bath garden continued to eke out an existence, but on a much reduced scale.<sup>109</sup> In 1804, Dancer wrote *Some Observations Respecting the Botanical Garden*, a short pamphlet that argued for the utility of his garden at Bath and the one at Liguanea. Here, Dancer notes, "The public opinion on this subject has so much wavered, that the scale of the Garden has been, at different periods, alternately enlarged and contracted; and never has it yet been on a proper foundation."<sup>110</sup> His words describe a shadow existence that all botanic gardens in the Caribbean experienced, and some never escaped. Anderson in St. Vincent had such a horror of his garden's reversion to the earlier style of local support that he turned down the assembly's offer of an annuity to augment his government wage.<sup>111</sup> Superintendents working under the direction of the colony dreamed of a "proper foundation," royal recognition and a permanent salary from

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<sup>108</sup> "Botanical Institutions of Jamaica" *Bulletin of Miscellaneous Information*, 64; Powell, *The Botanic Garden, Liguanea*, 11-16. Powell notes that 94 acres only were advertised, but the entire grounds of 193 acres were sold.

<sup>109</sup> "Botanical Institutions of Jamaica," *Bulletin of Miscellaneous Information*, 64-66. The combined budget for the two gardens had been L800

<sup>110</sup> Dancer, *Some Observations Respecting the Botanical Garden*, 5.

<sup>111</sup> *IP Corr JB*, Vol. 4, Letter 128, dated c. summer 1794, from Joseph Banks to Alexander Anderson, 212-213. Banks chastised Anderson's shortsightedness, saying that he could have accepted the annuity as a token of appreciation, while stipulating that as the "king's Servant" he could only accept orders from Britain.

government in London. These elements gave a garden some security beyond the whims of the local assembly or governor, and some clout to expect more willing plant exchanges. Dancer himself admitted that the Bath garden was not at that level.

The secondary literature often folds Jamaica's gardens into the narrative of a network of colonial botanical establishments headed by Kew.<sup>112</sup> This network metaphor obscures significant differences between the botanic gardens in the late eighteenth and early nineteenth centuries. A botanical enthusiast in Britain's age of high empire observed, "Jamaica botanic gardens have always been cursed by their dependence on a popular vote for their maintenance," and blamed that dependence for the lack of continuity and loss of Bath and Liguanea.<sup>113</sup> Jamaica's early botanic gardens demonstrate that botanic gardens could be established upon a variety of legal foundations, and these distinctions mattered. However, the problem was not unique to Jamaica; it was a feature of the practices of government in the Caribbean. If financial support came from the local assembly, the assembly provided the orders. Gardens supported from London could only act within London's guidelines. And a garden founded by colonial governor could easily founder if the next governor had no interest in maintaining it. The British settlements in the Caribbean had some enthusiasm for botanic gardens and the plant management they could provide, but that support was unstable and erratic.

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<sup>112</sup> See, for example, McCracken, *Gardens of Empire*, 5-7; John Gascoigne, *Science in the Service of Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution* (Cambridge: Cambridge University Press, 1998), 130-131, Gascoigne speaks of colonial networks and recognizes that Banks had little influence over the Bath garden, however he does not make the distinction between the foundation of the various colonial gardens; Desmond, *The History of the Royal Botanic Gardens Kew*, 122-123 and 262-263. Desmond goes further to argue that Banks encouraged these gardens to serve interests of empire rather than "parochial interests."

<sup>113</sup> *JStor Global Plants*, RBGK, Directors' Correspondence, letter dated February 19, 1894, from William Fawcett to William Thistleton-Dyer, p. 4, <http://plants.jstor.org/stable/10.5555/al.ap.visual.kldc13648>, accessed July 18, 2017.

## Failure of St. Vincent

While the gardens in other parts of the Caribbean struggled in the last decade of the eighteenth century, the garden at St. Vincent flourished. Anderson had weathered his earlier troubles with the island's governor, and despite the disruptions of war with the French and an uprising of the native Caribs on the island, the garden was well supported. Anderson himself seems to have had the knack for cultivating allies. After he died, however, the garden was again subject to the encroachments that characterized its early years. Imperial cost cutting and an unsociable superintendent have often been blamed for the garden's demise. These factors likely played a role. However, when the last decade of the garden's existence is examined in the context of its entire history, the garden's termination becomes merely one data point in a predictable pattern of events. The relatively consistent local support that Anderson experienced was the outlier. The continuous wrangling between the last two superintendents and Charles Brisbane, St. Vincent's governor from 1808 to 1829, was a return to form.

In declining health, Anderson resigned from his post at the St. Vincent garden in 1811 and died in September of that year. His successor was a friend, William Lockhead, who had travelled with him on some of his plant collecting expeditions of the previous decade. Like Anderson, Lockhead was a surgeon trained in Scotland.<sup>114</sup> He had been recommended for a botanical post before; in Trinidad in 1806, Governor Hislop of that island recommended him for

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<sup>114</sup> TNA, CO 260/28, letter dated September 9, 1811, from Robert Paul to Lord Liverpool, f. 17; Guilding, *An Account of the Botanic Garden in the Island of St. Vincent*, 18-19; RBGK, Forsyth Correspondence, Foreign Letters, FOR 1/2, letter dated September 3, 1792, from Thomas Beath to William Forsyth, f. 58; and C.D. Waterston and A. Macmillan Shearer, *Former Fellows of the Royal Society of Edinburgh, 1783-2002, Biographical Index, Part One and Two* (Edinburgh, UK: The Royal Society of Edinburgh, 2006), 21 and 551, [https://www.rse.org.uk/cms/files/fellows/biographical\\_index/fells\\_indexpl.pdf](https://www.rse.org.uk/cms/files/fellows/biographical_index/fells_indexpl.pdf), accessed August 7, 2017. Anderson and Lockhead were both accepted into the Royal Society of Edinburgh June 4, 1791, with the same three sponsoring members. Lockhead's name also appears as Lochhead and Lothead.

the job of establishing a locally funded botanic garden.<sup>115</sup> Unlike Anderson, he was not able to settle in for a long and relatively well supported career as superintendent in St. Vincent. Charles Brisbane, the governor of the island, like former Governor Lincoln, used the opportunity of the change in personnel to assert his authority over the botanic garden. Lincoln had acted to resist change; he did not want to submit to the shift in power when the garden obtained royal status and financial support from Britain. Brisbane, however, tried to turn back the clock and reassert the governor's prerogative over an institution that had been clearly claimed by the Crown.

Lockhead's instructions upon assuming his post restated the garden's footing and his own place with respect to government. Lord Palmerston, secretary at war, issued the instructions, which were much the same as in Anderson's time. Lockhead was ordered to rely on the President of the Royal Society (Banks) and the War Office for botanical advice and orders. He would confer with the Army Medical Board regarding which medicinal plants to cultivate. The local governor would approve Lockhead's expenses, which would be submitted in a report periodically. Lockhead was also expected to write a general account of the garden's progress at least quarterly and send it to Banks, the Army Medical Board, and the governor. The governor would transmit the reports to the secretary at war, who would retain them for the king's information.<sup>116</sup> These instructions allowed a role for the governor, but he was not in a position to issue orders to the garden. He was merely a check to prevent garden superintendents from running extravagant expenses.

Charles Brisbane, as governor, may have only had the authority to approve accounts, but he took it upon himself to suspend Lockhead, and he sent letters to the War Office giving a very

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<sup>115</sup> TNA, CO 714/157, Vol. 1, precis entry for General Hislop, dated October 26, 1806, f. 17; Before Hislop, there had been discussion of starting a botanic garden at Trinidad as part of a program to use science to reform Caribbean society, see James Epstein, *Scandal of Colonial Rule: Power and Subversion in the British Atlantic during the Age of Revolution*, (Cambridge: Cambridge University Press, 2012), 193-195.

<sup>116</sup> TNA, CO 260/30, letter dated August 4, 1812, from Lord Palmerston to William Lochead, f. 44.

unflattering account of Lockhead's character. Most of Brisbane's complaints suggested that Lockhead was using his position at the garden to enrich himself. Brisbane ordered a survey of the garden and sent home the surveyor's notes about the amount of land in cultivation. The governor added a memorandum suggesting that most of the garden was planted in provisions for Lockhead's private use.<sup>117</sup> More seriously, Brisbane accused Lockhead of falsifying his accounts. Lockhead's expenses outran the customary amount allotted to the garden. And after "minutely" investigating the accounts, Brisbane found that slaves hired from a J McClure to work in the garden were actually Lockhead's or his wife's slaves. J McClure was Mrs. Lockhead's maiden name and a ruse to conceal the shady deals. Furthermore, the slaves, according to Brisbane, were employed as domestics in the botanic garden house and not laborers in the garden.<sup>118</sup> Such improprieties, argued Brisbane, necessitated his suspension of Lockhead from the superintendency.

Once the suspension was in place, Brisbane continued to inform the War Office of Lockhead's irregular behavior. The governor was aghast at Lockhead's refusal to relinquish his post, telling the secretary of state for war that Lockhead determined only to leave under military force. Lockhead had written to Major General Croker on the island, asking him for protection against the governor.<sup>119</sup> Refusing to bow to the local power was not the way to a good reputation in government circles, particularly if it involved an appeal to one branch of power in the island to resist the orders of another. In this case, Lockhead tried to set the military power against the civil authority.

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<sup>117</sup> TNA, CO 260/30, letter dated January 29, 1813, from Joseph Billingham to Charles Brisbane, and Memorandum, f. 35.

<sup>118</sup> TNA, WO 260/30, Charles Brisbane's Memorandum to Appendix 2, Garden Accounts, attached to letter dated February 28, 1813, from Charles Brisbane to Earl Bathurst, f. 41; TNA, CO 260/30, letter dated February 28, 1813, from Charles Brisbane to Earl Bathurst, f. 14 -19.

<sup>119</sup> TNA, CO 260/30, letter dated February 28, 1813, from Charles Brisbane to Earl Bathurst, f. 18; TNA, CO 260/30, Charles Brisbane's Memorandum to letter dated February 12, 1813, from William Lockhead to General Croker, f. 54.

Brisbane brought up past history in his assassination of Lockhead's character. He reminded the War Office that the suspended superintendent had been involved in a legal skirmish on Trinidad years earlier. In 1810, Lockhead had had a disagreement over slaves with George Smith, a judge and the executor of the estate of Lockhead's former partner. Some passionate letters that Lockhead wrote to Judge Smith on the matter were deemed by some to be disrespectful to the judge's office. Brisbane alleged, "His conduct at Trinidad will convince your Lordship how dangerous a subject he is in any colony."<sup>120</sup> These sorts of attacks were presented to suggest that Lockhead's present unpleasant behavior was part of a pattern of behavior exhibited by a disrespectful, untrustworthy person, a person who was dangerous to government itself in his subversion of the rules and refusal to obey.<sup>121</sup>

In addition to the specific attacks on Lockhead's character, the governor also tried to define, or redefine, his own position relative to the garden. He presented to the secretary of state for war and the colonies an account of the way funding was approved for repairs to the superintendent's house in Anderson's time to argue that the garden had always been under civil authority, or the governor's control. Brisbane himself queried Croker, informing government that the major general did not consider the botanic garden to be under his authority. Along with these points, Brisbane cited customary practice, or in his words, "the proceedings that have invariably been adopted relative to the Garden since its first Establishment." The governor argued that though the appointment issued from the secretary at war, the governor retained the sole power to fill vacancies, supervise the quarterly accounts, and approve any additional expenditure.<sup>122</sup> In

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<sup>120</sup> TNA, CO 260/30, Charles Brisbane's Memorandum to letter dated February 3, 1813, from William Lockhead to Charles Brisbane, f. 50; CO 295/23, letter dated May 11, 1810, from Sir Thomas Hislop to George Smith, f. 103 and 107-111. It should be noted that Governor Hislop took Lockhead's side in this matter.

<sup>121</sup> TNA, CO 260/30, letter dated February 28, 1813, from Sir Charles Brisbane to Earl Bathurst, f. 20-21.

<sup>122</sup> TNA, CO 260/30, Charles Brisbane's Memorandum to letter dated November 5, 1810, from Army Medical Board Office to Alexander Anderson, f.67; TNA, CO 260/30, Charles Brisbane's Memorandum to letter dated

these arguments, the governor was being obtuse. The superintendent drew his salary from the military, and the garden was funded through the War Office, but the superintendent reported directly to the secretary at war and Sir Joseph Banks, though accounts were approved by the governor. The highest ranking military officer in the island was completely outside of the chain of command. Furthermore, Brisbane's understanding of his authority to fill vacancies was flawed. Prior to 1785 when the botanic garden was a pet project of the governor, the governor had the sole authority to appoint personnel. After the garden came under the Crown's protection in 1785, Banks and the secretary at war appointed Alexander Anderson. Upon Anderson's death, Robert Paul, president of the council of St. Vincent, recommended Lockhead as a suitable replacement to Lord Liverpool, the secretary of state for war and the colonies. The president of the council administered the government of the island if the governor were absent.<sup>123</sup> In this case, the acting governor only made a recommendation for staffing. Consequently, even for the most recent appointment, the authority did not rest solely with the governor of the island, as Brisbane claimed.

After attacking Lockhead and the botanic garden's command structure, Brisbane took aim at the garden's very existence. The governor wrote to the secretary of state for war to present the case that the garden had become a sinecure. Brisbane cited his research into garden history for evidence in the Lockhead situation as the basis for his opinion. As a sinecure, Brisbane argued, the garden was no longer pursuing the aims that justified its creation, yet it continued to demand great expense from government, which the governor calculated at £24,000 over its

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February 13, 1813, from General Croker to William Lockhead, f. 57; TNA, CO 260/30, letter dated February 28, 1813, from Charles Brisbane to Earl Bathurst, f. 19 quotation.

<sup>123</sup> TNA, CO 260/28, letter dated September 11, 1811, from Robert Paul to Lord Liverpool, f. 17; Arthur N. Birch and William Robinson, *The Colonial Office List for 1867 Comprising Historical and Statistical Information Respecting the Colonial Dependences of Great Britain with an Account of the Services of the Principal Officers of the Several Colonial Governments* (London: Harrison, 1867), 89-90.



twenty-nine year history.<sup>124</sup> Brisbane did not explicitly recommend the garden's closure, but implied that the garden should either be closed or radically reorganized.

Like Anderson and Young before him, Lockhead fought local authority. He found strategies to counteract the governor's attempt to assassinate his character. He responded to the accusations of fraud by arguing that previous superintendents had charged similar expenses to the garden accounts and hired their own slaves. As a long-term resident in the region, Lockhead mobilized friends to submit a memorial refuting the governor's claims against him and requesting his reinstatement. Brisbane resented this appeal to the local populace, and told government that Lockhead had influence with a rebellious class on the island who were always happy to combine against government.<sup>125</sup> Besides mobilizing public opinion to work for him, Lockhead tried to gain the support of other sites of authority. He wrote directly and privately to Lord Palmerston, secretary at war, to complain of Brisbane's behavior, accusing the governor of letting his cattle graze in the botanic garden. Lockhead also unsuccessfully requested help from the commanding officer of the island to prevent being expelled from the garden.<sup>126</sup> He resisted leaving his post to the last, explaining to John Francis Grant, the governor's replacement for him, "This besides is a duty the more conscientiously impress'd upon me by the precedent in the case of Dr. Anderson with Governor Lincoln."<sup>127</sup> Though Lockhead may have been guilty of some impropriety with the financial accounts, his attempts to circumvent the governor were echoes of the steps that Young and Anderson were compelled to take to safeguard the establishment. With

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<sup>124</sup> TNA, CO 260/30, letter dated February 28, 1813, from Charles Brisbane to Earl Bathurst, f. 21.

<sup>125</sup> TNA, CO 260/30, Charles Brisbane's Memorandum to letter dated February 3, 1813, from William Lockhead to Charles Brisbane, f. 50; TNA, CO 260/30, Charles Brisbane's Memorandum to letter dated May 24, 1813, from Charles Brisbane to Earl Bathurst, with attached Memorial, f.77.

<sup>126</sup> TNA, CO 260/30, letter dated February 28, 1813, from Charles Brisbane to Earl Bathurst, f. 13; TNA, CO 260/30, Appendix No. 2, Letter 4, letter dated January 31, 1813, from Charles Brisbane to William Lockhead, and Brisbane's Memorandum, f. 48; TNA, CO 260/30, letter dated February 12, 1813, from William Lockhead to General Croker, and Charles Brisbane's Memorandum, f.53-54.

<sup>127</sup> TNA, CO 260/30, letter dated February 18, 1813, from William Lockhead to John Francis Grant, f. 61.

a hostile civil authority, the best course of action for the superintendents was always to appeal to the Crown, War Office, or patrons at home to make sure that their side of the story had a fair hearing.

At this point, the British government was not ready to abandon the garden, and the secretary of state for war stepped in to reinstate Lockhead. The secretary at war, who was the administrative head of the War Office, concurred with this choice, and wrote to Lockhead to clarify the nature of the relationship between the governor and the superintendent. Lord Palmerston informed Lockhead that he had indeed not shown the governor the respect that was due to him. A governor had the right to dismiss anyone appointed to any post in his colony until orders were received from the relevant department of government in Britain, and it was not Lockhead's place to try to circumvent this practice and assume "an independence of his Authority which is quite incompatible with the necessary constitution of Colonial Government." Palmerston also clarified that though the actual "management & cultivation of the Garden must of necessity be conducted at the discretions of the Superintendent," unforeseen expenses should be approved first by the governor, and if rejected by him, they could be presented to the secretary at war for a final decision.<sup>128</sup> None of these conditions deviated from the original instructions that the War Office sent to Lockhead, but in pointing out Lockhead's errors in judgment, they constituted a check on his future behavior. It is not clear if Brisbane received a similar written rebuke; however, the reinstatement of an inferior who had defied the governor's authority established that the botanic garden was not under the governor's control. This clarified separation between the garden and the governor was a victory for Lockhead, confirming the independence of action for garden superintendents that Anderson had worked so hard to create and maintain.

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<sup>128</sup> TNA, CO 260/30, letter dated June 21, 1813, from Lord Palmerston to William Lockhead, f. 180-181.

After Governor Lincoln's power struggle with Anderson in 1785, the governor made his peace with the garden on St. Vincent. Thirty years later, in 1815, Governor Brisbane refused to accept the institution's semi-independent status. On Lockhead's death, he again campaigned, more directly this time, for the garden's demise. Not only did he advocate for the garden's closure, he wanted the colony to use the land to build a governor's residence, since it was good land conveniently located near Kingston. Brisbane couched this request between an observation that the Crown had considered discontinuing the garden prior to Lockhead's appointment and a suggestion that a new governor's residence would benefit St. Vincent governors for years to come.<sup>129</sup> Yet again, the War Office stood by the St. Vincent garden and sent out a new superintendent, handpicked by Sir Joseph Banks.

George Caley, the final superintendent at St. Vincent, inherited a difficult situation. Nonetheless, his notoriously difficult personality has been blamed for the garden's closure in 1822.<sup>130</sup> However, the basic facts of Caley's career show that he was an experienced and well-regarded naturalist. He was born into the working class and circulated in artisan botanical circles before coming to Banks' notice. Through this connection, he received some botanical training at the Chelsea Physic Garden and William Curtis's garden at Brompton. Banks later sent him to Australia to collect plants from 1800 to 1810, after which he returned to Britain. In 1816, Banks selected Caley to head the garden at St. Vincent.<sup>131</sup> Though Banks helped Caley find scientific work for many years, that relationship had not been entirely calm and easy. Caley had squabbled with Banks during the early years of his training, and while Caley was collecting plants in

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<sup>129</sup> TNA, CO 260/32, letter dated April 19, 1815, from Sir Charles Brisbane to Earl Bathurst, f. 15.

<sup>130</sup> R.A. Howard and E.S. Howard, "The Reverend Lansdown Guilding, 1797-1831," *Phytologia* 58, no. 2 (August 1985): 107-108; Gascoigne, *Science in the Service of Empire*, 131-132; McCracken, *Gardens of Empire*, 199. Caley's biographer has a nuanced view; she sites both the local animosity Caley faced and his character for his failure at St. Vincent, and surveys the literature critical of Caley. Joan Webb, *George Caley: Nineteenth Century Naturalist* (Chipping Norton, Australia: Surrey Beatty & Sons PTY Limited, 1995), 142-156 and 160-162.

<sup>131</sup> Curtis had previously been affiliated with the Chelsea Physic Garden.

Australia, Banks commiserated with the governor, writing that Caley would have been shot in a duel had he been born a gentleman.<sup>132</sup> Yet none of this precluded him from employment or membership in botanical circles. He corresponded regularly with naturalists he met in Australia, and when in Britain, took part in a variety of social activities, including regular visits to botanical society meetings.<sup>133</sup> Banks' selection of Caley in 1816 is a further proof of Banks' continued confidence in him, despite past disagreements.

Caley himself acknowledged his eccentricities but seemed unaware of the effect they may have had on his new neighbors in St. Vincent. Banks heard a report that Caley had denied being a gentleman when he first arrived at St. Vincent. Caley answered this accusation with an explanation of his character. He knew himself to prefer a more retired sort of life than some, and owned to have failings of character, but did not think them to be grave faults. Caley suggested that by declining all invitations to dinner, he may have given some locals the impression that he was ungentlemanly, though he absented himself only because he was near-sighted and prone to dry mouth and vomiting while eating.<sup>134</sup> Caley's excuses were reason enough not to eat in public, but he also seemed proud of declining to perform the sort of civility practiced by his predecessors. He spoke slightingly of his predecessors' habit of providing dinner for the governor, because it was a way of gaining influence by spending the garden's budget.<sup>135</sup> Banks was aware of this part of Caley's personality. He praised Caley's rectitude and refusal to seek

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<sup>132</sup> Anne Secord, "Corresponding Interests: Artisans and Gentleman in Nineteenth-Century Natural History," *British Journal for the History of Science* 27, no. 4 (December 1994): 401-403

<sup>133</sup> See Caley's diary for details of his social calls while in Britain, State Library of NSW, MAV/FM4/10949, George Caley Travel Diary, January 1, 1811 – May 11, 1817.

<sup>134</sup> *IP Corr JB*, Letter 184, dated July 29, 1818, from George Caley to Sir Joseph Banks, 258.

<sup>135</sup> SL NSW, MLMSS 6361, Joan Webb Transcript Book 5, letter dated December 2, 1818, from George Caley to Robert Brown, p. 172. "Dinner" here may have meant either invitations to dinner, or perhaps growing vegetables for the governor's table.

influence with his neighbors at the expense of the garden. However, Banks tried to tell Caley to follow convention and socialize with his neighbors, otherwise they might become his enemies.<sup>136</sup>

Caley may have eschewed customary practices of sociability, but his personality was not entirely to blame for his lack of local friends and patrons. Unlike his predecessors, all of whom had spent some time in the British West Indies, he arrived without a network of local or regional support. Anderson had made several local friends before his showdown with Governor Lincoln. Lockhead had been a long term resident of the British West Indies when he battled Governor Brisbane. Caley however, had absolutely no West Indian experience before he arrived in St. Vincent to take up his post.<sup>137</sup> And the governor he faced, Brisbane, had already suspended one superintendent and written to government at least twice to recommend the garden's closure. It's unlikely that, in themselves, local friends were enough to counter local government's opposition.

Governor Brisbane's disagreement with Lockhead taught him that the botanic garden was independent of his power. Caley himself wrote of his independence from the governor, noting that he had full control over policy and went to Brisbane only to swear to his expenses.<sup>138</sup> However, the governor's new approach was not necessarily benign. Brisbane and the civil government in the island switched from a strategy of over-involvement in the garden to one of neglect. While this new official attitude meant that Caley could manage the garden with little interference from local government, it also meant that the garden was unprotected if powerful locals encroached upon garden lands. Caley found himself friendless locally, and in times of trouble, his only recourse was to write to Banks and Palmerston for help.

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<sup>136</sup> SL NSW, M730, letter from Sir Joseph Banks to Lord Palmerston, undated, in response to Palmerston's letter of December 5, 1817, frame 117.

<sup>137</sup> Some of the previous superintendents were also Scottish, which seems to have given them immediate access to that community in the island. Caley himself complained of his troubles from "Scotch-Scotchmen." SL NSW, MLMSS 6361, Joan Webb Transcripts, Book 5, letter dated May 8, 1819, from George Caley to Robert Brown, p. 178. For discussion of the Scottish networks of doctors in the Caribbean, see Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820*, 125-135.

<sup>138</sup> SL NSW, M730, letter dated February 4, 1825, from George Caley to George Suttor, frame 104.

The years of Caley's superintendency, 1816 to 1822, were a time of constant disorder for the St. Vincent botanic garden. In Caley's first year, he clashed with the owner of the neighboring Montrose estate who claimed the right to use a path through the garden. Caley tried to prevent the slaves of the Montrose estate from passing through, and he published a notice asking locals to respect the garden's boundaries. He appealed for help to the president of the council, who was acting governor in Brisbane's absence.<sup>139</sup> President Paul, to his credit, contacted the crown surveyor, Joseph Billinghurst, the same surveyor who gave Brisbane a report on Lockhead's use of the garden in 1813. According to Paul, Billinghurst declined to certify the garden's boundaries for Caley, claiming that the garden's boundaries were already clear. Billinghurst's refusal to get involved threw the matter to the courts and the "waywardens," local officers who managed the highways of St. Vincent's parishes.<sup>140</sup> Caley became embroiled in lawsuits with the neighboring estate. One was to determine whether there was a public road through the garden, another was about the Montrose estate's right to have a watercourse through the garden. Caley faced further legal troubles when the manager of the neighboring estate tried to prosecute him for assault because he had made efforts to stop trespassers. Caley received support from London to answer these challenges; Lord Bathurst gave orders for the attorney general in the island to represent Caley in any cases regarding the garden's boundaries.<sup>141</sup>

These sorts of trespasses through the garden were not a sudden development. In the 1790s, Anderson's first crop of cloves and some of the breadfruit had been stolen. These thefts made him wary, and he afterwards was very secretive about his nutmeg trees and refrained from

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<sup>139</sup> TNA, CO 260/34, letter dated October 16, 1816, from George Caley to Robert Paul, f. 7

<sup>140</sup> TNA, CO 260/34, letter dated October 21, 1816, from Robert Paul to George Caley, f. 9; R. Montgomery Martin, *History of the West Indies: Comprising British Guiana, Barbadoes, St. Vincent's, St. Lucia, Dominica, Montserrat, Antigua, St. Christopher's, &c &c* (London: Whittaker & Co., 1837), 221.

<sup>141</sup> TNA, CO 260/34, letter dated March 28, 1817, from Robert Paul to Lord Bathurst, f. 6.

positively identifying them to visitors.<sup>142</sup> In his later years, Anderson seems to have developed more friendly relationships with the locals. His successor, Lockhead, had a very good relationship with the neighboring estate, but was still forced to publish an advertisement warning that trespassers through the garden might be shot.<sup>143</sup> However, Lockhead and Anderson offered both carrots and sticks to the local populace to protect the garden.<sup>144</sup> They accepted that there was a certain equilibrium that they had to reach with the local communities, which might involve relaxing some of the botanic garden's rights, in order to gain local support. Caley was less flexible, and received little support from the local office holders. Caley complained to Banks, "The first time I saw Sir Charles he told me that the less notice I took of the trespassers the less they would trouble me."<sup>145</sup> The judge hearing Caley's suit was little better. He advised Caley not to repair garden fences or oppose trespassers, but to leave the matter, and the garden, open for six months until the scheduled hearing.<sup>146</sup> Though Caley could count on representation by the attorney general in his legal woes, he could not count on practical help from the local magistrate or the governor's support.

The legal suits against Caley and the botanic garden gave some members of the local community the opportunity to voice their criticisms of the garden's staff and the garden's programs. While some long-term residents of the island testified that there had never been a public road through the garden, others insisted that there had always been a road, and castigated Caley and his predecessor Anderson for preventing free passage. The opposing counsel in the case was locally considered a great orator; he ridiculed the very word "superintendent." He said

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<sup>142</sup> *IP Corr JB*, Vol 8, Letter 184, dated July 29, 1818, from George Caley to Sir Joseph Banks, 261.

<sup>143</sup> *IP Corr JB*, Vol 8, Letter 184, dated July 29, 1818, from George Caley to Sir Joseph Banks, 270.

<sup>144</sup> TNA, CO 260/30, letter dated February 11, 1813, from William Lockhead to Sir Charles Brisbane, f. 46 – for instance, Lockhead gave some of the garden's felled woods to the neighboring estate. The neighbors habitually allowed Lockhead to use their carts for garden work, and they supplied sugar cane tops for thatch for slave houses.

<sup>145</sup> *IP Corr JB*, Vol. 8, Letter 184, dated July 29, 1818, from George Caley to Sir Joseph Banks, 268.

<sup>146</sup> *IP Corr JB*, Vol. 8, Letter 184, dated July 29, 1818, from George Caley to Sir Joseph Banks, 264-265.

that it was “quite new and a word of five syllables,” to the amusement of onlookers. The attorney took aim at the garden’s great patron, calling him “Sir Joseph Banks, the Bumbo Jumbo Naturalist.” Besides these ad hominem attacks, opposing counsel offered some substantive arguments against the garden’s purpose, arguing that spices from the West Indies could never be imported into Britain, presumably due to the East India interest in Parliament, therefore the botanic garden had no purpose.<sup>147</sup> While the attorney made a valid point about Britain’s trade restrictions, his other comments reveal the resentment that some locals felt for the botanic garden. They saw it as a literal obstacle in their way or a waste of good land. Some saw no value in the garden’s premise, hence the ridicule for British colonial science’s most devoted patron. A garden superintendent could not hope to resist such local ire alone.

Lord Bathurst, secretary of state at war, did what he could to aid Caley. He sent multiple letters to President Paul and Governor Brisbane asking for help. Paul was requested to “afford every assistance to Mr. Caley” in his efforts to resist the road and trespassing.<sup>148</sup> “Exert your Authority in Supporting Mr. Caley in the protection of the property of the Crown...and in repressing any attempts...to encroach upon the Garden or Molest the Superintendent,” implored Bathurst.<sup>149</sup> When Brisbane returned from a leave of absence and took control of the government, Bathurst asked him to “take effectual measure for protecting this publick officer in the discharge of his duty, and for punishing those who have evinced so determined a disposition

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<sup>147</sup> *IP Corr JB*, Letter 184, dated July 29, 1818, from George Caley to Sir Joseph Banks, 263-266, quotation p. 266; Daniel Rood has written on the difficulty of scientific work crossing linguistic or imperial boundaries, Caley in St. Vincent shows that ideas about the worth of science had difficulty crossing from the superintendent to the local populace, when both were ostensibly from the same culture, see Daniel Rood, “Toward a Global Labor History of Science” in *Global Scientific Practice in an Age of Revolutions, 1750-1850*, ed. Patrick Manning & Daniel Rood (Pittsburgh, PA: University of Pittsburgh Press, 2016), 263-264.

<sup>148</sup> TNA, CO 261/13, letter dated February 6, 1817, from Bathurst to Robert Paul, p. 36 (quotation); TNA, CO 261/13, letter dated June 11, 1817, from Bathurst to Robert Paul, p. 43; and TNA, CO 261/13, letter dated April 12, 1818, from Bathurst to Charles Brisbane, p. 59.

<sup>149</sup> TNA, CO 261/13, letter dated December 17, 1817, from Bathurst to Robert Paul, p. 48.



to insult and oppress him.”<sup>150</sup> Governor Brisbane did not come to Caley’s aid.<sup>151</sup> After receiving a judgment in favor of the public road, Caley blamed the inaction of local magistrates and recommended the closure of the garden. With a road running through it, the plants in the garden would have been constantly under threat.<sup>152</sup> Both the governor and Dasent, the attorney general, were incensed by Caley’s charge. They wrote to government to blame Caley’s character for all of the unpleasantness. To support this claim, Brisbane and Dasent tried to sell Bathurst a revisionist history in which Anderson and Lockhead had lived in harmony with locals who respected their careful superintendence of the botanic garden. The governor suggested again that the botanic garden should be abandoned and its plants moved to a locally supported garden in Trinidad.<sup>153</sup>

Banks and government in Britain were still not ready to close the botanic garden. They knew Caley’s character, but they also knew Brisbane. Banks, particularly, had had too long of a history with the garden to uncritically accept Brisbane’s account. Anderson, Lockhead, and Caley had all interpreted their troubles with the local community as part of a pattern of behavior endured by all of their predecessors. As the garden’s patron, Banks had heard tales of the superintendents’ difficulties for over thirty years. In fact, Banks himself had warned Caley about Charles Brisbane, to put him on his guard “against cunning and duplicity.” Palmerston, too, early

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<sup>150</sup> TNA, CO 261/13, letter dated February 25, 1818, from Bathurst to Charles Brisbane, p. 57.

<sup>151</sup> The garden’s first biographer, Lansdown Guilding, wrote a private letter to government years later, stating that the governor never expended even half of the power of his office to help protect the garden; he never even posted a guard. Guilding speculated that the governor was complicit in the plans of the neighboring estate to try to ruin the garden, so that the lands would be for sale. TNA, CO 260/46, letter dated November 25, 1829, from Lansdown Guilding to Sir George Murray, f. 247.

<sup>152</sup> TNA, CO 260/35 letter dated May 9, 1818, from George Caley to Charles Brisbane, f. 75-77, the governor asked Caley to write a letter with his opinion on the garden for transmission to Britain, and the above was the result. Caley told Banks that he was unsure if Brisbane sent his critical letter, but he sent a copy to Palmerston on his own. *IP Corr JB*, Letter 184, dated July 29, 1818, from George Caley to Sir Joseph Banks, 269.

<sup>153</sup> TNA, CO 260/35, letter dated May 11, 1818, from Sir Charles Brisbane to Earl Bathurst, f. 64-68; TNA, CO 260/35, letter dated May 15, 1818, from J.R. Dasent Charles Brisbane, f. 78-79. Dasent particularly blames the judgments against the garden to Caley’s character and not “any hostile and insulting intentions to the Rights and Property of the Crown,” see TNA, CO 260/35, letter dated May 8, 1818, from JR Dasent to Sir Charles Brisbane, f. 69-74, (quotation f.70).

on told Caley about Brisbane's treatment of Lockhead.<sup>154</sup> Though Banks, Palmerston, and probably Bathurst, too, knew well enough not to blame Caley, they were not decided on what to do. They prevented Caley from resigning in 1818, but the future of the garden remained in limbo.

After Sir Joseph Banks died in 1820, Caley sensed that the St. Vincent garden was nearing its end.<sup>155</sup> Despite his earlier fatalistic attitude, when confronted with the garden's actual closure, Caley fought to preserve it. "This telling me to quit, after all I have suffered, has roused my indignation," wrote Caley to Lord Palmerston.<sup>156</sup> Caley sent samples of cloves and other spices he had grown and prepared in the garden to the Horticultural Society in London for quality assessment.<sup>157</sup> The War Office was inundated with his letters detailing the reasons why the garden should be preserved. His arguments ran the gamut from botanical analysis to financial concerns. A colony funded botanic garden had opened in Trinidad in 1817 at the behest of a botanically minded governor, and the St. Vincent garden's portable plants were to be moved there. Caley understood that the War Office would have seen the removal of the St. Vincent garden's plants to Trinidad as a clever act of economy with few practical repercussions. He countered by explaining that the valuable spice trees in the garden were finally mature enough to produce a respectable crop, and too old to be moved. The garden at Trinidad, Caley argued, would need another twenty years of development to equal St. Vincent, and as a local

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<sup>154</sup> TNA, WO 43/150, letter dated September 1, 1822, from George Caley to Lord Palmerston, f. 304v-305r. Caley had personally met Palmerston and Banks in London to receive instructions about St. Vincent, prior to taking his post. It is possible Palmerston and Banks warned him of his predecessor's troubles then. See SL NSW, MAV/FM4/10949, p. 341.

<sup>155</sup> SL NSW, M730, Royal Botanic Gardens, Kew Records, letter dated April 7, 1821, from George Caley to George Suttor, f. 97.

<sup>156</sup> TNA, WO 43/150, letter dated September 1, 1822, from George Caley to Lord Palmerston, f. 305r.

<sup>157</sup> TNA, WO 43/150, letter dated December 14, 1821, from W. Salim to Lord Palmerston, and "Minutes Relative to the Cloves Sent from St. Vincents by Mr. George Caley, CMHS," f. 268-270. His cloves and mace received high marks.

establishment, its existence could be fleeting.<sup>158</sup> Caley directed his arguments both to Palmerston and local government in hopes that if the War Office failed the garden, the colony might step in to preserve the plants.

The War Office ultimately declined to continue financially supporting the garden, and Caley received orders to provide the garden in Trinidad with whichever plants the governor and superintendent requested.<sup>159</sup> Though the botanic garden had lost Banks and its secure government funding, a lifeline issued from an unexpected source. Governor Brisbane, who had long wished for the garden's closure, mobilized the colonial assembly to vote money for the construction of a government house on the garden grounds. He asked Caley to write a letter for the secretary of state in support of his bid for the botanic garden.<sup>160</sup> The War Office agreed to grant the botanic garden to the colony if they built a suitable governor's residence on the land.<sup>161</sup> And after years of maligning Caley's character to the War Office and the secretary of state for war, Brisbane offered Caley £500 a year to continue working in the garden as his personal gardener. When making this offer, Brisbane took care to specify that Caley would answer to his authority alone.<sup>162</sup> Caley understandably declined. Caley's assistant was next offered the

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<sup>158</sup> TNA, WO 43/150, letter dated April 8, 1822, from George Caley to William Merry, Deputy Secy at War , f. 277 and 279v; TNA, WO 43/150, letter dated April 8, 1822, from George Caley to Sir Charles Brisbane, f.287.

<sup>159</sup> TNA, CO 261/13 letter dated October 31, 1822, from Bathurst to Charles Brisbane, p. 102; WO 43/150, letter dated April 8, 1822, from George Caley to William Merry, f. 273.

<sup>160</sup> TNA, WO 43/150 letter dated April 11, 1822, from George Caley to Charles Brisbane, f.289-290. See particularly government's note on f. 290v. Caley took the opportunity to complain the garden's loss, and recommend that there should be strict instructions attached if the garden were to be turned over to the governor.

<sup>161</sup> TNA, CO 260/39, letter dated April 1822, Charles Brisbane to Lord Bathurst, f. 16-17. This measure was adopted both to relieve the British government of the expense of the garden and to safeguard the remaining plants. Brisbane was so jealous of the garden's possessions that when Caley applied to the War Office to take possession of Dr. Anderson's books and papers that had been left in the garden, Brisbane stepped in bad-mouth Caley one more time. Brisbane argued that he needed the books because he wished to "keep up the advancement of Science." See TNA, WO 43/150, letter dated December 1823, Charles Brisbane to Lord Palmerston, f. 373.

<sup>162</sup> TNA, WO 43/150 letter dated September 5, 1822, from Charles Brisbane to George Caley, f. 293. Brisbane's words were "I am disposed to offer it to you on those terms but you must consider yourself under my immediate control."

situation, but he, too, had had enough of West Indian gardening.<sup>163</sup> Neither of them cared to work in a garden entirely dependent on the goodwill of the governor and the colony.

Several governors had resented the St. Vincent garden's independence, and a confluence of circumstances allowed Brisbane to bring it back under local control. The plants were maintained for a period. A house of sorts was built in the garden to fulfill the terms of the contract with the War Office. The local legislature voted £300 for its yearly upkeep, and a caretaker was appointed to look after the plants.<sup>164</sup> In 1824, one of the garden's supporters, the botanical enthusiast Reverend Guilding, wrote a history of the garden in which he recorded that it continued to flourish as a locally supported institution. The caretaker happily admitted visitors and plants could be obtained after petitioning the governor.<sup>165</sup> Visitors friendly with the governor sometimes attended dinner parties held there.<sup>166</sup> Since the money supporting the institution came from the assembly, the public expected a return on their investment, including public access. Brisbane, however, was not content with this arrangement. Guilding himself reported the change to the secretary of state for war. Visitors had to gain written permission to visit the garden which Brisbane ran like his private farm. Plant distribution became limited to Brisbane's friends. The governor often sent the man hired by the assembly to care for the plants to do other work. In reaction to the governor's personal control of the garden, the assembly withdrew all financial support.<sup>167</sup>

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<sup>163</sup> TNA, WO 43/150, letter dated September 7, 1822, from George Caley to Lord Palmerston, f. 307.

<sup>164</sup> TNA, CO 260/46, letter dated January 26, 1829, from Charles Brisbane to Sir George Murray, f. 2.

<sup>165</sup> Guilding, *An Account of the Botanic Garden in the Island of St. Vincent*, 23.

<sup>166</sup> TNA, CO 260/48, letter dated April 29, 1831, from H. Dwarris to Lord Howick, f. 320-321, Dwarris reported having dinner with Brisbane in the gardens in May 1823, which was around the time of Caley's departure from the island. Frederic William Naylor Bayley, *Four Years' Residence in the West Indies, during the Years 1826, 7, 8, and 9* (London: William Kidd, 1833), 223-224 and 299-302.

<sup>167</sup> TNA, CO 260/46, letter dated November 25, 1829, from Lansdown Guilding to Sir George Murray, attachment f. 250-251.

In 1828, Brisbane was asked to report to the secretary of state for war on the garden's condition, in part to determine if the colony had satisfied the War Office's conditions for granting the garden to the colony. Brisbane tried to play the hero. Brisbane told Sir George Murray, the current secretary, that he successfully propagated nutmeg and spread it throughout the island. He blamed the local legislature's withdrawal of garden funds on colonial finances and not his own appropriation of the garden. Brisbane told Murray that he alone was responsible for the preservation of the last exotic plants in the garden.<sup>168</sup> However, there is nothing in Brisbane's past behavior to suggest that he would save any plants for the benefit of the colony. Guilding, a local observer, denied any such efforts on the governor's part. He accused the governor of using or throwing away spices which should have planted for distribution. The only money Brisbane was known to have spent on the garden was in mangling some trees near the road.<sup>169</sup> Several travel narratives of individuals visiting the colony during this period note the unkempt and overgrown state of the garden.<sup>170</sup> It had dwindled to insignificance as a botanical institution.

### Reasons for Closure

The St. Vincent garden's closure has been explained by incidental factors, namely a cantankerous superintendent. George Caley's reputation and his long, whingeing letters to government provide an easy answer. Contemporary observers identified their own villain in the story of the garden's end. Lansdown Guilding firmly blamed the trouble with the St. Vincent garden on Brisbane. Years later, he wrote that if the governor had bothered to protect Caley and

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<sup>168</sup> TNA, CO 260/46 letter dated January 26, 1829, from Charles Brisbane to Sir George Murray, f. 2-3.

<sup>169</sup> TNA, CO 260/46, letter dated November 25, 1829, from Lansdown Guilding to Sir George Murray, attachment f. 249-251 – The attachment is a point by point rebuttal of the governor's own report of the garden.

<sup>170</sup> Mrs. Carmichael, *Domestic Manners and Social Condition of the White, Coloured, and Negro Population of the West Indies*, Vol. 1 (London: Whittaker, Treacher, and Co., 1833), 39-40; Bayley, *Four Years Residence in the West Indies*, 214 and 221-223 – Bayley notes that though the garden is no longer a site for botanists, it is great for naturalists in its overgrown state, with birds and insects of note. He further states that the resident clergyman spends much time there collecting (Guilding, no doubt).

the garden, the War Office would have been spared the torment of Caley's frequent complaints, and the institution would have been spared.<sup>171</sup> Where scholars do not blame Caley's attitude, they blame colonial finance. The British government was cutting costs all over the empire, and with Sir Joseph Banks' death, there was no one influential enough to advocate for government supported science.<sup>172</sup> However, when the garden's end is considered along with the rest of its history, and put within the context of the British West Indies, the problems that plagued the garden appear more systemic.

When the garden was established, it was expected to help local planters diversify their agricultural production and identify the next cash crop. This goal was nearly impossible to fulfill because the planters were simply obsessed with sugar. George Caley often commented on this local preoccupation in his letters. Caley wrote of the garden, "it was thrown away upon the people here, who would destroy almost every thing before them for the sake of planting a sugar cane."<sup>173</sup> According to Caley, even if "among their standing timber there were trees bearing ready baked loaves and fried Beef-Steaks, they would keep cutting them down until they destroyed them all for planting canes."<sup>174</sup> The long legal battles with people from the Montrose Estate probably gave Caley a dour outlook on the planter class. However, his predecessor, Alexander Anderson, who seemed to have a better relationship with his neighbors, shared his sentiments. He informed Sir Joseph Banks, "West India planters have hardly a view beyond the Sugar Cane, or what does not yield Immediate revenue."<sup>175</sup>

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<sup>171</sup> TNA, CO 260/46, letter dated November 25, 1829, from Lansdown Guilding to Sir George Murray, attachment f. 249-250.

<sup>172</sup> Drayton, *Nature's Government*, 131-133.

<sup>173</sup> TNA, WO 53/140, letter dated 8 April 1822, from George Caley to William Merry, Deputy Secy at War, f. 278r.

<sup>174</sup> SL NSW, M730, Royal Botanic Gardens, Kew Records, letter dated July 3, 1820, from George Caley to George Suttor, R92.

<sup>175</sup> *IP Corr JB*, Vol. 4, Letter 60, dated June 3, 1793, from Alexander Anderson to Sir Joseph Banks, 132.

Market forces supported the planters' fixation on sugar, and once it was established as a major crop, it was difficult to dislodge. Sugar was the main product of the region, and increasing demand for sugar in Europe helped drive increasing production. Setting up a plantation required significant capital investment, and sugar looked like a sure bet. As much as Anderson and Caley lamented the planters' commitment to growing sugar cane, they could not deny that it was an incredibly lucrative crop. Caley believed that only a revolution in the landed class could ever make spices a major part of the economy of the British West Indies.<sup>176</sup> The planters' loyalty to sugar was slow to change, though the financial returns to sugar cultivation decreased from the late eighteenth through the nineteenth centuries.<sup>177</sup> When the governor-in-chief of the Windward Islands addressed the legislative council on May 27, 1890 to reestablish a botanic garden in St. Vincent, he prefaced his recommendation, "In the meanwhile, whilst not losing sight of the claims of sugar, I have felt it my duty to encourage and assist, by every means in my power, the introduction and improvement of other industries."<sup>178</sup> A botanic garden of almost sixty years duration could hardly have been expected to achieve what a century of falling profits failed to do.

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<sup>176</sup> TNA, WO 43/150, letter dated April 8, 1822, from George Caley to William Merry, f. 276.

<sup>177</sup> See for instance, Carrington, *The Sugar Industry*, though this decline depends on island and when sugar developed. Sidney Mintz also suggests that the colonial system led to fixation on a narrow range of concerns and dedication to a system with little chance of future improvement or growth. St. Vincent specifically, saw an economic downturn in the 1830s from overproduction and emancipation, see Sidney W. Mintz, "From Plantations to Peasantries in the Caribbean," in *Caribbean Contours*, ed. Sidney W. Mintz and Sally Price (Baltimore: The Johns Hopkins University Press, 1985), 128-133 and 142-143.

<sup>178</sup> "Botanical Station, St. Vincent." *Bulletin of Miscellaneous Information* (Royal Botanic Gardens, Kew) 1892, no. 64 (1892): 92.– to this end, Sir Walter Hely-Hutchinson was inquiring into cultivation and manufacture of arrowroot, and wanted "re-establishment of the old botanic garden here, in order that we may have at our command the services of a scientifically trained botanist and horticulturist, whose duty it will be to conduct, in connexion with the establishment at Kew, experiments with economic plants, to supply, at cost price, plants seedlings, and seeds of economic plants to persons who desire to cultivate them, and to give to landowners, large and small, such information as he may possess or can obtain and they may require, either with regard to the cultivation of the plants, with regard to the extirpation of parasites and diseases to which the plants may be liable, or with reference to the preparation and disposal of the economic products." Arrowroot had become an important crop, second to sugarcane, in St. Vincent. See Mintz, "From Plantations to Peasantries in the Caribbean," 143.

Transforming the agricultural landscape of the British West Indies was too ambitious a goal for the botanic garden, and the other means of proving its worth were also difficult to realize. Many of the gardens in the Caribbean began because powerful people locally or in Britain wanted to found an institution to pursue science. Economic botany projects, such as agricultural experimentation were included in the pursuit of science, but plant collection and exchange, and other less clearly lucrative activities were also valued. Unfortunately, an interest in botany in the Caribbean was not widely held. Caley and Anderson both complained about the lack of public spirit and interest in science in St. Vincent.<sup>179</sup> In the garden's early years, Anderson complained that he received more help from foreigners than British settlers in the region. He later believed that Jamaica was a highly supportive place for men of science because there were many naturalists there to help and encourage each other.<sup>180</sup> Jamaica may have been a scientific paradise compared to St. Vincent, but its purported scientific culture did not rate highly with Bligh and Wiles or save its two botanic gardens from closure.

Once they identified other scientifically minded people in the British West Indies, the garden superintendents may have found it difficult to pursue the regular, reciprocal plant and specimen exchanges that formed the basis for botanical study in this period. Due to currents and trade winds, it was possible for a ship from the Lesser Antilles, *e.g.* Trinidad or St. Vincent, to reach Jamaica in a few days, but it would take the same ship weeks to try sailing against the wind to return. There was no regular mail packet between Jamaica and St. Vincent in Anderson's time.

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<sup>179</sup> TNA, WO 43/150, letter dated April 8, 1822, from George Caley to William Merry, Depty Secy at War, f. 279r – “there was no spirit for horticulture in the West Indies.” TNA, WO 43/150, letter dated April 15, 1822, from George Caley to William Merry, Depty Secy at War, f. 281v-282r - “If there should be any public spirit shown on the occasion, it is what I have not hitherto experienced. On the contrary, the public were always ready to side with the claimants on the Garden.”

<sup>180</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated July 16, 1788, from Alexander Anderson to William Forsyth, f. 124-125; RBGK, Forsyth Correspondence, FOR/1/4, letter dated August 12, 1786 from Alexander Anderson to William Forsyth, f. 101; RBGK, Forsyth Correspondence, FOR/1/4, letter dated August 17, 1786, from Alexander Anderson to William Forsyth, f. 103.



Anything he had bound for Jamaica, he had to transship via London.<sup>181</sup> The frequent wars in the region would have also disrupted shipping and affected the ability of the superintendents to do their jobs. Shipping issues may have contributed to the isolation experienced by the St. Vincent garden's caretakers.

Difficult goals, imperial cost cutting, and the low status of science in the British West Indies added to the St. Vincent garden's difficulties, but the practices of governance in the region were the primary reason for its difficult history and closure. Gardens founded with the support of only the governor were subject to a change in fortunes when a new governor took over. The support of local assemblies might be more constant, but they were subject to the financial health of individual islands. The St. Vincent garden demonstrates that royal support was also not a guarantee of constancy. Local elites could ease a garden into decline through constant trespassing and legal challenges. This systemic weakness left the garden unable to weather other challenges in the early 1820s.

## **Conclusion**

The histories of the botanic gardens in the British colonies or Kew Gardens prior to the 1840s often focus on the centralizing effect of Sir Joseph Banks' patronage and the overall success of plant exchanges amongst the botanic gardens across the empire. Some of these works might note a relative decline of this system after the death of Banks in 1820 and during the period of austerity for imperial governments in the 1830s. This overall narrative of success does not accurately describe the botanic gardens of the Caribbean. Though Sir Joseph Banks was instrumental in getting the St. Vincent botanic garden recognized as a garden of the Crown, it

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<sup>181</sup> Dunn, *Sugar and Slaves*, 26; RBGK, Forsyth Correspondence, FOR/1/4, letter dated August 1, 1786, from Alexander Anderson to William Forsyth, f. 101.

was never on secure footing. The upstart garden that soon took its place was not itself a royal garden with the protection of the Crown, but a local garden that owed its existence to a supportive colonial governor. It faced rough times in the 1830s when cost cutting significantly reduced the superintendent's salary and eliminated the post of his assistant. The histories of the gardens at St. Vincent and Jamaica show that the pursuit of botany in the Caribbean was not logically directed by the politically connected gentleman botanists in Britain. Instead, botany in the Caribbean was a largely local affair, and the success and failure of individual gardens rested in part on the ability of garden staff to ingratiate themselves with the governor and local landowners.

The literature that discusses the closure of the St. Vincent garden tends to blame George Caley and his reputedly difficult personality. I wish to push back on both the notion that Caley was simply a cantankerous man entirely to blame for the St. Vincent garden's failure. The overall history of the garden reveals that the governors of St. Vincent repeatedly tried to appropriate botanic garden lands, and even at times the botanic garden house, for their own uses. Governor Brisbane, who ran the colony during the tenure of Lockhead and Caley, tried to have the garden closed multiple times. During Lockhead's superintendency and after Lockhead's death, Brisbane tried to get his way. He told government that the botanic garden was pointless. It was finally during Caley's term as superintendent that Brisbane succeeded, after a period of refusing to support Caley against an ambivalent populace. This campaign of hostility is not something that could have been resisted by even the most socially adept of garden superintendents. In writing on empire more generally, Bernard Porter suggests that colonists and merchants in the colonies were a formidable locus of power that the official colonial apparatus

struggled to keep under control.<sup>182</sup> In St. Vincent, local government was in bed with neighboring planters, and imperial government in London struggled to keep both of these groups under control. After 1820, Caley still had some support in Britain in the form of Lord Palmerston, secretary at war, but it simply was not enough to save the St. Vincent garden.

Finally, the garden in Trinidad owed its existence, like St. Vincent, to an enthusiastic governor. Unlike St. Vincent, Trinidad never received royal sanction and funding from government at home. As an entirely local affair, it fell on hard times as colonial revenues fell in the 1830s. After the 1841, it became a part of the net of gardens run by the Hookers, and fared much better. But in this early period, it would be difficult to class it as a success, even though it did survive to join the imperial network.

The lesson of the British botanic gardens in the Caribbean is simply this – state support for botany in that region was piecemeal, inconsistent, and largely local. As such, the gardens' lack of longevity can be blamed on the vagaries of elite interest, the shrinking of local assembly budgets, and the failure of the garden superintendents to ingratiate themselves with the local *populus*.

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<sup>182</sup> Bernard Porter, *The Lion's Share: A Short History of British Imperialism 1850-2004* (Harlow, UK: Pearson Education Limited, 2004), 3-6.

## Chapter 3

### Agricultural Experimentation, Plant Exchanges, and Imperial Reform: Founding a Botanic Garden in New South Wales, c. 1820

#### **Introduction**

Unlike India and the British West Indies, Australia had not had a long period of European contact and settlement before the British established a botanic garden in Sydney in 1816. The First Fleet arrived in 1788 with the goal of establishing a penal colony; the success of the American Revolution had foreclosed North America as a site for offloading Britain's criminals. Since Europeans had little familiarity with Australia's climate or wildlife, they had a difficult time simply surviving. The settlers found themselves at a loss for tools, seeds, and knowledge of what to grow and how to grow it. The region could have benefited from the services of a botanic garden, securely funded and supported from London. Sir Joseph Banks, a major booster for government funded botanic gardens in the empire, was also very involved in Australian exploration and settlement. He could have thrown his support behind such a venture. However, it took several decades for such an institution to materialize. Instead, early governors made agricultural trials in experimental farms managed by supervisors of convicts in Sydney and in the more westerly settlement of Parramatta. New South Wales was host to a number of both private and semi-publically funded naturalists and plant collectors who introduced Britain to the flora of the colony. The space that would become an official botanic garden was fenced in around 1816, which has led many scholars to place the garden's founding around that date. However, Governor Lachlan Macquarie's motivations for enclosing the land are not clear.

The foundation date for the Sydney botanic garden has been established by purely circumstantial evidence. This uncertainty provides an opportunity to consider what services were missing from the type of plant exchanges spurred by private initiative and what contemporaries might have expected an official government botanic garden to add to the colony. Jim Endersby argues that Governor Macquarie established the garden in 1818 to control the flow of exotic Australian plants that had previously been managed by private collectors. The garden may have been, in part, a self-conscious effort of the governor to take charge of the flow of valuable plants. However, when the evidence is examined within the context of political developments in the colony, it suggests that the garden owes its creation to a Commission of Inquiry and the networks formed as people made their careers in the empire, traveling from colony to colony.<sup>1</sup> The impetus to establish the garden did not come from London nor from the colony itself. However, the garden's support by government in London was a response to complaints of overall colonial mismanagement and the loss of the informal botanical services that Joseph Banks had provided to the colony. Once imperial government began to take an interest in the 1820s, it pushed the garden in Sydney to conform to the standard practice of government supported botanic gardens in other parts of the empire. In this sense, the botanic garden was expected to provide the same sort of botanical services that Joseph Banks organized for the colony before his death in 1820. However, the Sydney botanic garden's early history as a site for agricultural trials and a governor's kitchen garden continued to shape its relationship to the Sydney community and imperial government.

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<sup>1</sup> For treatments of imperial mobility and its results, see *Colonial Lives Across the British Empire: Imperial Careering in the Long Nineteenth Century*, ed. David Lambert and Alan Lester (Cambridge: Cambridge University Press, 2006).

## Early Days of Settlement and Crown Lands

Sir Joseph Banks and British scientific institutions were involved with the project of exploring and settling Australia from the beginning. The Royal Society lobbied the Crown to outfit a naval expedition to travel to Tahiti to observe the transit of Venus in 1769. Captain James Cook was selected to head this expedition, in command of the HMS Endeavour. Though the voyage was advertised as a purely scientific journey, Cook received a packet of additional instructions to be opened only after the mission to Tahiti was complete. The secret instructions ordered Cook to explore the South Pacific, especially to find the famed southern continent, Terra Australis. The existence of this land had been postulated since Greco-Roman times, based on the theory that a large southern landmass was needed to counterbalance all of the known land in the northern hemisphere. Dutch seafarers in the seventeenth century were the first Europeans to land on what is now known as Australia, in the seventeenth century. However, at that time, no one was certain of the new land's size. After the transit of Venus, Captain Cook and his crew were the first Europeans to happen upon Australia's eastern coast, which they claimed for Britain. A young Sir Joseph Banks had taken part in the expedition as a naturalist, thanks to the influence of the Royal Society. On May 3, 1770, Banks made a large collection of plants at a spot Cook named Botany Bay.<sup>2</sup> After the expedition's return to Britain, the plants Banks collected were considered so important to the world of botany that Carl Linnaeus suggested that the new lands should be called "Banksia" to commemorate the gentleman naturalist.<sup>3</sup>

Upon his return to Britain, Banks became the botanical advisor to George III and unofficial director of Kew Gardens. His advice helped determine the sorts of scientific and

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<sup>2</sup> Lionel Gilbert, *The Royal Botanic Gardens, Sydney: A History 1816-1985* (Oxford: Oxford University Press, 1986), 4-5.

<sup>3</sup> Philip A. Clarke, *Aboriginal Plant Collectors: Botanists and Australian Aboriginal People in the Nineteenth Century* (Kenthurst, NSW: Rosenberg Publishing, 2008), 10.

agricultural projects that the government funded. He also consciously used his influence to shape plans for settlement and administration throughout the empire. In 1785, Banks was asked to give evidence to Parliament regarding new opportunities for government settlements. He spoke favorably of the eastern coast of Australia, recommending Botany Bay as an ideal site for settlement. Because of his advocacy for a settlement in New South Wales, Banks has been called the “Father of Australia.”<sup>4</sup>

The years had softened Banks’ opinion of the Australian coast. When he visited with Cook, he saw Botany Bay at its best, after the autumn rains.<sup>5</sup> Even so, in his account of his visit in 1770, he had doubts about the proportion of fertile soil to barren and specifically mentioned the low density of trees and the sandy soil that only produced a local grass.<sup>6</sup> However, Banks’ doubts about the ability of the land to support a settler population had apparently melted away by 1785, when he spoke in support of settlement. At that point, Banks believed that Australia could not only support settlers, but provide raw materials to help maintain the British empire.

From the first, Banks considered ways to develop the plant wealth of the new colony. Banks hoped that a settlement in New South Wales could provide plant materials that would be beneficial for Britain’s security and balance sheet, and as a botanical advisor to the king, he marshalled his connections to help shape the first botanical projects funded and managed by government in the new colony. Both before and after the sailing of the First Fleet, Banks used his relationships with the Privy Council Committee for Trade to plant the idea that a New South Wales settlement could help Britain gain self-sufficiency by producing timber and naval stores. The cultivation of native hemp and flax might reduce British reliance on Russia for these

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<sup>4</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 6-7; Clarke, *Aboriginal Plant Collectors*, 10-12.

<sup>5</sup> Glyndwr Williams, “The Pacific: Exploration and Exploitation,” in *The Oxford History of the British Empire: The Eighteenth Century*, ed. P.J. Marshall and Alaine Low (Oxford: Oxford University Press, 1998), 565-568.

<sup>6</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 6-7; C.M. Finney, *To Sail Beyond the Sunset: Natural History in Australia, 1699-1829* (Adelaide, NSW: Rigby Publishers, 1984), 41.

materials which were vital for Britain's naval supremacy.<sup>7</sup> Banks was also involved with the details of the First Fleet's sailing. His connections at the Admiralty consulted him while planning the mission, particularly on matters pertaining to botany. He advised the future governor about the plants to take for cultivation in Australia and asked to be informed about the scientific instruments that would be brought to the new colony.<sup>8</sup>

Despite Banks' favorable report of the area, Botany Bay was soon abandoned by the First Fleet in favor of Port Jackson, with settlement occurring at Sydney Cove, which the settlers called Farm Cove. Enthusiasm for that area quickly flagged, too, with some complaining that the plentiful trees were fit for nothing but burning and the soil was rocky and poor.<sup>9</sup> Governor Phillip still tried to carry out his instructions. He was expected to survey the settlement's soil quality and write a report of the best means for developing the area. He was also ordered to cultivate a flax plant (*Phormium tenax*) which Banks had previously identified on Norfolk Island. These plans were stymied by a shortage of settlers with botanical knowledge. Philip Gidley King was sent with two men familiar with flax production to Norfolk Island, yet they ran into trouble because no one could find the specific plant that Banks wanted. Governor Phillip complained that he had a poor knowledge of botany and no skilled gardeners to assist him.<sup>10</sup> This lack of expertise led to further complications when settlers scouted Australian plants to supplement their government rations. Early settlers tried their luck eating local plants despite their ignorance of the local flora. Members of the First Fleet tried plants that looked like common European food plants or had been used by Cook's expedition and described in their

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<sup>7</sup> John Gascoigne, *Science in the Service of Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution* (Cambridge: Cambridge University Press, 1998), 117-120.

<sup>8</sup> John Gascoigne, *Science in the Service of Empire*, 119-125.

<sup>9</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 7-10.

<sup>10</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 9-11. This plant was later found to be unsuitable for making linen.



accounts. This adventurousness led to an episode where Governor Phillip and several officers ate a local bean and were seized with vomiting thirty minutes afterward, though they all survived.<sup>11</sup>

The First Fleet settlers had further problems growing the plants they had brought with them to the new colony. Plants from Britain, Rio de Janeiro and the Cape were planted on land near the governor's residence. Though the ships had landed in January 1788, the Australian summer, Phillip immediately sowed salad crops in hopes of quickly producing food to supplement the rations brought from Britain. The dearth of fresh food had led to scurvy outbreaks among the convicts and crew. These salad crops did not flourish since they had been planted in the wrong season. Less than a kilometer away from the governor's house, convicts began clearing a plot of land in Farm Cove, likely around February of 1788. After a laborious period spent felling and grubbing up trees with substandard tools, they planted nine acres of cereal crops to create a government farm in an area that is now the Middle Garden in present day Royal Botanic Gardens, Sydney.<sup>12</sup> Unfortunately, in November of 1788, Lieutenant Governor Ross reported that much of the seed had rotted in the ground. The first six acres at Farm Cove had yielded only about a bushel of grain, though it had been sown with 12 bushels. The meagre returns of this planting led colonists to turn to the bush for food. Supply ships from Britain did not come regularly, and provision from neighboring colonies in South Africa or China could not be relied on. Settlers turned to aboriginal people for information on which plants were safe to eat, and how to prepare them.<sup>13</sup>

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<sup>11</sup> Jocelyn M. Powell, "Early Impressions of the Vegetation of the Sydney Region: Exploration and Plant Use by the First Fleet Officers," *History of Systematic Botany in Australasia, Proceedings of a Symposium Held at the University of Melbourne*, ed. P.S. Short (Melbourne, Australia: Australian Systematic Botany Society, 1990), 87-96.

<sup>12</sup> Gilbert, *The Royal Botanic Gardens, Sydney* 11; Barbara Cameron-Smith, *Starting from Scratch: Australia's First Farm* (Sydney: Royal Botanic Gardens, 1987), 7-8 and 14.

<sup>13</sup> Clarke, *Aboriginal Plant Collectors*, 25-44; Cameron-Smith, *Starting from Scratch*, 4-5 and 11.

Governor Phillip had resisted putting his eggs in one basket, botanically. The garden near the governor's residence and the government farm were just two of the plantings made shortly after the First Fleet's arrival. Near the hospital on the western shore of Sydney Cove, officials selected a spot for raising vegetables for hospital use. The officers in the colony had also tried cultivating plots of land with vegetables, usually under an acre, though the lieutenant governor had three acres. All efforts had to contend with rampant theft motivated by hunger, by both convicts and aborigines.<sup>14</sup>

The failure of the first crops from the government farm made Governor Phillip consider his options. His reconnaissance in the first year led him to an area further inside Sydney Cove, which they called Rose Hill, near present day Parramatta. The soil here was less sandy and rocky, with more clay. In November of 1788, the governor sent a team of convicts and officers to Rose Hill to establish a new government farm, with the plot on Sydney Cove being downgraded to Old Government Farm. Henry Edward Dodd, the overseer of the first government farm, was transferred to supervise agriculture in Rose Hill, in March 1789. Though the convicts working here had to learn through trial and error, just as they had in Sydney Cove, the farm had produced 200 bushels of wheat, 35 bushels of barley, and some oats and maize by December of 1789.<sup>15</sup>

Phillip's agricultural establishments were important for stabilizing the food reserves in the colony, but they served a dual purpose. Transportation to New South Wales was envisioned by government at home to provide a deterrent to crime. Rumors of life there needed to be unsettling enough to make the criminally inclined rethink their options. Furthermore, imperial

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<sup>14</sup> Cameron-Smith, *Starting from Scratch*, 14.

<sup>15</sup> Cameron-Smith, *Starting from Scratch*, 12.

government expected hard work to help reform the transported populations. Labor, namely agricultural labor, would transform Britain's criminals into model citizens.<sup>16</sup>

Phillip managed government agricultural trials to grow food crops for colonial self-sufficiency, but he also used settler and convict experiences to help determine what was achievable in New South Wales. One of the most enthusiastic workers on the government agricultural projects, James Ruse, saw his sentence expire in August 1789. The governor granted him thirty acres of land near the new government farm at Rose Hill. Phillip was curious how quickly a settler or settler household could produce enough on their homestead to feed everyone on site. Ruse called his land Experiment Farm. With the benefit of the experiences of both government farms, Ruse was able to fully support himself and his wife without government rations by February 1791.<sup>17</sup> This experiment demonstrated that subsistence farming was possible despite the challenges posed by the soil and weather of New South Wales. Emancipated prisoners or free settlers could expect to have a future in the colony.

Shortly before his retirement in 1792, Governor Phillip handed down an act of great importance for the current Sydney botanic garden. He demarcated the land on the peninsula bounded by the eastern shore of Woolloomooloo Bay and eastern shore of Darling Harbor as a large reserve, for the Crown and for public use of the Sydney settlement. Within this area, he marked another region by the Government House which included the old Government Farm and the modern boundaries of the Sydney botanic garden. None of the land was to be leased, yet his successors ignored that order.<sup>18</sup> By this point, there was lessening faith in the fecundity of the Government Farm land, and it was leased to private people between 1794 and 1807. The lessees

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<sup>16</sup> Lauren Benton and Lisa Ford, *Rage for Order: The British Empire and the Origins of International Law, 1800-1850* (Cambridge, MA: Harvard University Press, 2016), 33-35.

<sup>17</sup> Cameron-Smith, *Starting from Scratch*, 12.

<sup>18</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 13-16.

included a range of individuals, including a superintendent of convicts, emancipated convicts, and Thomas Alford, who was head government gardener and an emancipated convict.<sup>19</sup>

The farm was leased and developed by others, but the garden next to the governor's house remained in the governor's hands and continued to be cultivated. This plot of land had been a nursery, a spot to hold plants and acclimatize them before sending them to other gardens, depending on the governor's pleasure. These exchanges went both ways. Australian plants destined for European gardens might rest in the government house garden before their long journey. However, the garden was also a site for acclimating plants for distribution to settlers. In 1804, for instance, settlers were instructed to apply to the Government Gardener at Sydney for bamboo if they were interested. In 1806, a similar offer of oak acorns was made. Individuals requesting either of these plants were offered planting and care instructions by the government gardener, most likely Thomas Alford.<sup>20</sup>

While the governor's garden helped facilitate some plant exchanges inside and outside the colony, agricultural experimentation had largely moved to other parts of the colony. However, these government sites did not represent the only areas of botanical initiative in the new colony. There were other efforts, both public and private, for moving the flora of New South Wales around the world.

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<sup>19</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 12-14; Cameron-Smith, *Starting from Scratch*, 13.

<sup>20</sup> E. Charles Nelson, "'...and Flowers for Our Amusement': The Early Collecting and Cultivation of Australian Plants in Europe and the Problems Encountered by Today's Taxonomists," in *History of Systematic Botany in Australasia. Proceedings of a Symposium Held at the University of Melbourne*, ed. P.S. Short (Melbourne: Australian Systematic Botany Society, 1990), 287; Gilbert, *The Royal Botanic Gardens, Sydney*, 13-16, quotation at 16; Cameron-Smith, *Starting from Scratch*, 13. George Caley had been in the colony c. 1800-1810 and referenced this bamboo growing in the "Governor's Garden" many years later, SL NSW, M730, letter dated February 4, 1825, from George Caley to George Suttor, frame 106.

## The Plant Collectors

Botanic enthusiasts championed the founding of colonial botanic gardens for the role they could play in facilitating the exchange of plants. However, government botanic gardens were one option from a range of methods for introducing plants to a colony or bringing colonial plants back to mainland Britain. In New South Wales, private individuals responded to the profits to be made from selling Australian plants to collectors in Britain and helped create a brisk trade in Australian plants. Local government officials, too, became involved in this trade for profit. At the same time, Sir Joseph Banks helped arrange for botanically minded men to travel to the new colony, some as settlers and some as temporary plant collectors. Though supported by Banks and supplied by the colony, these men were tasked with different responsibilities from those of the superintendents of colonial botanic gardens. The reliance on private enterprise and semi-private ventures arranged by Banks to manage the botanical exchanges of New South Wales had consequences for the character of those exchanges. Private gardens, including the Royal Botanic Gardens, Kew, were the major beneficiaries of these initial efforts to know the Australian flora.

In the early days of the colony, many people collected plants and seeds on an unofficial basis for payment. Ordinary settlers became collectors, encouraged by the profits they could receive from nurserymen in Europe, like James Lee (co-owner, with John Kennedy, of Vineyard Nursery in Hammersmith), who had elite customers all over Europe.<sup>21</sup> Lee and Kennedy received seeds and plant specimens when the First Fleet ships returned to England in 1789. Even at this early stage, there was a surprising amount of plant materials exchanged between Britain and Australia. The traffic was enough to support several nursery-houses that were known for their selection of Australian plants. Besides Lee and Kennedy in Hammersmith, firms that

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<sup>21</sup> Clarke, *Aboriginal Plant Collectors*, 59. Empress Josephine was one of his patrons. She cultivated exotic plants near Paris at the Château de Malmaison.

specialized in Australian plants included Thomas Barr, Islington; Colville and Sons, Chelsea; William Curtis and William Salisbury, Brampton; Grimwood and Wykes, Kensington; G. Knight, Chelsea; Loddiges and Sons, Hackney; Napier and Chandler, Wandsworth Road, London; and Whitley and Brame, Old Brompton.<sup>22</sup>

The botanical enthusiasts in Britain who wanted Australian plants had a few options. They could rely on nurseries like Lee and Kennedy. Some European collectors opted to directly contract with individuals in Australia or tap their personal networks for specimens from New South Wales. Settlers were also encouraged to collect plants and specimens for European collectors with scholarly pretensions. Not all of these exchanges were strictly legal. Convicts collected plants and animal specimens for sale to people returning to Britain on the transport ships, though it was forbidden to purchase anything from convicts. However, the colony could ill-afford to squander any available botanical skill. Convicts with the appropriate talents were used by government to collect and illustrate plants and animals. Thomas Watling, convict servant to surgeon John White and David Collins, was employed in this way.

Government officials also gathered materials for natural history collectors back home. Governors and acting governors, including Arthur Phillip, Major Grose, Captain William Paterson, John Hunter, Phillip Gidley King, and William Bligh sent specimens to Banks. Surgeons too, like John White and Dennis Conisden supplied Banks with specimens. Banks did not send a plant collector with the First Fleet, yet he still received a stream of specimens. Other elite British naturalists received items directly from officers in Australia. White sent materials to Thomas Wilson, and A.B. Lambert and J.E. Smith of the Linnean Society. Other surgeons, Worgan, Harries, and Bowes Smith, were also known collectors. Major Grose collected for a Mr.

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<sup>22</sup> Tony Cavanagh, "Australian Plants Cultivated in England, 1771-1800," in *History of Systematic Botany in Australasia. Proceedings of a Symposium Held at the University of Melbourne*, ed. P.S. Short (Melbourne, Australia: Australian Systematic Botany Society, 1990), 273-284.

McKay, and Marine Watkin Tench and Naval Lieutenant William Bradley collected for sale, too. Individuals from every class of people in New South Wales were involved in the plant trade.<sup>23</sup>

Once the plant materials and other natural history specimens reached Britain, there is no reason to believe that there were not additional exchanges among recipients. James Lee of the Hammersmith nursery was a friend of Sir Joseph Banks and visited his famous herbarium. Lee also corresponded with Linnaeus and was “responsible for the first English translations of Linnean ideas.”<sup>24</sup> Other recipients active in the botanical world, such as J.E. Smith and A.B. Lambert, were known to each other and may have shared materials. People unable to obtain living plants could access information about the flora of New South Wales through botanical literature. In the 1790s, images of Australian plants appeared in both Curtis’ botanical magazine, and *The Botanist’s Repository*, published and illustrated by Henry Andrews, son-in-law to John Kennedy of the Lee and Kennedy nursery. Curtis and Kennedy were both connected to commercial botany; Andrews was close to the nursery trade, and Curtis had a botanic garden in Lambeth which was open to the public.<sup>25</sup> J.E. Smith, founder of the Linnean Society and fellow of the Royal Society, published *A Specimen of the Botany of New Holland* (1793) for a more scientifically minded clientele.<sup>26</sup>

The early trade in seeds, plants, and images of plants from New South Wales indicates that government intervention was not needed to facilitate plant exchanges or dissemination of information about Australian plants. There seems to have been a brisk trade in Australian plants,

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<sup>23</sup> Cavanagh, “Australian Plants Cultivated in England, 1771-1800,” 276-277; Nelson, “...and Flowers for Our Amusement,” 286; Margaret Steven, *First Impressions: The British Discovery of Australia* (London: British Museum (Natural History), 1988), 63-67.

<sup>24</sup> R.M. Barker and W.R. Barker, “Botanical Contributions Overlooked: The Role and Recognition of Collectors, Horticulturalists, Explorers and Others in the Early Documentation of the Australian Flora,” in *A History of Systematic Botany in Australia, Proceedings of a Symposium Held at the University of Melbourne*, ed. P.S. Short (Melbourne, Australia: Australian Systematic Botany Society, 1990), 44.

<sup>25</sup> Graham Gibberd, “The Location of William Curtis’s London Botanic Garden in Lambeth,” *Garden History* 13 no. 1 (Spring 1985): 6-16.

<sup>26</sup> Nelson, “...and Flowers for Our Amusement,” 287.

but there is less evidence that, at this stage, Australian settlers were contracting with British nurseries to send out food crops for themselves or their livestock. Banks tried to marry the collecting aspect with the development of Australian agriculture by helping those with gardening skills seize opportunities to go to Australia in government service. He had been asked by Governor Phillip to help Home Office Under Secretary Evan Nepean find men with farming experience to settle in Australia as supervisors of convicts.<sup>27</sup> The deal for these prospective settlers was sweetened by the prospect of being able to collect plants and offer them to London nurserymen for sale. Sometimes Banks offered compensation to these men to collect for him and Kew Gardens. Though Banks did not send any collectors out with the First Fleet, he made an arrangement with two men traveling on the first resupply voyage. Banks planned for the Kew-trained George Austin and James Smith to join the 1789 voyage of the store ship *Guardian* and take care of the agricultural plants on board and keep them viable for planting in the colony. Smith and Austin were given instructions to train a sailor in general gardening principles, including the care of plants on board ship. Smith and Austen would remain in the colony to serve as superintendents of convicts, most likely those engaged in agricultural work, and provide general gardening expertise to fill the knowledge gap mentioned by Governor Phillip in his government dispatches. The sailor they trained would look after the Australian plants sent with the *Guardian* on its return to England. Unfortunately, the ship hit an iceberg on the way to New South Wales, and both gardeners abandoned ship and were lost at sea.<sup>28</sup>

Austin and Smith were different from the colonial officials and naval surgeons who sent plants to Banks on an informal basis. They were sent out as part of a plan to help develop the colony and provide Banks and the king's garden at Kew with Australian plants. Banks had

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<sup>27</sup> *India and Pacific Correspondence of Sir Joseph Banks*, ed. Neil Chambers, Vol. 3 (London: Pickering & Chatto, 2007), Letter 100, dated August 21, 1790, from Arthur Phillip to Joseph Banks, 161-163.

<sup>28</sup> Barker and Barker, "Botanical Contributions Overlooked," 52-53; Finney, *To Sail Beyond the Sunset*, 51-53.



explicitly ordered both men not to join the commercial networks of plant exchange. As part of their agreement, Banks stipulated that they could not contract with nurserymen in Britain to collect seeds; he intended Kew to be the sole beneficiary of their efforts. However, Austin had made agreements to send seeds to several London nurseries anyway, and bragged to Smith about his double-dealing.<sup>29</sup> Though Banks would have been their patron, the distance made him somewhat powerless to control their behavior, and the lucrative rewards possible from providing plant materials to nurseries made it difficult to buy their loyalty.

After the journey of Austin and Smith miscarried, Banks sent out David Burton on similar terms. Burton headed to Sydney to as a supervisor of convicts, but Banks also offered him £20 a year for the exclusive right to any plants, seeds, or specimens that he collected. Burton would also need to assist Governor Phillip in his plant collections in order to earn that sum.<sup>30</sup> From Burton's case, it appears that contracting with botanically minded men in government service was an efficient way for Banks to gain access to the productions of New South Wales. Superintendents of convicts like Smith, Austin, and Burton had a primary occupation in Australia, and by virtue of their posts, a claim on government stores for sustenance. The local government would in turn benefit from their facility with growing plants. For instance, the governor tasked Burton with making a survey of soil quality of the region.<sup>31</sup> All Banks had to offer was a small financial incentive to secure primary access to their plant collections. Maintaining their allegiance was difficult, however, as demonstrated by the perfidy of unfortunate George Austin. Perhaps to better maintain control of the items he wanted, yet allow

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<sup>29</sup> Barker and Barker, "Botanical Contributions Overlooked," 52-53; Finney, *To Sail Beyond the Sunset*, 51-53.

<sup>30</sup> A.J. Gray, "Burton, David (?-1792)," *Australian Dictionary of Biography*, <http://adb.anu.edu.au/biography/burton-david-1856>; *IP Corr JB*, Vol. 3, Letter 130, dated January 31, 1791, from Joseph Banks to David Burton, 193.

<sup>31</sup> *IP Corr JB*, Vol. 3, Letter 256, letter dated April 2, 1792, from Arthur Phillip to Joseph Banks, with enclosure from David Burton, 356-359.

collectors to participate in commercial networks by gathering other materials, Banks claimed primacy only over Burton's vegetable collections. Burton was explicitly allowed to gather from "the other two Kingdoms of nature" for sale.<sup>32</sup> He collected for Lee and Kennedy, presumably plant materials, therefore he did not strictly adhere to his deal with Banks. However, Burton's work ethic was highly valued by Governor Phillip; when Burton died in 1792 in a duck hunting accident, Phillip lamented his loss.<sup>33</sup>

In the hierarchy of scientific workers, the collectors in New South Wales were at the bottom. They were men without wealth or property, but sometimes they had some education. Imperial government, Banks and other patrons paid them to care for plants on the voyage out to the colony and collect plants to send back to Britain. Their class and employment status greatly curtailed their ability to gain credit for their discoveries. Unlike the superintendents of botanic gardens, these early collectors were usually not the ones to describe their finds in Europe; others would formally classify and publish on the plants they found. However, many of the early collectors provided descriptions or further information on the plants they sent back to Britain; they did not merely supply specimens. Even so, they did not receive public credit for this work; the literature describes them as collectors only. Today, much of this work would have been published under joint authorship.<sup>34</sup> Some of the surgeons and other officers did publish their own accounts of the colony, including images of the unfamiliar plants and animals they came across. However, the men who were paid for their work were on the weaker end of the balance of power and transferred the right to their discoveries as part of the exchange.

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<sup>32</sup> *IP Corr JB*, Vol. 3, Letter 137, letter dated February 22, 1791, from Joseph Banks to David Burton, 199.

<sup>33</sup> Powell, "Early Impressions of the Vegetation of the Sydney Region," 93; Cavanagh, "Australian Plants Cultivated in England, 1771-1800," 276; *IP Corr JB*, Vol. 3, Letter 271, dated May 20, 1792, from Governor Arthur Phillip to Joseph Banks, 376-377; Nelson, "...and Flowers for Our Amusement," 287.

<sup>34</sup> Barker and Barker, "Botanical Contributions Overlooked," 37-86.

Bank's early collectors went out to Australia as superintendents of convicts or with plans to settle and farm. However, in the nineteenth century, Banks began to send men with the sole responsibility to collect specimens and accompany natural history and mapping expeditions in the region. Many of them, such as George Caley, Robert Brown, and Allan Cunningham, had extended careers in botany and natural history. Banks and government provided full financial support for these men during their sojourn in Australia, but this payment did not eliminate rivals for ownership of the collectors' work. The governors became competitors for these collections, sometimes claiming them by right.

Caley had been a protégé of Banks, training in the Chelsea Physic Garden, William Curtis' garden in Lambeth, and at Kew before Banks selected him to take a last minute berth in 1799 as his personal collector in New South Wales.<sup>35</sup> Caley would later be the final superintendent at the St. Vincent botanic garden, from 1816 to 1822. He has been frequently described as a difficult man, and plenty of his contemporaries and modern historians have blamed his temperament for the difficulties he had with local governments during his colonial assignments. Banks once clarified that Caley "will neither seek nor accept any...indulgences to which he has not a decided Right."<sup>36</sup> This type of scrupulous rectitude might mean that Caley never tried to cheat his employer, but it was not the most efficient mode of action in an era of changing social and professional boundaries. Out in the empire, particularly in the spaces the British considered blank, the notion of government and rights themselves were being negotiated.<sup>37</sup>

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<sup>35</sup> Joan Webb, *George Caley: Nineteenth Century Naturalist* (Chipping Norton, NSW: Surrey Beatty & Sons, Pty Ltd, 1995), 7-12.

<sup>36</sup> SL NSW, M730, undated letter c. 1817, from Joseph Banks to Lord Palmerston, frame 117.

<sup>37</sup> See, for example, Benton and Ford, *Rage for Order: The British Empire and the Origins of International Law, 1800-1850*; John McLaren, *Dewigged, Bothered, and Bewildered: British Colonial Judges on Trial, 1800-1900*, (Toronto: University of Toronto Press, 2011).

George Caley traveled to Australia aboard ship with the new governor, Philip Gidley King, and butted heads with him during a stop at the Cape of Good Hope. Despite their disagreements, King provided very well for Caley's needs when he accompanied James Grant's expedition to explore the southern coast of New South Wales shortly after arriving in the colony. King ordered that Caley should have the assistance of any men who could be spared, and a soldier should always accompany him during shore excursions. King behaved as though this assistance entitled him to take over Caley's collections when the expedition was over. Before Caley left the ship, Grant tried to take his materials, citing the governor's orders. Once Caley went ashore, King personally asked Caley for a set of duplicates of his collection of plants, then later claimed that Caley's plants could go to Banks, but as Caley expressed it, "all other things I collected belong to him."<sup>38</sup> Caley successfully resisted King's machinations. The terms of Caley's employment required him to send plant materials to Banks, but part of the time, he was allowed to sell plants and other materials elsewhere. Caley took advantage of this freedom and had an agreement with Colvill Nursery.<sup>39</sup> If King had offered to pay Caley, he may have found a more willing partner.

While in the colony, Caley went on several voyages supported by colonial government to improve British knowledge of the region. For some of these, such as his voyage to the Bass Straits, he accompanied a surveying mission and looked for opportunities to go ashore and collect plants. For other voyages, Caley went on foot, both to collect plants and survey the country. Prior to setting off for New South Wales, Caley was given lessons in navigation to help

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<sup>38</sup> *IP Corr JB*, Vol 5, Letter 306, letter dated August 25, 1801, from George Caley to Joseph Banks, 410-411; Barker and Barker, "Botanical Contributions Overlooked," 68.

<sup>39</sup> Barker and Barker, "Botanical Contributions Overlooked," 54; Webb, *George Caley*, 10; If Caley wanted to accompany Brown and Flinders while surveying the coast, he was to collect only for Kew, since that voyage was outfitted in part to provide specimens to Kew, and Banks did not want others to have access to those plants, see *IP Corr JB*, Vol 5, Letter 288, letter dated June 15, 1801 from Joseph Banks to Robert Brown, 363-364.

him on his journeys, which served multiple purposes. Though Banks hungered for plants for Kew, he and Caley were also eager for any discoveries that might be beneficial to either the colony or mainland Britain. Caley himself felt that his experience in manufacturing, presumably gleaned from his past as a Manchester weaver, made him more attentive to plants that would be useful for industry. Caley noted that past collectors had “not favoured agriculture, commerce and the materia medica so much as an inquisitive mind would expect,” and he blamed narrow training in botanic gardens for this omission. Once in the colony, Caley sought to determine the course of known rivers near the New South Wales settlement and find a way through the Blue Mountains.<sup>40</sup> In these expeditions, the imperative for plant exploration blended with the geopolitical concerns of mapping the region.

Shortly after Caley arrived in New South Wales, Banks arranged for another naturalist to collect in the colony as part of a surveying expedition. The Admiralty approved an expedition headed by Matthew Flinders to survey the coasts of the British settlement and explore the flora, fauna, and geologic features of the land. The 1801 expedition aboard the HMS Investigator would include botanical artist Ferdinand Bauer and landscape artist William Westall. Banks tapped Brown to be the expedition’s naturalist and supervisor of a miner accompanying the expedition to provide geological expertise. In the course of this voyage, Flinders and his crew became the first Europeans to circumnavigate Australia, thereby establishing that New South Wales and New Holland, a Dutch discovery, were part of the same continent.<sup>41</sup> Creating accurate maps of the region was the main priority, but Banks did not neglect to set botanical goals for the mission. He informed Brown that the Investigator was specially “fitted out among other things

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<sup>40</sup> Finney, *To Sail Beyond the Sunset*, 86-91; J.E.B. Currey, *George Caley: Naturalist and Explorer* (Melbourne, Australia: Lansdowne Press, 1966), 21-22, 28 and 52-59, quotation p. 22.

<sup>41</sup> Finney, *To Sail Beyond the Sunset*, 91-103.

for the purpose of supplying the Royal Gardens with Plants...” Banks also told Brown about Caley and offered Caley the opportunity to join the expedition once it stopped at Sydney.<sup>42</sup>

In India and the Caribbean, botanic garden superintendents pushed government to support the creation of a flora. In the case of New South Wales, Brown tried to produce the first comprehensive flora with Banks’ support. Banks arranged for the Admiralty to continue Brown and Bauer’s salaries after they returned to Britain to enable them to prepare their drawings and accounts of the colony for publication. The result was Brown’s technical publication *Prodromus Florae Novae Hollandiae*, published in 1810. This work covered 2,000 species, using Brown’s collections and specimens from Dampier’s 1699 voyage, Banks and Solander’s collection on Cook’s expedition, Nelson’s expedition in 1777, and Baudin’s expedition in 1800, as well as collections of Menzies, Paterson, and Caley. This work was praised by botanists, but was a commercial failure, leading Brown to abandon publication of the planned second volume. Bauer’s *Illustrationes Florae Novae Hollandiae* was similarly a failure, and he stopped publication after one volume, though a series had been planned.<sup>43</sup>

In the first decade of the nineteenth century, Banks had Caley and Brown extracting plants for him from New South Wales, but he continued his other efforts to aid agricultural development in the colony. Banks helped George Suttor settle in Australia as a farmer, sending him out on the Porpoise, part of the same fleet as Caley, due to depart in 1799. Banks offered Suttor free passage in exchange for providing shipboard care for a consignment of agricultural plants destined for introduction to New South Wales. Delays in preparing the plant cabin and making the ship seaworthy put Suttor in the colony shortly after Caley.<sup>44</sup> The delays led to the

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<sup>42</sup> *IP Corr JB*, Vol 5, Letter 288, letter dated June 15, 1801, from Joseph Banks to Robert Brown, 288-289, quotation 289.

<sup>43</sup> Finney, *To Sail Beyond the Sunset*, 103-104.

<sup>44</sup> Webb, *George Caley*, 11-12.

death of many of the more temperamental plants selected for the voyage. Banks had hand-picked the varieties after querying William Paterson, an officer who had spent time in the colony. Once Suttor arrived in New South Wales, he was responsible for giving Banks an inventory not only of the agricultural plants that survived the voyage, but of the agricultural plants that he found growing in the colony.<sup>45</sup> Like the gardeners Banks sent to New South Wales as supervisors of convicts, Suttor represented an opportunity for Banks to improve the stock of agricultural knowledge in the colony.

Banks' involvement with New South Wales also helped to encourage a web of correspondence between the botanic enthusiasts with a connection to both him and the colony. Suttor and other men he helped to settle in Australia became Banks' permanent contacts for reporting on the state of Australian agriculture. Suttor and Banks remained correspondents for years. Caley made contact with Suttor while they were waiting to sail and became friends with him while in the colony. Caley remained Suttor's friend and correspondent, writing to him for news of the colony when he was superintendent of the botanic garden at St. Vincent.<sup>46</sup> Both Caley and Suttor were points of contact when Brown arrived in the New South Wales. In *Prodromus*, Brown named a few plants in Caley's honor and called him "an assiduous and accurate botanist."<sup>47</sup> Caley and Brown were also known to plant collectors who came after them.

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<sup>45</sup> *IP Corr JB*, Vol 4, Letter 306, Note concerning George Suttor dated December 11, 1797, 475-476; *IP Corr JB*, Vol 5, Letter 296, letter dated August 4, 1801, from George Suttor to Joseph Banks, 372; *IP Corr JB*, Vol 4, Letter 318, dated May 15, 1798, from Joseph Banks to John King, 500-503, Banks consulted with Col Paterson about the European plants and fruit trees already in the colony, and felt them deficient. Suttor's voyage was designed to help remedy those lacks. *IP Corr JB*, Vol 6, Letter 118, letter dated April 21, 1803, from George Suttor to Joseph Banks, 181-182 indicates that Suttor planned to travel the colony to survey the plants being cultivated, and he provided suggestions to Banks regarding what agricultural plants might do well in the colony.

<sup>46</sup> Webb, *George Caley*, 28; For instance, Caley wrote to Suttor about Thomas Bigge, the Commissioner of Inquiry sent to examine the colony, as well as other NSW business, see SL NSW, MS730, letter dated April 7, 1821, from George Caley to George Suttor, frame 94-99.

<sup>47</sup> Currey, *George Caley*, 71-74 (quotation at p. 74); Suttor first met Brown at Caley's house in Paramatta in 1803, see Orchard, A.E. and Orchard, T.A. *Allan Cunningham: Letters of a Botanist/Explorer* (Fyshwyck, Australia: Privately Published through New Millenium Print, 2015), Letter 7/n/2, dated September 13, 1859, from Robert Heward to Joseph Hooker, 547.

Caley knew Allan Cunningham's family, who offered to include any letters Caley might have for Suttor in a packet they were sending to Cunningham while he was collecting in New South Wales in the 1820s. Allan Cunningham himself wrote to Brown and Suttor.<sup>48</sup> In colonies with a botanic garden, the superintendent helped stimulate correspondence amongst likeminded individuals inside and outside the colony. Banks interest and involvement in New South Wales placed him in that role.

In its first decades, the Sydney settlement was host to a range of plant collectors and botanical initiatives, though it did not boast a botanic garden. Individuals driven by hopes of payment collected specimens for nurseries and gentleman naturalists at home. Sir Joseph Banks organized passage for gardeners and temporary residence for plant collectors on a variety of footings. Some would become supervisors of convicts. George Suttor superintended plants on ship during his voyage out in exchange for free passage and a land grant once he arrived. Brown found funding as part of a military expedition, and Caley was personally funded by Banks and granted rations from the public store in New South Wales. Through these ad hoc means, Banks provided a range of botanical services to the new colony. He increased the store of gardening expertise in New South Wales and helped create a local network of botanically minded men. Banks organized the introduction of useful agricultural plants in New South Wales and tried to facilitate the discovery of useful local plants by giving Caley a mandate to find them. All of the Banks affiliated individuals helped enrich Kew with Australian plants. Banks provided many of the services of a colonial botanic garden without committing to the permanent expense of one.

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<sup>48</sup> SL NSW, M730, letter dated February 27, 1825, from George Caley to George Suttor, frame 108, where Caley notes that Allan Cunningham's father offered to include Caley's letter to Suttor in his packet to his son; Orchard and Orchard, *Allan Cunningham*, Letter 3/d/2, dated July 16, 1822, from Allan Cunningham to Robert Brown, 157-158; and Orchard and Orchard, *Allan Cunningham*, Letter 3/e/1, dated November 4, 1821, from Allan Cunningham to George Suttor, 159-161.



Banks arranged a variety of botanical interventions, but one of his main motivations for facilitating these plant transfers was his desire to obtain Australian plants for Kew Gardens. His efforts to control if and when his gardeners and plant collectors could sell for profit demonstrate how much he wished to make Kew the sole possessor of exotic Australian species. After Caley and Brown left the colony, Banks convinced Treasury officials to take on the burden of funding collectors to replenish the stocks of rare plants at Kew Gardens, which had dwindled during the protracted period of disrupted shipping due to the wars with France. William Aiton, head gardener at Kew, wrote to Banks in 1814 about increasing the stock of rare plants in the garden, and asked Banks to pitch new collecting trips to the Prince Regent and select appropriate places for collectors to visit. Banks commiserated with Aiton; he prioritized the Cape of Good Hope and New South Wales as locations for collection. Banks reaffirmed the imperative to improve the stock of plants at Kew, identifying the Schönbrunn as a feared rival. Banks knew that Francis I of Austria had been in the habit of sponsoring botanical expeditions before the French wars and was likely to resume during peace. Banks promised to do his part by instructing the governors of New South Wales and the Cape of Good Hope to assist the collectors if Aiton could obtain royal permission to send some.<sup>49</sup>

Banks contacted his connections in government to suggest that public money, the Treasury itself, should support plant collectors at the Cape of Good Hope and New South Wales. When Banks explained the venture to George Harrison, Assistant Secretary of the Treasury, for the information of Lord Liverpool, the Prime Minister, he spoke in terms of the benefits for the holdings of Kew Gardens. Banks explained that Kew supplied gifts for foreign monarchs, and he included a short list of the European monarchs, nobility, foreign universities, and foreign gardens

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<sup>49</sup> SL NSW, M730, letter dated May 29, 1814, from W Aiton to Joseph Banks, frame 122-123; and SL NSW, M730, letter dated June 7, 1814, from Joseph Banks to W Aiton, frame 123-124.

who had approached the prince regent, queen, government ministers, and William Aiton for a gift of plants from Kew. Banks suggested that this sort of plant exchange among royals would benefit the British nursery business. When other Europeans saw plants from Kew in the gardens of their monarchs, they would wish to cultivate them, too. This demand would provide business for British nursery growers.<sup>50</sup> Banks did not justify these collecting trips in terms of any benefits to the empire or the discovery of new medicines or cash crops. Instead, he emphasized the importance of having plants for royal gift exchanges to cultivate soft power, with secondary, presumed benefits to British commerce through the nursery trade. Banks also cited the benefits to science, presumably in classifying new, previously undiscovered plants. Thus, the perceived necessity of replenishing the rare plants growing in Kew Gardens launched the careers of James Bowie in South Africa and Allan Cunningham in Australia.

When Cunningham received the instructions for his journey, the purpose of his Australian journey was clear. His salary would come from the Lords Commissioners of the Treasury, and he could apply to a fund managed by Aiton for contingencies. However, Cunningham's orders would come from Sir Joseph Banks.<sup>51</sup> Banks had finally become habituated to governors who used their authority to claim the collectors' wares for themselves or refused to provide basic assistance despite requests from himself and the government in Britain. He equipped his new collectors accordingly. Bowie and Cunningham would each be given a commission, a document to carry with them, explaining their quest and exhorting any governor or ruler to assist them. He gave William Aiton some advice to forward on to Bowie and Cunningham to help them curry favor with governors. If the governor was not helpful, Banks gave the collectors permission to give him unlabeled packets of seeds of plants already known in

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<sup>50</sup> Orchard and Orchard, *Allan Cunningham*, Letter 1/b/1, dated September 1, 1814, from Joseph Banks to George Harrison, 5-7.

<sup>51</sup> SL NSW, M730, letter dated September 13, 1814, from George Harrison to Joseph Banks, frame 127-129.

Britain, if it seemed that a share of their collections would make him more amenable. If the governor asked for the plant names, the collectors were told to play dumb and beg to be excused because they feared being incorrect. On the packets of seeds and plants to send to Banks, they were told to never label the packets. Instead, Banks instructed the collectors to number the packets and provide a separate list with the numbers matched to the actual names.<sup>52</sup> Banks had ordered Cunningham to put all of his materials into the hands of Governor Macquarie with the request to forward them to Aiton at Kew as soon as possible.<sup>53</sup> The numbered list with all of the plant names would have been sent back to Britain as well, but likely protected behind the wax seal of a private letter.

During the latter half of his life, Joseph Banks supported botanic gardens in India and the Caribbean. He used a variety of other strategies in New South Wales to provide botanical services, including floras and other scientific botany projects. However, the secrecy surrounding Allan Cunningham's collections makes clear that Joseph Banks was fueled by the desire to make Kew the most impressive repository of Australian plants. Colonial garden superintendents initiated plant exchanges to help stock their gardens with foreign plants, but Banks' collectors in New South Wales had more restricted latitude for action. Though Banks was not involved in the founding of a botanic garden in New South Wales, histories of the Royal Botanic Gardens, Sydney, place its founding during Allan Cunningham's tenure in the colony. No documents positively establishing the Sydney botanic garden survive, therefore the 1816 or 1818 founding date cited in secondary literature is based on circumstantial evidence. Working through this confusion sheds light on why imperial government might support a botanic garden in a colony and what a colonial garden might be expected to achieve.

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<sup>52</sup> *IP Corr JB*, Vol 8, Letter 102, dated September 18, 1814, from Joseph Banks to William Aiton, 101-102.

<sup>53</sup> *SL NSW*, M730, letter dated February 10, 1817, from Joseph Banks to Allan Cunningham, frame 133.

## A Botanic Garden in New South Wales?

During the tenure of Robert Brown and George Caley in Australia, the letters of government contain the first reference to plans for a “botanic” garden. In writing to Banks in May 1800, Philip Gidley King, then governor of New South Wales, reported that he had cordoned off land in Parramatta for a “Botanic Garden” and put it under Col. William Paterson’s care. This observation was sandwiched between reports that he had installed Caley in Parramatta and given him use of the government house there to dry his specimens.<sup>54</sup> Caley, though, with his characteristic ability to point out the shortcomings of his social superiors, informed Banks at the end of the year of his thoughts on the matter, writing, “Gov: King and Col. Patterson were some time back anxious to establish a Botanic Garden, but I hear nothing said of it now, however the ground is living waste.”<sup>55</sup> By 1802, there was a garden in Parramatta attributed to Paterson, for acclimatizing plants brought to the colony and for preserving plants destined for transport to Kew. This garden was wholly reliant on Paterson for support; when he was out of the colony, the lieutenant-governor allowed his livestock to eat the garden.<sup>56</sup>

Of course, there were gardens of all sorts throughout the colony. From the earliest days of the British settlement at New South Wales, soldiers and officials were keen to cultivate their own gardens to supplement the rations from the government storehouse and whatever Australian flora and fauna they could find and eat. Caley himself frequently complained of the shortage of government rations, and obtained materials to fence in some land near his accommodation in Parramatta and grow some of his own food. He admitted to Banks that he would use some of the enclosed ground in for things in “the Botanic line,” but food was the most pressing issue. Bad

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<sup>54</sup> *IP Corr JB*, Vol 5, Letter 139, dated May 3, 1800, from Philip Gidley King to Joseph Banks, 181-182.

<sup>55</sup> *IP Corr JB*, Vol 5, Letter 165, dated December 22, 1800, from George Caley to Joseph Banks, 226-228.

<sup>56</sup> Currey, *George Caley*, 51-52; Paterson’s garden suffered when he was out of the colony – according to Caley, Joseph Foveaux let his livestock eat Paterson’s garden, see SL NSW, MAV/FM5/402-452, letter dated February 17, 1809, from George Caley to Joseph Banks, frame 424.

floods ruined his good work and destroyed many gardens in the settlement, but Caley was undaunted and planted his garden again.<sup>57</sup> Besides growing supplemental food, a small garden like this would have helped Caley preserve the plants that he collected in seasons in which shipments to England were not likely to survive. The plants could be reared in the garden until a better opportunity for shipment presented itself. Caley himself informed the governor that some plants needed to be cultivated in a garden before being shipped.<sup>58</sup> A garden would also give a collector a chance to transmit a plant in a different form. Cuttings could be reared until they produced seeds and bulbs, corms, tubers, and rhizomes could be reared until they seeded and divided.

There was no official announcement to signal the founding of the Sydney Botanic Garden, which has led to much confusion over the date of its establishment. The site of the current botanic garden had been one of the first sites for government supported agriculture in the colony, and Governor Phillip had set aside the area as crown lands. As such, they should have been reserved for the use of the governor or for public institutions for the use of the colony. Poor production at the site led subsequent governors to lease the lands and turn to agricultural development in other areas of the settlement. However, in 1814, Governor Lachlan Macquarie moved to more clearly separate this area from the rest of Sydney. The leased land was next to the governor's residence and the governor's garden. Macquarie explained to government how much these leases had inconvenienced his family, noting, "Even the Passage to the Govern't Garden, which would be a pleasant Place of Recreation to Mrs. Macquarie and myself, lead thro' the Leased Ground and Close by the Mills, Whereby we are Nearly Excluded from that

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<sup>57</sup> *IP Corr JB*, Vol 5, Letter 165, dated December 22, 1800, from George Caley to Joseph Banks, 226-229; *IP Corr JB*, Vol 5, Letter 306, dated August 25, 1801, from George Caley to Joseph Banks, 410-413; SL NSW, M730, letter dated June 7, 1801, from George Caley to Philip Gidley King, frame 60-61.

<sup>58</sup> SL NSW, M730, letter dated June 7, 1801, from George Caley to Philip Gidley King, frame 60-61.

Satisfaction.”<sup>59</sup> Macquarie voided leases, ordered the construction of a border fence, and issued an order prohibiting trespassing. With the tendency to define a place with the benefit of hindsight, many historians have cited 1816 or 1818, when the area was completely encircled by a road, then a fence, and protected by the trespassing edict, as the birth of the Royal Botanic Gardens, Sydney.<sup>60</sup> However, if one places the fence building and trespassing orders in context, there is little support for the 1816 or 1818 date. Wading through the contradictory evidence about the garden’s foundation is useful because it provides clues about why the garden was founded, who pushed for its founding, and what it was expected to achieve beyond the public and privately supported agricultural experimentation and plant exchanges already taking place. Furthermore, it reveals what both contemporaries and modern scholars comprehend in the term “botanic garden.”

Maiden, an early twentieth century superintendent of the Sydney botanic garden, wrote a short history of the establishment and grappled openly in his text with the difficulty of fixing the garden’s date of establishment. He supported an 1816 founding date, arguing that the current botanic garden had been the site for the government supported cultivation of plants since the establishment of the colony, therefore 1816 would actually be an understatement. To support his claim, Maiden also cited the completion of the road ringing the garden and the inscription of 1816 on Mrs. Macquarie’s chair, a bench carved into a stone outcropping at the edge of the garden for Macquarie’s wife.<sup>61</sup> Maiden appears to have established a founding date which later scholars have followed. Furthermore, as a superintendent of the Royal Botanic Gardens, Sydney,

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<sup>59</sup> *Historical Records of Australia*, Series 1, Vol 8 (Sydney: The Library Committee of the Commonwealth Parliament, 1916) dispatch from Governor Macquarie to Earl Bathurst dated October 7, 1814, 339-341, quotation p. 341.

<sup>60</sup> For one of the few works to question the 1816 date, see Finney, *To Sail Beyond the Sunset*, 140.

<sup>61</sup> J.H. Maiden, “History of the Sydney Botanic Gardens,” *Royal Australian Historical Society Journal and Proceedings* XIV, no. 1 (1928): 13-14 and 16.

his date became the official line disseminated in publications associated with the botanic garden, including their 200<sup>th</sup> anniversary publication.<sup>62</sup> These histories sometimes point out that Maiden was adamant about the 1816 date on thin evidence, but they do not contradict him.

Jim Endersby has linked Macquarie's enclosure of the land near the government house as a bid to control the lucrative trade in Australian plants, or "botanical bartery," and he proposes an 1818 foundation date for the Sydney botanic garden. He argues that the enclosure itself was akin to the enclosures in Britain whereby lands for public use became private property to benefit the higher orders of society. Scientific collectors, nurserymen, and avid gardeners coveted plants from the colony. In physically walling off the garden and showing favoritism to his own collectors rather over those sent from Kew, Endersby argues that Macquarie created a botanic garden to try to reserve for himself the financial and diplomatic benefits of selling and gifting Australian plants.<sup>63</sup>

Despite the importance that some have placed on Macquarie's actions, if one draws back a bit and considers what was happening throughout New South Wales, Macquarie's voiding of leases and move to fence off the government domain and garden from the Sydney populace does not necessarily signal the creation of a government supported botanic garden. Macquarie was not the first governor to try to restrict access to that land, and the same processes happened in other parts of the colony.

Before his retirement in 1792, Governor Phillip set aside land for a crown reserve. This grant included the plot containing the present day botanical garden, as well as the old Government Farm. As a crown reserve, none of these lands should have been leased, yet his

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<sup>62</sup> See *The Royal Botanic Gardens, Sydney: The First 200 Years*, ed. Jennie Churchill, (Sydney: Halstead Press, 2015), 28-29. See also Gilbert, *The Royal Botanic Gardens*, 20-26 for another account of the foundation date.

<sup>63</sup> Jim Endersby, "A Garden Enclosed: Botanical Barter in Sydney, 1818-39," *The British Journal for the History of Science* 33, no. 3 (September 1, 2000): 313-334.

successors, John Hunter and Philip Gidley King, had been content to lease the crown reserves, including the Government Farm, to settlers.<sup>64</sup> In the context of the colony's system of land tenure, this concession was not unusual. New South Wales was a penal colony designed to be a place of reform, where wholesome agricultural labor would lead prisoners to reject their criminal ways. Though Sydney was also home to free settlers, the needs of the penal system structured the colony. The local government did not offer land grants within Sydney in a bid to encourage the population to settle outside of town. However, citizens who wished to engage in commerce stayed near the port. As a result, most of the houses in town were built by permission of the governor on leased land.<sup>65</sup>

In Sydney, what one governor gave, another could take away. The colony was a quasi-military establishment. Unlike Jamaica and many old West Indian settler colonies, New South Wales had no elected legislature. The governor held military and administrative power without an appointed council to guide him. The governor was supported by a judge advocate assisted by six military officers in a hybrid military court, but these individuals were expected to work with the governor. The civil and military officers and even clergy had received commissions instructing them to do their duties "according to the rules and discipline of war."<sup>66</sup> The legal basis for initial settlement was suitable only for a prison colony. The exigencies of governance led some governors to exercise legislative power, too. In short, despite the lack of legal precedent, there were not many real checks on the governor's power in New South Wales. Governors in other British colonies were usually more restricted; however, Trinidad, Mauritius, Ceylon, and several more recent West Indian colonies had similarly powerful governors. In

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<sup>64</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 13-16.

<sup>65</sup> Benton and Ford, *Rage for Order*, 33-35.

<sup>66</sup> John Ritchie, *Punishment and Profit: The Reports of Commissioner John Bigge on the Colonies of New South Wales and Van Diemen's Land, 1822-1823; Their Origins, Nature and Significance*, (Melbourne, NSW: Heinemann Melbourne Australia Pty Ltd, 1970), 3-6, quotation at 4.



colonies where the imperial government feared that legislatures would be dominated by planter elites or did not wish to expand the rights of people of color, colonial governors were invested with sweeping political powers. In New South Wales, imperial government had no interest in extending representative government to convicts and emancipated convicts.<sup>67</sup>

In 1806, William Bligh arrived in New South Wales to take his post as governor, and he did not appreciate the encroachments on the crown reserve. The power of his post gave him the ability to take back the land, and Bligh already had a reputation for overreaching his authority. He had been the captain of the expedition to transplant breadfruit from Tahiti to the British West Indies to feed slaves in times of famine. The first voyage was rocked by a mutiny, though Bligh and many of his loyalists survived due to his skills piloting an open boat safely to Timor. Bligh managed to salvage his career and successfully command the second breadfruit voyage, but he was rumored to have caused the failure of the first voyage by his autocratic style of command. Accusations of tyranny would plague him again after he used his powers as governor to try to force the populace away from Sydney Harbor and the governor's mansion in accordance with the original plan for an agrarian penal colony. In 1807, Governor Bligh cancelled the active leases on the lands that Arthur Phillip had set aside as a crown reserve. Some of the lessees had built houses on the land. Bligh forced them to vacate and some of the homes were pulled down. Furthermore, Bligh forbade settlers from passing through or grazing their animals on old Government Farm, citing Phillip's boundaries, and he had a ditch dug to mark the boundary. The governor was thorough; large rocks and even a grave site were cleared away. Bligh worked tirelessly to transform the land around the old Government House and put some distance between himself and the settlers and convicts. Bligh's acts regarding the government domain, as well as other aspects of his rule, such as his treatment of convicts and interventions into the judicial

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<sup>67</sup> Benton and Ford, *Rage for Order*, 33; McLauren, *Dewigged, Bothered, and Bewildered*, 13-15 and 31-32.

process, led to another mutiny. He was deposed by Major George Johnston leading a contingent of the New South Wales Corps in an uprising called the Rum Rebellion.<sup>68</sup>

Once word of Bligh's plight reached London, he was replaced by Lachlan Macquarie. Governor Macquarie continued Bligh's work by constructing a sandstone wall around land now occupied by the Sydney botanic garden and the Domain. By 1813, he began farming the site, with 12 convicts for labor, five acres of fenced land, and a house for the chief gardener. Macquarie's efforts to enclose the land near the governor's mansion earned him the credit of establishing the Sydney Botanic Garden. "His renewed interest led to the establishment of the Botanic Gardens around 1816," according to one history of that institution.<sup>69</sup>

Macquarie's term as governor was a period of extensive public works projects, including public buildings, institutions, and roads. In addition to the road ringing the governor's mansion and domain in Sydney, roads were built to connect the settlements of Sydney, Parramatta, Windsor, Richmond, and Hawkesbury, and a road to Bathurst helped open up settlement beyond the Blue Mountains. Macquarie's detractors highlighted the expense of these major building projects. His supporters would later argue that he pursued these programs as a way of employing excess convict labor for the benefit of the colony.<sup>70</sup> Indeed, after the wars with France, New South Wales received an increasing number of convicts, with a local peak of nearly 4000 transportations in 1820.<sup>71</sup>

Within the upswing in public works projects during Macquarie's tenure was a move to cordon off crown lands, or property within the governor's purview, throughout the colony. The

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<sup>68</sup> Benton and Ford, *Rage for Order*, 31-43; Gilbert, *The Royal Botanic Gardens, Sydney*, 16.

<sup>69</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 13-16; Cameron-Smith, *Starting from Scratch*, 13 (quotation); Maiden, "History of the Sydney Botanic Gardens," 28-29.

<sup>70</sup> Thomas Henry Braim, *A History of New South Wales from Its Settlement to the Close of the Year 1844*, Vol 1 (London: 1846), 43-44.

<sup>71</sup> David Meredith and Deborah Oxley, "The Convict Economy," in *The Cambridge Economic History of Australia* ed. S. Ville & G. Withers (Cambridge: Cambridge University Press, 2014), 98-99.

government garden, domain, and government house at Parramatta, where Caley had once dried his specimens, were enclosed by a fence in 1815. An order went out that no one was allowed on the grounds unless they visited specifically to transact business with the governor or a member of his family. This was a clarification of an earlier order of 1810 which prohibited people from trespassing and cutting timber in the government “Demesne.” However, “respectable Free Persons” could apply to the governor or Richard Rouse, the Superintendent of Government Works, to see the grounds with the gardener as a chaperone. Similar enclosures and proclamations of terms of visitation were applied to the government garden and domain at Windsor, a settlement northwest of Parramatta.<sup>72</sup> The enclosure of the garden grounds may be akin to the enclosure movement in Britain as Endersby suggests, but the more immediate cause was a public works building spree driven by the need to manage convicts through control of their labor. Fencing in government land is a good first step to forming a government supported botanic garden, but it does not necessarily lead in that direction, since the government gardens at Parramatta and Windsor remained gardens for the governor’s recreation.

If one accepts the 1816 or 1818 foundation date as many scholars do, we must wonder why contemporaries did not call the governor’s garden by the “botanic” epithet. Did they interpret the new restrictions on the Sydney domain to be akin to those at Parramatta or Windsor, or did they see them as measure to protect a government supported botanic garden? Absence of evidence is not evidence of absence, but it is curious that the people interested in botanical matters in New South Wales did not frequently report on a new botanic garden in their correspondence. There are contemporary materials that refer to the territory around the

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<sup>72</sup> In Windsor, prospective visitors were instructed to apply to Richard Fitzgerald, the Supervisor of Public Works there, “Government Public Notice,” *The Sydney Gazette*, 9/22/1810, p. 1, <https://trove.nla.gov.au/newspaper/page/6674>; Ancestry.com. New South Wales, Australia, Colonial Secretary's Papers, 1788-1856 [database on-line]. Provo, UT, USA: Ancestry.com Operations, Inc, 2010, Government Order dated August 19, 1815, pp. 129-131.

government house in Sydney, and from those, we can gain a sense of the way local settlers and officials viewed that land. Endersby's article about the enclosure of the Sydney garden and domain suggests that a 1816 proclamation in *The Sydney Gazette* instructed citizens on new ground rules for "the botanic garden and Domain [his words]."<sup>73</sup> However, the proclamation in question mentions only the "Government Domain."<sup>74</sup> Though this proclamation about the neighborhood of the governor's mansion in Sydney allows public access to the respectable people of the town, it reads similarly to the public government notices about the government domain at Parramatta and Windsor, issued in 1810 and again in 1815.<sup>75</sup> These documents all note the outrages that some citizens had committed on the grounds as justification for the restrictions, and then outline who might be allowed access and on what terms.

Allan Cunningham was active in New South Wales from 1816 to the end of Macquarie's term as governor, and he sent reports to Sir Joseph Banks on his own progress and other botanical initiatives in the colony. However, his surviving correspondence does not mention a botanic garden next to the governor's house in Sydney. Instead, in 1818, Cunningham wrote to Sir Joseph Banks that Macquarie was on the verge of enacting a long-standing plan to establish a botanic garden at Parramatta. Cunningham further reported that Macquarie would start an exchange program with London nurseries like Lee & Kennedy, who would receive Australian plants if they sent seeds of European trees. This program would be under the direction of the man tending the garden next to the governor's Sydney residence, Charles Fraser, who was elevated to the post of colonial botanist. Fraser had only arrived in the colony on April 8, 1816; he was a

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<sup>73</sup> Endersby, "A Garden Enclosed," 316.

<sup>74</sup> "Government Public Notice," *The Sydney Gazette* 14, no. 659 (July 6, 1816): 1, <https://trove.nla.gov.au/newspaper/page/493073>.

<sup>75</sup> "Government Public Notice," *The Sydney Gazette* 13, no. 612 (August 19, 1815): 1, <https://trove.nla.gov.au/newspaper/page/7316>.

soldier who had formerly been a gardener in service of a noble.<sup>76</sup> In March of 1819, the proposed garden at Parramatta was still not in place. Cunningham further reported to Banks, “The new Botanic Garden of which the Colonial Botanist is to have charge has not yet been commenced upon, but will no doubt in the course of this Year, in the future Riches of which I am lead to believe Some of our opulent Nurserymen near London will participate, by barter or otherwise.”<sup>77</sup> The conversations about botanical barter that Endersby associates with the Sydney botanic garden were initially about this unrealized garden in Parramatta.

Cunningham’s correspondence about a garden in Parramatta reveals that there had been talk of establishing a government botanic garden in New South Wales for some time. However, that talk intensified after the arrival of a commissioner for an inquiry into the administration of the colony. This commissioner, John Thomas Bigge, spoke with Cunningham in February 1820 about establishing a botanic garden. Cunningham referenced this meeting in his correspondence and his journal. Cunningham wrote to Banks, explaining that Bigge was taken with the benefits that would accrue to the colony for having a botanic garden. According to Cunningham, Bigge hinted that Cunningham himself should run the new establishment. Cunningham had heard from other sources that his name had been put forward in the Colonial Office for the post, but Governor Macquarie had recommended his own man, Charles Fraser, for the post. Cunningham demurred, assuring Banks that he remembered his duties to Kew. Cunningham had the same doubts about the purpose of this garden as he had had about the proposed garden in Paramatta. He mentioned to Banks, “I could have observed that such an establishment appear’d (upon the very face of it) to have in View one decided common object (under the present administration)

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<sup>76</sup> Orchard and Orchard, *Allan Cunningham*, Letter 3/a/25, dated December 19, 1818, from Allan Cunningham to Joseph Banks, 100-101; the noble was said to have been the Duke of Norfolk, see Gilbert, *The Royal Botanic Gardens, Sydney*, 26.

<sup>77</sup> Orchard and Orchard, *Allan Cunningham*, Letter 3/a/28, dated March 29, 1819, from Allan Cunningham to Joseph Banks, 105-106.

that of carrying in to effect a certain speculative Botanical Bartery with some Nurserymen in and about London, evidently to their decided advantages, to whom I had understood favours and overtures had been made.”<sup>78</sup> Endersby argues that Cunningham felt that a botanic garden next to the governor’s house had been founded in 1818 to help Macquarie control the flow of plants from the colony to Europe. He quotes Cunningham’s letters to Banks and Aiton about botanical barter to support his case. However, when placed in context, the letters to both men make clear that Cunningham believed the garden proposed by Commissioner Bigge in 1820 had at its root the desire for lucrative botanical bartery. Cunningham was not referring to a garden already in place in Sydney. In a later report to Banks, Cunningham reaffirmed that the planned botanic garden did not yet exist in June of 1820.<sup>79</sup>

As a plant collector in the employ of Banks, it is possible that Cunningham was not privy to all of the governor’s plans for the garden near the Government House. Maiden, in his history of the Sydney garden, claims that Cunningham did not dignify the garden next to the governor’s house with the epithet “botanic” because he had high standards. However, Fraser, gardener to Macquarie and first superintendent of the Sydney garden, did not claim a definite date for its foundation, either. Fraser arrived in New South Wales in 1816. In 1828, he wrote to the colonial secretary that he was “placed in charge of all the exotics in the Garden at Sydney” in 1818 and went on various expeditions, including one with Commissioner Thomas Bigge in 1820, before he

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<sup>78</sup> Orchard and Orchard, *Allan Cunningham*, Letter 3/a/36, dated February 25, 1820, from Allan Cunningham to Joseph Banks, 118-119, quotation at 118. Endersby quotes a portion of the same letter above to support his case (320 of his article), however, taking the letter in its entirety and placing it in context with earlier correspondence, it is more apparent that Cunningham was speaking of a planned botanic garden. Cunningham reiterates similar sentiments in his letter to William Aiton, Orchard and Orchard, *Allan Cunningham*, Letter 3/a/37, dated February 25, 1820, from Allan Cunningham to William Aiton, 122.

<sup>79</sup> Orchard and Orchard, *Allan Cunningham*, Letter 3/a/41, dated June 12, 1820, from Allan Cunningham to Sir Joseph Banks, 127.

was appointed “Colonial Botanist” on January 1, 1820, with no fixed salary.<sup>80</sup> Cunningham’s high standards or perhaps professional jealousy may have led him to discount the garden next to the governor’s house. However, Fraser himself, the supposed head of the garden, did not speak of his garden or his post in official terms. Furthermore, when Commissioner Bigge raised the idea of forming a botanic garden, both Cunningham and Fraser were put forward as possible directors, with Fraser being the governor’s choice.<sup>81</sup> The governors in New South Wales had always had a gardener for the land next to their residence and were always eager for native plants. Heading the garden that Bigge proposed would have been a rise in stature for Fraser.

If there was a botanic garden in Sydney prior to 1821, Macquarie and locals were secretive about it and outsiders were completely unaware. Colonial botanic gardens took on many different functions, such nursery garden for locals and site for agricultural trials. However, superintendents were expected to carry on a correspondence with fellow naturalists and garden heads to facilitate plant exchanges to make the other functions of the botanic gardens possible. When Bigge spoke to Cunningham about heading a botanic garden, Cunningham understood that corresponding with the heads of similar institutions was part of the job.<sup>82</sup> While Joseph Banks lived, the heads of officially sanctioned botanic gardens in the British colonies provided him with regular progress reports, and he provided general guidance in return. When the gardens were locally supported, like those in Jamaica, the superintendents wrote to Banks for moral support and plant exchanges. If Fraser or Macquarie wrote to Banks about a botanic garden in

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<sup>80</sup> J.H. Maiden, “History of the Sydney Botanic Gardens,” *Royal Australian Historical Society, Journal and Proceedings*, ed. R.H. Cambage, Vol. 14, Part I (1928): 15; one published work that takes issue with the 1816 founding date relies on Fraser’s letter mentioned above, but interprets “placed in charge of all the exotics in the Garden at Sydney” as an appointment to a botanic garden. In light of the other material presented here, this interpretation is a stretch. See Finney, *To Sail Beyond the Sunset*, 140.

<sup>81</sup> Orchard and Orchard, *Allan Cunningham*, Letter 3/a/36, dated February 25, 1820, from Allan Cunningham to Joseph Banks, 118-119.

<sup>82</sup> Orchard and Orchard, *Allan Cunningham*, Letter 3/a/36, dated February 25, 1820, from Allan Cunningham to Joseph Banks, 118-119.

Sydney, those letters do not survive. Banks was in correspondence with other people in New South Wales at the time, including Allan Cunningham and George Suttor. There is no known correspondence from either of these men that mentions a botanic garden before 1821. Macquarie wrote to government and Banks relatively frequently about botanical matters. Macquarie sent Banks letters about Cunningham and wrote to government, sending plants to Britain as gifts for elite Britons or foreign nobles and monarchs. When writing to Lord Bathurst to report on the botanical riches collected during the various expeditions around Australia, it would have been the perfect opportunity for Macquarie to mention that some plants would remain in Sydney in a botanic garden, as a sign of his good governance. Macquarie's surviving letters to Bathurst never mention a botanic garden.<sup>83</sup> George Caley was well apprised of the happenings in New South Wales through his correspondence with George Suttor, yet he wrote to Suttor and imperial government in the early 1820s about the benefits a botanic garden would bring to New South Wales.<sup>84</sup> Yet, there is no evidence that Suttor or Banks ever told him about a botanic garden in Sydney. The silence of the source materials on this point is remarkable and unlike the surviving letters and government documents for the early days of the botanic gardens in India, St. Vincent, or Jamaica. These institutions were called botanic gardens early and often. What ever one might call the garden in Sydney next to the governor's house, as of 1820, it had no existence outside of Governor Macquarie's pleasure, and locals were not quick to call it a botanic garden.

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<sup>83</sup> See for instance, *Historical Records of Australia*, Series 1, Vol 9 (Sydney: The Library Committee of the Commonwealth Parliament, 1917) dispatch from Governor Macquarie to Earl Bathurst dated May 30, 1818, 808-809 and dispatch from Governor Macquarie to Earl Bathurst dated August 24, 1818, 729-731 <https://archive.org/stream/historicalrecord00v9aust#page/n0/mode/2up>; or *Historical Records of Australia*, Series 1, Vol 10 (Sydney: The Library Committee of the Commonwealth Parliament, 1917), dispatch from Governor Macquarie to Earl Bathurst dated February 7, 1821, 401-402, <https://archive.org/stream/historicalrecord00v10aust#page/n0/mode/2up>.

<sup>84</sup> Caley wrote to government to suggest a botanic garden in NSW, see TNA, WO 43/150, letter dated April 8, 1822, from George Caley to William Merry, Deputy Secy at War, f. 277-278; Caley writing to Suttor about establishing a botanic garden in NSW, see SL NSW, M730, letter dated July 3, 1820, from George Caley to George Suttor, frame 92-93 and SL NSW, M730, letter dated February 4, 1825, from George Caley to George Suttor, frame 104; Caley also knew Allan Cunningham's father, who would have presumably received NSW updates from his son, see State Library NSW, M730, letter dated February 27, 1825, from George Caley to George Suttor, frame 108.



Once people in New South Wales began to speak of a botanic garden in the colony, it was in connection with one man. On February 5, 1820, Cunningham wrote in his journal that he spoke with the Commissioner Bigge who had “revived the subject of a Botanic Garden being formed in the Colony, assuring me the Governor had now fully determined to set about its formation immediately.”<sup>85</sup> Fraser, by his own account, had gone on government supported collecting expeditions and had taken care of exotic plants in the government garden since 1818, but he was not given the official post of colonial botanist until January 1820, during Bigge’s stay in the colony. The creation of a botanic garden had been considered a few times in Sydney’s history. However, the idea did not gain traction until 1820, when Bigge and the Commission of Inquiry pushed the government of the colony to account for itself.

### **A Commission of Inquiry and the Botanic Garden**

Under normal circumstances, the governor of New South Wales had a great deal of autonomy. As a prison colony on a quasi-military foundation, New South Wales did not have an elected legislature or a council to guide the governor in administration. Macquarie appointed local magistrates and judges, and thereby wielded executive, legislative, and judicial power. However, he had the misfortune to rule in a period of imperial retooling. Conversations about imperial order during the American crisis and reforms in India helped shape the imperial government’s greater scrutiny of the machinery of colonial government after the American, French, and Haitian Revolutions.<sup>86</sup> The commissions of inquiry that started this wave of imperial evaluation exposed government in Trinidad and Malta in to the eyes of the public in 1802 and 1812, respectively. The results of the Malta inquiry went unpublished, but the investigation in

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<sup>85</sup> J.H. Maiden, “History of the Sydney Botanic Gardens,” 14-15.

<sup>86</sup> Benton and Ford, *Rage for Order*, 13-18; McLaren, *Dewigged, Bothered, and Bewildered*, 140-141.

Trinidad was a sensation. With Governor Picton himself appointed to the commission designed for reform and rule, the inquiry devolved into a power struggle between himself and the commissioners who were new to the colony over who better understood the style of rule that Trinidad needed.<sup>87</sup>

New South Wales was ripe for examination. Macquarie's appointed predecessor, William Bligh, had been ousted by mutineers who defended their actions to imperial government by blaming Bligh's autocratic style of governance. Imperial government tapped Macquarie to succeed Bligh, expecting him to provide strong rule untainted by local affiliations. Macquarie became governor of New South Wales in 1810, and the colony was subject to an imperial investigation in 1812 to ensure that it was meeting expectations as a site for transportation. The expense of the colony was cause for concern, and the committee took measures to reduce the pardons and tickets-of-leave that Macquarie had granted too freely. Committee members also regretted some of the ad-hoc measures Macquarie had adopted, such as contracting with three merchants to build a hospital in exchange for a three-year monopoly on importing liquor. The committee recommended a legislative council and other changes in governance which Lord Bathurst declined to enact.<sup>88</sup>

After the investigation of 1812, Macquarie's style of rule continued to gain detractors. Groups in mainland Britain and the colony itself had a litany of complaints. For some, Macquarie's policies regarding emancipation and the integration of former convicts into society remained too lenient. The Home Office was concerned that transportation to New South Wales had become an ineffective deterrent to crime because it no longer struck fear into the hearts of criminals. Leaders of the Treasury began to complain about the expenditure on Macquarie's

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<sup>87</sup> Benton and Ford, *Rage for Order*, 56-58; James Epstein, *Scandal of Colonial Rule: Power and Subversion in the British Atlantic during the Age of Revolution* (Cambridge: Cambridge University Press, 2012), 90-143.

<sup>88</sup> Ritchie, *Punishment and Profit*, 4-6.

public work projects. Free settlers in the colony opined that Macquarie's projects monopolized all of the convict labor. People in the colony trained in English law were concerned by Macquarie's autocratic style of rule. One particular enemy, a local judge named Jeffery Hart Bent, wrote to Bathurst with accounts of the governor's extrajudicial actions. Just as Bligh had been castigated over his protection of the Domain, Macquarie received similar treatment. One of Bent's critical letters included an account of Macquarie's summary flogging of three men who had climbed the walls of the Sydney domain. The deluge of critical reports pushed Lord Bathurst, secretary of state for war, to create a commission of inquiry.<sup>89</sup> This time, the commission would need to settle the much debated issue of whether New South Wales should be a colony or a jail.<sup>90</sup>

Commissioner John Thomas Bigge already had colonial experience when he arrived in New South Wales in 1819 to examine Macquarie's administration. Bigge was from a gentry family in Northumberland, but he had begun his career as chief justice of Trinidad, from 1814 to 1818, after studying law in London. Like Australia, Trinidad had no elected assembly and the governor had far-reaching powers. Chief justices were expected to work in concert with the governor, both as an administrator and legal advisor. Bigge had been hand-picked as chief justice by Sir Ralph Woodford in 1812 after he learned that he had been appointed governor of Trinidad. The two men had been friends since meeting on Madeira in 1811.<sup>91</sup> Woodford and Bigge worked closely in Trinidad and were seen as stabilizing forces on the island.<sup>92</sup>

As Woodford's protégé, Bigge would have been exposed to his enthusiasm for botany and agricultural improvement. The abolition of the slave trade had been disruptive for Trinidad,

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<sup>89</sup> Meredith and Oxley, "The Convict Economy," 97-122; McLaren, *Dewigged, Bothered, and Bewildered*, 126 and 132-143.

<sup>90</sup> Ritchie, *Punishment and Profit*, 2.

<sup>91</sup> Ritchie, *Punishment and Profit*, 36-42 and 45-51.

<sup>92</sup> McLaren, *Dewigged, Bothered, and Bewildered*, 136 and 142.

and Woodford asked Bigge to research and write a report on the best way to transition the island into an agricultural society powered by free labor. Bigge's 1815 report recommended land leases that required crop rotation, prizes for growing desired crops, and other measures for attracting free settlers.<sup>93</sup> Besides wishing to improve agriculture on his island, Woodford was interested in botany and pushed for a botanic garden in Trinidad during Bigge's tenure as chief justice. In 1818, Woodford personally wrote to Lord Bathurst, secretary of state for war, and recommended Trinidad as a transfer site for the plants of St. Vincent's botanic garden. The minute that legal challenges against the St. Vincent botanic garden threw its future in jeopardy, Woodford sent a subordinate to Superintendent George Caley to request the transfer of moveable plants.<sup>94</sup> With Trinidad providing Bigge with a model of colonial governance, it is possible that his circulation of the idea of creating a botanic garden in New South Wales had its root in Woodford's effort to found one in his colony.

Cunningham and Fraser's letters are indefinite about the birth of botanic gardens in New South Wales, but Bigge had been sent to the colony to provide certainty. The earliest surviving official reports about a "botanic garden" in New South Wales were the result of Bigge's investigation. Cunningham, as a local plant collector, may have been eager to downplay the botanical efforts of others in New South Wales. Fraser was a botanical enthusiast managing the governor's garden without an official appointment or salary. He may have believed that the overseer of a botanic garden would have these things. As local observers and botanical workers, the worth of Cunningham and Fraser's work would have been affected by the existence of a

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<sup>93</sup> Ritchie, *Punishment and Profit*, 48-49.

<sup>94</sup> TNA, CO 295/46, letter dated February 22, 1818, from Ralph Woodford to Lord Bathurst, f. 120; for instance, Suttor and Caley corresponded about Bigge's investigation, and Caley informed Suttor that Bigge had been Chief Justice of Trinidad, see SL NSW, M730, letter dated April 7, 1821, from George Caley to George Suttor, frame 94; for Woodford and the plants, see letter dated May 5, 1818, from Caley to Banks, in Currey, *George Caley*, 201-202.

colonial botanic garden nearby. Bigge, however, had a different set of responsibilities and expectations shaping his testimony about the colony.

Since Bigge visited New South Wales as part of an official investigation, the full import of his visit would have been widely known. Macquarie had a vested interest in demonstrating to government in Britain that his rule was wise and benevolent by showing the colony at its best. Botanic gardens were often established to signal good governance and a commitment to improvement; if the colony had one, it would have received some attention. The investigation was largely concerned with other aspects of the colony's infrastructure, but the report mentions a botanic garden yet further muddies the issue of its establishment. Commissioner Bigge's third and final report, which he provided to government (the secretary of state for war) on January 10, 1823, stresses the importance of "the establishment of the botanic garden at Sydney, that has hitherto been attached to the governor's garden at that place...It has lately been placed under the management of Mr. C. Frazer..."<sup>95</sup> This statement implies that during Bigge's visit to the colony, a botanic garden at the governor's house was moved elsewhere. It also confirms that Fraser's official appointment had come "lately" or while the commissioner was in New South Wales.

Macquarie had already resigned his post by the time Bigge published the reports on his administration. When Macquarie returned home to Britain, the critical reports were circulating around London. Perhaps concerned about his legacy or the security of his government pension, Macquarie addressed government to clarify and rebut some of Bigge's points. Macquarie included a schedule of public works projects that he had undertaken during his term as governor. Three entries on this register for Sydney (entries 44, 45, 46) refer to the following three projects: repairs to the government house, "A Government Garden made on 'Farm Cove'" and enclosed

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<sup>95</sup> John Thomas Bigge, *Report of the Commissioner of Inquiry On the State of Agriculture And Trade In the Colony of New South Wales* (London: 1823), 93.

by a stone wall with a house for the “Chief Gardener,” and the “Government Domain enclosed with a Stone Wall.”<sup>96</sup> “Farm Cove” was the first name given to the area of land around the governor’s house and the current site of the Sydney botanic garden. Macquarie’s rebuttal also contains a list of government works for Parramatta and Windsor, two other sites that had their domains and the gardens next to the government house enclosed and protected from trespassers. These lists contain entries similar to Sydney’s about the enclosure of their gardens and domains.<sup>97</sup>

Macquarie’s list of achievements does not set the Farm Cove site apart from the government gardens and domains in other parts of the settlement. However, his list of improvements includes an entry (55) about a botanic garden. He wrote of “A large and suitable allotment of Ground (about 15 acres) on the South side of Port Jackson Harbour, two Miles from Sydney, marked out some time since for a Colonial ‘*Botanical Garden*’ (at the recommendation of the Government Botanist), now clearing and enclosing with a strong Fence.”<sup>98</sup> This new site, in Double Bay, was the result of the furor around creating a botanic garden during the commissioner’s visit. Macquarie and Fraser surveyed the grounds and set aside this new space on September 4, 1821.<sup>99</sup> In his account of the Sydney garden’s history, Maiden acknowledges that a Double Bay site was earmarked for a botanic garden, but he suggests that Macquarie wished for a second botanic garden in order to have more privacy in the governor’s house at

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<sup>96</sup> *Historical Records of Australia*, Series 1, Vol 10, 687, <https://archive.org/details/historicalrecord00v10aust>.

<sup>97</sup> *Historical Records of Australia*, Series 1, Vol 10, p. 690, #13 and p. 691, #13, <https://archive.org/details/historicalrecord00v10aust>.

<sup>98</sup> *Historical Records of Australia*, Series 1, Vol 10, 688, <https://archive.org/details/historicalrecord00v10aust>.

<sup>99</sup> The Commentary to the published dispatches, presumably written by the editor, cites this date for laying out the botanic garden. *Historical Records of Australia*, Series 1, Vol 10, p. 845. Macquarie’s diary bears out that statement, <https://www.mq.edu.au/macquarie-archive/lema/1821/1821sept.html#sept4>; The Lachlan & Elizabeth Macquarie Archive. [www.library.mq.edu.au/digital/lema](http://www.library.mq.edu.au/digital/lema) (Feb 13, 2018); “I went by Water this forenoon, accompanied by Mr. Meehan Dy. Surveyor Genl., Mr. Chas Fraser Colonial Botanist, Capt. Piper and Lieut. Macquarie – to Double Bay, and there marked the future Botanic Garden, directing about twenty acres of Ground to be reserved & located for that purpose.”

Farm Cove. However, increased privacy is an unlikely reason for Macquarie's decision because he had no intention of remaining in the colony. Macquarie had already tried to resign his command in December 1817, and his final application to resign was accepted in 1820, before he surveyed the Double Bay site.<sup>100</sup> It is more likely that Macquarie saw the government garden in Sydney as a spot for the governor's recreation, not a public botanic garden.

Macquarie took steps to found a botanic garden at Double Bay in September of 1821, but he was no longer governor a mere two months later. It is not clear if this site was ever developed beyond being surveyed. Bigge's report implied that a garden next to the governor's mansion had been moved elsewhere, whereas Macquarie's rebuttal only reports that a botanic garden in Double Bay had only been allotted and cleared. Bigge's confusion over the gardens in New South Wales is understandable. The record does not show what Macquarie told him about the role of the gardens next to the government houses in the colony. As a man under investigation, Macquarie may have inflated the importance of his personal garden, and with the commissioner's encouragement, hatched the idea of moving it to a larger site. The exotics kept in the governor's garden would have been an obvious initial source for stocking any official botanic garden. Perhaps in 1820, when Bigge reported that Macquarie had decided to form a botanic garden "immediately," Macquarie set aside a plot of the government garden to stock the new garden.<sup>101</sup> The transfer of plants could easily be read as the movement of a botanic garden from one site to another.

Considering the way Bigge spoke of the space next to the governor's house, Macquarie's garden probably was unusual. Macquarie would have used it as his private garden to supply his table with vegetables. Under previous governors, the land had supplied plant materials to settlers

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<sup>100</sup> McLaren, *Dewigged, Bothered, and Bewildered*, 143.

<sup>101</sup> J.H. Maiden, "History of the Sydney Botanic Gardens," 14.

to encourage the spread of certain plants. The site contained novel Australian plants to facilitate Macquarie's plant exchanges with people outside the colony and provide private recreation for the governor and his family. For several years, Fraser received no special title for looking after the exotic plants, somewhat like a gardener. With its location next to the governor's house, contiguous to a large park-like area called the domain, the area had more in common the gardens of the great houses in Britain, formed for the amusement and use of the resident lord.

The brief mention in Bigge's report about a botanic garden in Sydney brought the issue into the light. Bigge's reports on the state of the colony were influential; imperial government made the decision that New South Wales would be a colony and not just a penal settlement. Bigge's investigation led to the abolition of the sweeping powers of the governor of New South Wales. Instead, future governors had to work with an appointed legislative council headed by a chief justice. Furthermore, the governor's acts were subject to a basic form of judicial review. These reforms favored the free settler population and were a check against the ambitions of the convict population.<sup>102</sup> The reports also brought the idea of a botanic garden in Sydney to the notice of imperial government in London. In July 1823, Lord Bathurst transmitted Bigge's second and third reports to the new governor, Thomas Brisbane, for guidance, along with his comments. Bathurst included the instruction, "attention should be paid to the botanic Garden," though he did not specify where the garden should be or what sort of attention it should receive.<sup>103</sup> Brisbane sprang into action. In 1825 he reported that nearly 3,000 varieties of grapes, trees, fruit, and other items had been planted in the "Old Garden," which he had expanded by five acres. Unlike Macquarie, Brisbane chose Parramatta as his primary residence; therefore he

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<sup>102</sup> McLaren, *Dewigged, Bothered, and Bewildered*, 149 and 156; Benton and Ford, *Rage for Order*, 62-66.

<sup>103</sup> *Historical Records of Australia*, Series 1, Vol. 11, (Sydney: The Library Committee of the Commonwealth of Parliament, 1917), despatch from Earl Bathurst to Thomas Brisbane dated July 31, 1823, 101, <https://archive.org/details/historicalrecord00v11aust>.



must have supervised these developments in Sydney from afar.<sup>104</sup> Brisbane had been given open ended instructions, and he chose to develop the site next to the governor's mansion at Farm Cove rather than the one surveyed in Double Bay. Brisbane chose the spot, but Bigge's reports were responsible for the transformation of the land next to the governor's mansion from a private garden to a public institution, concurrent with the settlement's transformation from an outdoor prison camp to a legitimate colony.

After the garden's elevation to the attention of imperial government in London, Lord Bathurst tried to push it to conform to the usual standards of imperial botanic gardens. In 1825, under the administration of Brisbane's successor, Ralph Darling, the secretary of state for war discovered that the Sydney garden's superintendent had never sent home a report of the garden's status. Quarterly reports were issued from the St. Vincent garden while it was a government institution, and the superintendents in India also reported on their financial outlay and botanical activities. Regular reports were a standard feature of administration, and Banks himself had set the standard for the form and frequency of the reports from the gardens funded by government. The superintendents in India and St. Vincent had great freedom in the actual management of the garden, but they were bound to keep within a budget and report on their work. Lord Bathurst instructed Governor Darling to provide reports from the Sydney botanic garden superintendent, Charles Fraser, twice a year. Bathurst also asked for information on plants and vegetables native to New South Wales and a list of plants from other countries which were likely to be useful if introduced to the colony.<sup>105</sup> This second order is an echo of the sorts of queries Joseph Banks had

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<sup>104</sup> TNA, CO 201/161, dispatch from Thomas Brisbane to Earl Bathurst dated March 18, 1825, p. 170; Gilbert, *The Royal Botanic Gardens, Sydney*, 41-42.

<sup>105</sup> Banks wrote the East India Company Court of Directors, that if he was to provide advice on the Calcutta garden, he would need a periodic report of the plants growing in the garden. Banks also described the sort of reports he received from the St. Vincent botanic garden, see *IP Corr JB*, Vol 3, Letter 123, dated January 17, 1791, 186-188; *Historical Records of Australia*, Series 1, Vol. 12, (Sydney: The Library Committee of the Commonwealth of Parliament, 1919), dispatch from Earl Bathurst to Governor Darling dated December 14, 1825, 88,

once posed to the collectors and permanent settlers he helped place in New South Wales. Bathurst had worked with Banks for years in regard to Banks' own initiatives in New South Wales and the government botanic gardens in India and the Caribbean. Banks' death in 1820 ended his services to New South Wales, and Bathurst's orders encouraged the Sydney botanic garden to fill the breach.

Even with Bathurst's prodding, the Sydney garden could not easily shake its earlier mode of existence and association with the governor's mansion. The twice yearly reports requested in 1825 were not very frequently supplied. In 1832, the colonial secretary wrote that the Colonial Office in London had not received a report from the garden since 1828. Reports were provided sporadically from 1832 to 1837, and no reports have been found for the decade from 1837 to 1847.<sup>106</sup> When granted the official post as superintendent, Fraser's mandate turned from serving the governor as a gardener to providing botanical services for government and the colony. However, governors retained certain expectations of the roles that Fraser and the garden lands should play. Aesthetics still mattered. Inattention to this aspect earned Fraser a missive from the governor in 1831. Governor Darling ordered Fraser to keep the grounds in front of his residence in "complete order" with "full Shrubs."<sup>107</sup> Allan Cunningham, who was superintendent in the 1830s, became frustrated because his time was much occupied with projects unrelated to scientific botany. The superintendents in New South Wales were also responsible for looking after the government Domain, which was laid out as a park-like space for the recreation of the populace. In 1837, Cunningham oversaw the construction of a new public promenade through

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<https://archive.org/details/historicalrecord00v12aust>. This determination of which plants should be introduced continued into Allan Cunningham's term as superintendent, when he asked for specific European trees to introduce into the colony, see Orchard and Orchard, *Allan Cunningham*, Letter 6/b/23, dated July 4, 1837, from Allan Cunningham to the Colonial Secretary, 419.

<sup>106</sup> Maiden, "History of the Sydney Botanic Gardens," 19-20.

<sup>107</sup> Emphasis in the text, RBGS, Colonial Letter Book, letter dated November 11, 1831, from Thomas C Harrington, for the colonial secretary, to Charles Fraser, unpaginated.

the domain. To Cunningham's further chagrin, the governor wanted him to attend to landscape gardening, including the placement of rocks, presumably next to the governor's residence.<sup>108</sup>

Cunningham had made his career as a protégé of Banks, and he aimed to run a scientific garden. However, the establishment in Sydney fell below his expectations. A few months before Cunningham took his post as superintendent, Governor Bourke established the Committee of Superintendence of the Australian Museum and the Botanical Garden. This committee was a group of local officials to provide day to day oversight over Cunningham's management of the botanic garden and set basic guidelines for public visitation and plant distribution.<sup>109</sup> During Cunningham's term as superintendent, the governor ordered the committee to oversee the constructions of barracks within the garden to house the convicts assigned to the institution. This development gave the superintendent and his assistant the responsibility for supervising the convict laborers by night as well as day. Cunningham chafed at several requirements of his post, but this one was particularly odious to him. In addition to maintaining the domain and housing his convict laborers, Cunningham oversaw the governor's kitchen garden. Beyond being a place for the governor's aesthetic enjoyment, the old governor's garden provided fresh fruit and vegetables for the governor's table.<sup>110</sup> This required bit of practical gardening was Cunningham's symbol for what was wrong with the Sydney botanic garden; as late as 1838, he called it the "Gov<sup>rs</sup> [Governor's] Cabbage Garden."<sup>111</sup>

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<sup>108</sup> Orchard and Orchard, *Allan Cunningham*, Letter 6/c/1, dated April 15, 1837, from Allan Cunningham to William Hooker, 436.

<sup>109</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 58-60.

<sup>110</sup> SRA NSW, 4/7577, Letters Received and Minutes Botanic Gardens, attachment to letter dated July 9, 1836 from Alex McLeay to Committee of Superintendence of the Australian Museum and the Botanical Garden, p. 9-10; Orchard and Orchard, *Allan Cunningham*, Letter 6/c/4, dated December 26, 1837, from Allan Cunningham to William Hooker, 439.

<sup>111</sup> Orchard and Orchard, *Allan Cunningham*, Letter 6/i/1, dated May 29, 1838, from Allan Cunningham to John Smith, 459; Donal P. McCracken, *Gardens of Empire: Botanical Institutions of the Victorian British Empire*, (London: Leicester University Press, 1997), 12.

Cunningham resigned from the garden out of frustration with the duties that fell outside of scientific and economic botany.<sup>112</sup> The *Sydney Herald* reported that he had done so from disgust at the expectation that the garden provide regular gifts of fresh fruit and vegetables for many of the officials in the colony.<sup>113</sup> This interpretation of Cunningham's resignation from his post made it to Britain, and Governor Gipps wrote to Lord Glenelg, the secretary of state for war and the colonies, to refute this claim. Gipps assured Glenelg that he had removed governor's kitchen garden from the superintendent's purview. He also ordered that the garden cease to grow ordinary fruit and vegetables except those designed for introduction to the colony.<sup>114</sup> As a result, the botanic garden would no longer supply fruit and vegetables for the governor's table, but it would also stop providing seeds and cuttings of common agricultural plants to the settlers, since there were nurseries to provide that service.<sup>115</sup> The restrictions on growing common plants in the garden had been promulgated once before, in 1836, which suggests that they had been imperfectly followed.<sup>116</sup> Despite his stated reason for writing to Lord Glenelg, Gipps' changes in garden policy indicate that there was something unseemly in local expectations for the botanic garden. Cunningham may have been too politic to clearly tell government how the Sydney botanic garden fell short of the title, but his private comments likening the Sydney garden to a cabbage garden make it clear what he thought. In this judgment, he echoed local statesman, William Charles Wentworth, who in 1833 had said the garden's only contribution to the colony had been growing cabbages and pines.<sup>117</sup>

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<sup>112</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 61-62.

<sup>113</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 63.

<sup>114</sup> Orchard and Orchard, *Allan Cunningham*, Letter 6/f/5, dated May 14, 1838, from Sir George Gipps to Lord Glenelg, 455-456; RBGS, Colonial Letter Book, Notice dated April 24, 1838, unpaginated.

<sup>115</sup> Cameron-Smith, *Starting from Scratch*, 13.

<sup>116</sup> SRA NSW, 4/7577, Letters Received and Minutes Botanic Gardens, attachment to letter dated July 9, 1836 from Alex McLeay to Committee of Superintendence of the Australian Museum and the Botanical Garden, p. 11

<sup>117</sup> Endersby, "A Garden Enclosed," 327.

The separation of the kitchen garden from the Sydney botanic garden proper reduced the number of the practical gardening tasks required of the superintendents. However, the elimination of one holdover use of the land did not resolve the Sydney botanic garden's identity crisis. The instructions provided by the colonial secretary to one of Cunningham's successors, Charles Moore, show that government wished for the Sydney garden to function less as a nursery of common plants and more as a practical establishment for agricultural experimentation, botanical education, and scientific work. The director was ordered to provide public lectures on botanical subjects and draw up a plan for plant distribution, under the understanding that plants easily obtainable from nurseries in the colony should not be distributed.<sup>118</sup> The repeated promulgation of this particular guideline implies that curtailing the generous plant distributions was easier said than done. This new regime promised a severe reduction of plant distributions within the colony unless they were specifically sanctioned distributions of new plants.

Moore was ordered to strictly control his exchanges within the colony, but like all colonial garden superintendents, he sought to make beneficial exchanges with people and institutions outside of the colony. Some settlers resented the changes in plant distribution policies and suggested that Moore did not follow discretion in his exchanges outside the colony. Moore could not easily refute this charge. He was notorious for not keeping records or issuing reports like superintendents of other gardens, and he was able to maintain this behavior for the bulk of his nearly fifty year career.<sup>119</sup> In 1854, two nurserymen postulated that the root of this behavior was the desire to conceal some of his plant exchanges with people outside of the colony. The nurserymen petitioned colonial government for redress, claiming that Moore's plant distribution practices were injuring their businesses. They complained that the superintendent sent plants to

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<sup>118</sup> SRA NSW, 4/7577, Letters Received and Minutes Botanic Gardens, Letter and Memorandum dated March 7, 1848, from E. Deas Thomson to Charles Moore, p. 44

<sup>119</sup> Maiden, "History of the Sydney Botanic Gardens," 20.

nurserymen and other private people outside New South Wales, but would never exchange materials with nursery businesses in New South Wales. If the sales of the rarest Australian plants in foreign climes were made possible by Moore's gifts to foreign nurserymen, Moore was effectively cutting local nurseries out of the plant trade with foreign entities. The effected parties pointed out that the records Moore kept were thin on details for the categories of exchanges they most objected to, the ones that enabled the enrichment of foreign individuals at the expense of the public purse.<sup>120</sup> Moore himself reported that while he documented recipients and species, he did not keep records of the number of plants dispatched outside the colony. He kept no records of plants he gave to recipients inside the colony.<sup>121</sup>

Colonial botanic garden superintendents had been castigated for negligence before, but it was not common for them to face accusations of improper plant exchanges. The complaints against Moore may have been rooted in his outsider status.<sup>122</sup> He had arrived at his post in a time of change for both the Sydney botanic garden and government supported botany in the British empire. By the beginning of Moore's term as superintendent, the Royal Botanic Gardens, Kew, had entered the beginning of its interventionist phase. In 1841, Kew shed its identity as a pleasure ground for the royal family and became a public institution with celebrated scientific botanist, William Hooker, at the helm. The Sydney botanic garden was ultimately within the chain of command of the secretary of state for war and the colonies, but Hooker maintained correspondence with the institution and took an active interest in its wellbeing. However, the influence of William Hooker and the secretary of state were limited. At times, they lacked basic

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<sup>120</sup> SRA NSW, 4/7577, "1854, New South Wales, Botanic Gardens," publication ordered by colonial secretary, petition of TW Shepherd and M Guilfoyle, Nurserymen of the Colony, to the Members of the Legislative Council of New South Wales, p. 91-93.

<sup>121</sup> SRA NSW, 4/7577, "1854, New South Wales, Botanic Gardens," publication ordered by colonial secretary, letter dated October 24, 1854 from Charles Moore to E. Deas Thomson, colonial secretary, p. 88-89.

<sup>122</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 76, 81 and 89-92.

information about the garden's status. Between Cunningham and Moore's terms as superintendent, two superintendents died, and Hooker and imperial government did not first hear of the deaths from officials in New South Wales. Governor Gibbs was called to account by government when he failed to report on the death of the second of these, Naismith Robertson, for over a year.<sup>123</sup> The government was probably also underinformed of the garden's progress during these years; no reports of the Sydney superintendents to government have been found for the years between 1837 and 1847.<sup>124</sup> The lack of effective communication extended to Moore's appointment to the botanic garden. The new governor, Sir Charles FitzRoy, had consulted with his council and appointed John Bidwill, a botanist with almost ten years of antipodean experience, to succeed Robertson in 1847. The secretary of state for war and the colonies appointed Moore to the post. Bidwill had to step aside once news of Moore's appointment reached the colony, to the chagrin of local elites.<sup>125</sup>

A select committee of notables in New South Wales was convened to investigate the irregularities of Moore's record keeping and plant distributions. The Committee of Superintendence of the Australian Museum and Botanic Garden established in Cunningham's time had lost its mandate to oversee the garden in 1851, and the animosity towards Moore may have been part of a bid to restore local power.<sup>126</sup> The resulting investigation may have embarrassed Moore, but its results did not reduce his authority over the botanic garden. Governor Denison rejected the select committee's recommendation of giving another committee ultimate authority over Moore and the botanic garden. However, Denison instructed Moore to keep his garden accounts with more detail and be mindful of the effect of his plant exchanges on local

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<sup>123</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 67-71.

<sup>124</sup> Maiden, "History of the Sydney Botanic Gardens," 19-20.

<sup>125</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 71-73.

<sup>126</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 91-93; SRA NSW, 4/7577, letter dated November 22, 1851 from E. Deas Thomson to the Committee of Management of the Australian Museum, p. 97.

nursery growers.<sup>127</sup> These restrictions did not inconvenience Moore much. He maintained his minimalist approach to keeping records and only favored imperial government with a report from time to time.<sup>128</sup> He remained superintendent, shaping the garden into a form that would be recognizable today.

The reports of John Bigge's commission brought the Sydney botanic garden to the imperial government's notice, but the established usages and expectations of the Farm Cove land did not immediately disappear. Governors required it to be aesthetically pleasing, yet provide food for the officials' tables and plants for the settlers. Cunningham found himself supervising the construction of walks for the use of the general public. Suspicions about the garden's purpose and who would benefit were used as political weapons against the men associated with it. Governors, local committees, and imperial government at times tried to assume greater control over the institution. Outsider Charles Moore fought off the last local challenge for control, yet he did not become a creature of the superintendents at Kew or the imperial government.<sup>129</sup> His lengthy term as superintendent gave him the opportunity to chart the course of the Royal Botanic Gardens, Sydney in the era of high empire. The light touch of imperial government on an institution born from an inquiry into charges of colonial despotism implies that it did not much matter to officials in London what the botanic garden did. Its existence was enough to signal the benevolence of government in a colony that grew from a prison camp.

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<sup>127</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 93; State Record Authority of New South Wales, 4/7577, "Management of the Botanic Gardens: Governor General's Message No. 116" dated December 15, 1855, p. 99.

<sup>128</sup> Gilbert notes that Moore submitted a report to government in 1871, after a thirteen year silence, and made his last report to imperial government in 1874, over twenty years before his retirement! See Gilbert, *The Royal Botanic Gardens, Sydney*, 101 and 104. However, the Solander Library at the Royal Botanic Garden Sydney has a report printed by local government in 1879, see RBGS, P712.05 R4, Botanic Gardens Sydney Reports 1878-9, Ordered by the Legislative Assembly to be printed, prepared by Charles Moore, March 29, 1879.

<sup>129</sup> McCracken suggests that the tenure of Charles Moore's brother and nephew, David Moore and Sir Frederick Moore, respectively, as heads of the Royal Botanic Gardens of Ireland at Glasnevin allowed Charles Moore and the Sydney botanic garden to maintain some independence from Kew and the Hookers. The evidence presented here shows that the Sydney garden had not had a strong connection to Kew or imperial government prior to Moore's term as superintendent, either. This independence was structural and not primarily due to Moore's connections, See McCracken, *Gardens of Empire*, 31-32.



## **Conclusion**

The British settlement in New South Wales was initially conceived as a prison colony and a source for plant materials to aid Britain's empire. It quickly became the site of a variety of botanical endeavors, funded by both government and private money. British colonists, military officers, free settlers, and convicts alike, had to learn to wrest a livelihood from the land. Governor Phillip and his officers began overseeing agricultural experimentation to discover suitable crops and learn how to coax growth from the sandy soil of Farm Cove. In the midst of agricultural work, convicts, settlers, and officers tried to turn native Australian plants into profit by sending them to private collectors in Europe.

Sir Joseph Banks showed a lively interest in the settlement from its inception, and he provided advice and material help to aid its progress. Banks found ways to send men with gardening experience and agriculturally valuable plants to the colony. He also ensured that the plants of New South Wales would make their way back to Britain. First, he paid men in government service to collect for him. Later, he personally supported men to collect for Kew, before finally convincing the Treasury to fund the endeavor. Banks sent plant collectors to New South Wales to secure rare plants and support Kew's reputation as the preeminent botanic garden in Europe.

In the first decades of the colony, Banks, local government, and private individuals facilitated agricultural experimentation and plant exchanges, two major responsibilities of a colonial botanic garden. Governor Lachlan Macquarie, the last of Australia's autocratic governors, is said to have begun a botanic garden next to the governor's mansion, but the foundation of this institution is not documented. Talk of establishing a botanic garden in the

colony reached a crescendo while Macquarie's administration was examined by a Commission of Inquiry, and the first documented steps toward creating a botanic garden in Sydney coincided with Sir Joseph Banks' decline and death. Macquarie founded a botanic garden in the colony to demonstrate his effective governance, and imperial government took notice of the institution and ordered Macquarie's successor to develop it to create tangible signs of improved administration in the colony.

Lord Bathurst, the secretary of state for war, tried to push the botanic garden in Sydney to fulfill the functions that Joseph Banks had once handled, but he and his successors found it difficult to exercise any control. Local circumstances required the Sydney botanic garden superintendents to continue providing services that had their root in the garden land's past as the governor's garden. Some of these functions were shed as local government sought to save face with imperial government. During Charles Moore's term as superintendent, local and imperial government relaxed their grip on the garden. The Sydney botanic garden duplicated many botanical services obtainable elsewhere, but it was a useful symbol of reform in a colony with authoritarian rule.

## Chapter 4

### Working in British Colonial Botanic Gardens, 1780s to the 1840s

#### **Introduction**

In the eighteenth century, the pursuit of natural history was an elite activity. Only members of the highest social groups had the leisure to pursue extended investigations and the money to fund them. Furthermore, there were not yet clear avenues for gaining scientific credentials through formal study. The authority of discovery rested primarily on the social position of the discoverer. Institutions such as the Royal Academy facilitated the meeting of people interested in scientific research and conferred prestige on its members, but membership was only open to gentlemen. In short, if one did not fit the model of a scientific gentleman, there was little recognition to be had.

Anne Secord has shown that within Britain in the early nineteenth century, a space had opened for artisans and working men to enter into correspondence with British naturalists and exchange plant specimens. However, these plant exchanges were heavily shaped by social mores, and there was often a delicate dance around payment and issues of attribution.<sup>1</sup> Again, the artisans were merely suppliers of plant materials and could not expect recognition for their efforts beyond the thanks of their gentleman correspondents. However, the colonies provided greater opportunity for men without much social status to leverage their botanical knowledge for a scientific reputation. Empire and the growing importance of collecting specimens from far afield opened up some avenues for working men, such George Caley, one of Secord's artisan

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<sup>1</sup> Anne Secord, "Corresponding Interests: Artisans and Gentleman in Nineteenth-Century Natural History," *British Journal for the History of Science* 27, no. 4 (Dec 1994): 383-408.

botanists, to not only become involved in scientific work, but to create a reputation for themselves as men of science. Many of the superintendents of the botanical gardens in the British colonies, including those at Calcutta, St. Vincent, and Trinidad, initially came to the colonies as doctors in military service.<sup>2</sup> These men were able to find time to pursue their personal interests in natural history and correspond with similarly minded people, including those with political power. Elite connections helped working botanists rise to the superintendence of a botanic garden and win a reputation in London and in the colony as men of science. This chapter will examine the careers of several superintendents, with special attention to Alexander Anderson, the celebrated superintendent of the botanic garden at Saint Vincent, for some insight into the opportunities and challenges men of science who were not social elites could face while working in the colonies.

Besides the superintendent, who was the public face of the colonial gardens, dozens and sometimes hundreds of people worked to maintain the grounds and handle the clerical work. Like the superintendents themselves, these people could use their skills to move through some social boundaries. Superintendents often had assistants who worked closely with them. Ideally, the assistant to the superintendent would have been trained in practical gardening with some knowledge of botany, but in the colonies, it was challenging to find people with the requisite skills. The vacuum of talent created a space for individuals like John Tyley, a free man of color from Antigua, to become the assistant of Alexander Anderson in the Saint Vincent Botanical Garden in the 1790s. Tyley was a talented artist and made botanical watercolors while working

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<sup>2</sup> Richard Drayton has noted how much investigation in botany in the British colonies was supported by the War Office, according to Londa Schiebinger and Claudia Swan, "Introduction," in *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*, ed. Londa Schiebinger and Claudia Swan (Philadelphia: University of Pennsylvania Press, 2005), referencing Richard Drayton, "European Imperialism and the Enlightenment: Botany and the Science of Government, c. 1750-1815," paper delivered at the "Botany in Colonial Connection," Einstein Forum, Potsdam, May 2001.

in the garden. The colonial gardens at times struggled under assumptions that they were merely kitchen gardens for the governor or waystations for plant distributions, but superintendents created herbaria and produced floras and collections of botanical illustrations, which are more purely scientific pursuits, in order to make a claim to scientific status for both the botanic garden and for themselves. Thus, John Tyley was directly involved in the scientific work of the botanical garden at Saint Vincent, despite his lack of social capital. In India as well, local artists, namely Indian men, were hired as botanical artists by company naturalists and botanic garden superintendents.<sup>3</sup> Artistic talent could be an avenue for greater recognition and status, as in Tyley's case, but this advancement was not certain. Despite the important work that the botanical artists did, they at times went unnamed, and were often poorly paid.<sup>4</sup> For these unknown artists, their importance to the scientific reputation of the botanic gardens did not result in scientific recognition.

Below the superintendent, and even the botanical artist, in the social hierarchy both inside and outside the gardens stood the common workers who did the heavy labor of keeping the plants alive, the grounds maintained, and the shipments moving smoothly. In this chapter, we will see that the makeup of the labor force varied with the overall structure of the labor force in the colony itself. Some of these workers were European and some were indigenous. In every garden, some proportion of the labor was forced. Despite the importance of the physical labor that went into the upkeep of the botanic gardens, those who performed that work received no explicit recognition of their efforts or the expertise that they might have developed by working

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<sup>3</sup> See Henry Noltie, "The Hooker Lecture: Robert Wight and the Illustration of Indian Botany," *The Linnean Society*, Special Issue No. 6 (2006): 3-34.

<sup>4</sup> H.J. Noltie, *The Dapuri Drawings: Alexander Gibson & The Bombay Botanic Garden* (Woodbridge, UK: The Antique Collectors Club, 2002), 79-80. The name of the artist who produced a set of drawings for William Gibson at the Bombay Botanic Garden is unknown. Noltie has some evidence that he may have been Portuguese. It is certain that he was poorly paid in comparison with other workers in the garden. Robert Wight is an exception; he carefully acknowledged his Indian artists.

with the plants. However, in the case of the slave Washington who worked in the Saint Vincent Botanic Garden with George Caley, we will see that both garden superintendents and government officials implicitly acknowledged that even a slave's familiarity with the garden had value.

The juxtaposition of these stories demonstrates that the gardens were spaces for the cooperation of very different people who operated under very different social constraints. Though skill in some area of natural history practice might help an individual transcend his social status within the gardens themselves and spaces where that sort of knowledge was valued, this fluidity did not necessarily follow him into the wider world. The costs of belonging to certain social groups were real, and those identities posed greater limitations beyond the garden gates.

### **The Superintendents**

The British colonies were seen by those in Britain as “other” in nearly every dimension imaginable, socially, culturally, environmentally, with the fear that even the weather and the environment could change the Britons who settled there.<sup>5</sup> The scientific hopefuls who travelled to live in the British possessions in India, Australia, and the Caribbean were moving into unfamiliar spaces that could cost them their health or their lives, but they did so willingly. In Europe, before the late eighteenth century, the systematic investigation of natural history was understood to be an elite activity that took place in particular environments, such as a gentleman's study, or the public house of experiment, such as the Royal Society. The existing gentlemanly social codes were absorbed into scientific practice in order to add legitimacy in an

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<sup>5</sup> For a work that discuss these anxieties, see for example, Tillman Nechtman, *Nabobs: Empire and Identity in Eighteenth-Century Britain* (Cambridge: Cambridge University Press, 2010).

age without credentials or clear educational preparation.<sup>6</sup> Since scientific authority was linked to class status, it was difficult for anyone besides European elites to participate in scientific discovery and have their contributions acknowledged.

By the late eighteenth century, empire destabilized this understanding of science. Contact with disparate lands and people stimulated a desire in Europe for specimens of plants, animals, and minerals from other parts of the world and forced natural historians to revise their theories to encompass these new materials. The colonies thus became sites for collection. Men of means, like Sir Joseph Banks and Alexander von Humboldt, made trips of scientific discovery and returned to metropolitan centers with their specimens. When these gentlemen produced accounts of their journeys, they could do so after reflecting about their specimens in their study, surrounded by floras and other botanical reference works to help them situate their finds. They could also interact with other metropolitan men of science in learned societies and other social gatherings. The trip away and subsequent publication of findings on the plants of the foreign regions would render these men experts in the eyes of many within their social circles.<sup>7</sup>

The early models of scientific development that were influential for the history of science affirm the primacy of metropolitan centers for the production of scientific knowledge and the status of the colonies as a field for examination. George Basalla's diffusion model describes Western science moving from the center, namely Europe or a conquering European nation, to the periphery. In the first stage, a region, often a colony, would supply the materials to be studied by scientists of developed nations. In later stages, once a region had developed sufficient infrastructure and institutions to support science, the region could become independent

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<sup>6</sup> Steven Shapin, "The House of Experiment in Seventeenth-Century England" *Isis*, 79, no. 3 (1988): 373-404.

<sup>7</sup> Janet Browne, "Passports to Success: The Correspondence of Charles Darwin by Charles Darwin," *Journal of the History of Biology* 21, no. 2 (Summer 1988): 343-349.

of the center.<sup>8</sup> Later theorists, like Bruno Latour, have tried to break down the center and periphery model and problematize the relationship between the colony and the metropole. Latour's model disregards stages entirely in favor of "cycles of accumulation" wherein knowledge is created through repeated encounters with the object of investigation.<sup>9</sup> However, Latour's theory prioritizes the return of knowledge to a center.<sup>10</sup> These models suggest that in the late eighteenth and early nineteenth centuries, the colonies were sites for collecting specimens and data; they were the field under investigation. Fieldwork itself, wherever the field might be, was believed to be different from work in the study or the laboratory. Out in the field, the naturalist's attention would be drawn from subject to subject, whereas in a study, the naturalist could soberly examine specimens and consult reference materials to help with classification and theorizing.<sup>11</sup> Thus Humboldt and his ilk would travel to collect, then return home to create natural history.

Empire helped ignite the fervor for specimens of plants and animals from beyond Europe and drew gentleman naturalists to either travel themselves or hire others to acquire these materials. As cataloguing and understanding the world's flora and fauna became a goal of science, it also became a goal of empire. Knowledge about the natural environments in the British colonies could be used to better control, exploit, and conserve the available resources. The East India Company, the War Office, and other institutions of British governance began to

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<sup>8</sup> George Basalla, "The Spread of Western Science" *Science*, 156, no. 3775 (1967): 611-622.

<sup>9</sup> Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge: Harvard University Press, 1987); see also Roy MacLeod, "On Visiting the 'Moving Metropolis': Reflections on the Architecture of Imperial Science," in *Scientific Colonialism: A Cross-Cultural Comparison: Papers from a Conference at Melbourne, Australia May 1981*, ed. Nathan Reingold and Marc Rothenberg (Washington, D.C.: Smithsonian Institution Press, 1987), 217-249.

<sup>10</sup> Felix Driver, *Geography Militant: Cultures of Exploration and Empire* (Oxford: Blackwell Publishers, 2001), 27-30.

<sup>11</sup> Dorinda Outram, "New Spaces in Natural History," in *Cultures of Natural History*, ed. N. Jardine, J.A. Secord and E.C. Spary (Cambridge: Cambridge University Press, 1996), 249-265; David N. Livingstone, "Science and Place," in *Wrestling with Nature: From Omens to Science*, ed. Peter Harrison, Ronald L. Numbers, and Michael H. Shank (Chicago: University of Chicago Press, 2011), 377-400.



hire naturalists and expand the responsibilities of existing posts like military surgeon to include gathering information about colonial environments. For men with scientific interests who did not have the means to travel on their own funds, the opportunities for traveling in imperial service and doing research on the behalf of empire were tempting.

Paid natural history work in the British colonies was a new option for men who wished to study natural history but were not independently wealthy. These men were not gentlemen almost by definition. Gentleman could fund their own travels and natural history investigation. Furthermore, since they had no need of payment for their scientific exploits, there was no reason for them to submit to the yoke of government orders. For the non-elites who took up government positions for botanical work, these posts were not a guaranteed avenue to a scientific reputation in Britain due to issues of class, payment, and place. For one, credibility in science was still tied in part to social standing. As men without the usual social clout to bolster the credibility of their scientific claims, government naturalists were at a disadvantage. Payment further threatened their ability to present themselves as disinterested and objective observers, and the responsibilities of a paid post could cut into time that could be spent botanizing. Fear of having less time for scientific work and being seen as less credible made even fledgling naturalists with limited options think twice before accepting paid work, even if it provided an opportunity to travel. J.D. Hooker's early career illustrates some of these concerns. Before becoming the celebrated head of Kew Gardens with a knighthood, he was merely the son of William Hooker, the professor of botany at the University of Glasgow. William Hooker had come from a family of means, but he had converted his inherited land into an unfortunate investment in a brewery, and thereby found himself forced to turn his interest in natural history into a paying position. Medicine at this time was the least exalted of the "learned professions" and botany was generally taught in universities

as part of a medical course.<sup>12</sup> When J.D. Hooker decided to make a living through botany like his father, he wanted the respect of the elite gentleman of science. For this reason, when his father called on well-connected friends to give him the opportunity to travel on an expedition to Antarctica, J.D. Hooker was reluctant to go as the assistant surgeon once he heard that his desired post of naturalist had been filled, though the lure of exploring the plant life in that region was too great for him to decline outright. However, merely collecting natural history specimens on a voyage to Antarctica was not enough to ensure a place in scientific society. After J.D. Hooker's return, he continued to carefully manage his reputation by refusing to publish popular botany books and carefully navigating the limited paying options that would allow him some time to pursue botany, seeking to distance himself and botany from the association with medicine. Furthermore, Hooker did not often call himself a professional, opting instead to be a "professed" or "philosophical" botanist.<sup>13</sup> The success of J.D. Hooker's career is evidence that in the eighteenth and nineteenth centuries, a space opened for men to be paid for scientific work and win a scientific reputation, but only through careful maneuvering.<sup>14</sup>

J.D. Hooker successfully became a professional but professed botanist, but he had one key advantage over the superintendents of the colonial botanical gardens. Hooker returned from his journey to Antarctica; his career was largely in a metropolitan area. As a result, he sidestepped issues of place, namely the idea that the colonies were the source of materials for study but not the site for that study. Alexander Anderson, George Caley, and other

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<sup>12</sup> Jim Endersby, *Imperial Nature: Joseph Hooker and the Practices of Victorian Science* (Chicago: The University of Chicago Press, 2008), 9-11 and 36-40.

<sup>13</sup> Endersby, *Imperial Nature*, 20-28 and 31-34.

<sup>14</sup> See John Gascoigne, *Science in the Service of Empire: Science, the British State, and the Uses of Science in the Age of Revolution* (New York: Cambridge University Press, 1998) who suggests science became more state driven in first decades of the nineteenth century, with a place for professionals; see Endersby, *Imperial Nature* for J.D. Hooker's struggles to be seen as a disinterested man of science while also being paid for scientific work; see Paul Lucier, "The Professional and the Scientist in Nineteenth-Century America," *Isis* 100, no. 4 (December 2009): 699-732 for treatment of the same issue in the United States.

superintendents of the colonial gardens found themselves in regions not known for scientific production for decades at a time. Caley went to his post in St. Vincent with the intention of staying for the rest of his life.<sup>15</sup> They had to contend with the perception that true scientific work did not happen in the colonies, which were seen as peripheral areas. In addition to fighting perceptions, colonial garden superintendents had to work through real hardships caused by the remoteness of their posts and their own social status. They lacked books, encouragement from likeminded individuals, and the social capital to prevent opposition from local elites. And yet, they pushed through these issues to work in their chosen field and arguably, create a scientific reputation for themselves, at home in the colony, if not abroad, in Britain.

In their correspondence to friends and government, the colonial garden superintendents frequently lamented the scarcity of scientific reference works. Without either gardeners with experience growing exotic plants or reference works describing the soil conditions and weather of in the regions they grew, garden superintendents found it difficult to acclimatize plants from other regions inside their own gardens. In 1790, after five years of residence at the St. Vincent garden, Alexander Anderson complained to the Secretary of War, Sir George Yonge, “I find myself very much at a loss for want of Books on the Natural History of the Indies for I know not the soil or natural situation of the indigenous plants of that country which are very necessary to be known for the bringing them to perfection here.”<sup>16</sup> If the St. Vincent garden were to become a source of spices for the British empire, the superintendents would need reference materials describing the proper conditions for growing those spices.

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<sup>15</sup> *The Indian and Pacific Correspondence of Sir Joseph Banks*, ed. Neil Chambers, Vol. 8 (London: Pickering & Chatto, 2014), Letter 147, dated August 27, 1816, from George Caley to Sir Joseph Banks, 172. Caley sadly brought all of his New South Wales collection with him to St. Vincent and was then unable to pay for its passage back to Britain once he lost his position.

<sup>16</sup> TNA, WO 40/4, letter dated May 4, 1790, from Alexander Anderson to Sir George Yonge, p. 2.

Tending the exotic plants in the botanic garden was just one of a superintendent's responsibilities made more difficult by the lack of printed botanical resources. The colonial gardens were also sites for the collection of regional plants that were unknown or rare in Europe. The lack of books made it difficult for superintendents to identify and classify plants, which in turn threatened their ability to cultivate the most valuable and useful plants in the botanic garden and distribute these plants to their correspondents and government institutions. In 1790, Roxburgh wrote from Samulcotah to a correspondent about a shipment of plants he was sending to Sir James Edward Smith, founder of the Linnean Society, "I beg you will mention to Dr. Smith what I have said on the difficulties attending making up collections of specimens of ... plants in a country where there is no person to render the smallest assistance & with but a very poor Botanical Library."<sup>17</sup> Though plant collectors in other colonial outposts might understand why identification mistakes might occur, those in the major cities of Europe might instead blame the colonial botanists and assume a lack of skill, which Roxburgh feared. The superintendents in the Caribbean struggled with this problem as well. Anderson wrote to William Forsyth of the Chelsea Physic Garden that he thought he had sent new genera to Joseph Banks, but was uncertain because he lacked the scholarly resources to confirm his suspicion.<sup>18</sup> Anderson later wrote to Forsyth on sending another collection of plants, "I can assure you, it is no easy task so situate [sic] as I am, without any one to aid or advise me with defect of books, many of the indigenous plants of these Islands, are but ill described & wrong arranged. I intend procuring all the information as I can, as to their medical & other properties."<sup>19</sup> In the absence of printed flora,

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<sup>17</sup> JStor Global Plants, Linnean Society of London, LINNSOC-JES-COR-25-10, letter dated January 12, 1790, from William Roxburgh to Nathaniel Kindersley, p. 2, <http://plants.jstor.org/stable/10.5555/al.ap.visual.linnsoc-jes-cor-25-10>, accessed April 22, 2015.

<sup>18</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated July 29, 1787, from Alexander Anderson to William Forsyth, f.115-116.

<sup>19</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated May 2, 1789, from Alexander Anderson to William Forsyth, f.135.

the colonial superintendents might turn to local knowledge to fill the gaps in information. The sort of information gathering that Anderson professed to do was certainly a task beneficial to empire, yet the lack of resources made it difficult for him to perform even this basic task.

Complaining about the deficiencies of the reference shelf at the colonial gardens could provide some remedy. Writing to the government about the difficulties hindering the superintendent's work was likely a plea designed to loosen government purse strings and ameliorate the problem. Complaints to friendly correspondents might yield gifts of reference materials and instruments. After several complaints to Forsyth about the books he needed, Anderson received a very welcome shipment. He thanked Forsyth, writing, "The Books you sent me was a valuable acquisition, and the Quadrant, Barometer & Thermometer, will be an inestimable treasure to me."<sup>20</sup> Arguably, successful identification of plants required one to have a contact like Forsyth in Europe who could help. The colonial superintendent could provide "specimens, drawings and descriptions" and the correspondent could provide books and identifications.<sup>21</sup> Though reaching out to their networks of correspondence was one way that superintendents could supplement the meager offerings of reference materials available at a colonial botanic garden, it was not a permanent solution. After a superintendent spent time and effort amassing a small library of useful books, they could very well be dispersed upon his death or departure for another post. Upon arriving at the St. Vincent Garden in 1816, George Caley complained to Joseph Banks, "here are several books belonging to the Garden, but in the worst state of preservation I ever beheld, some of them totally destroyed by Cockroaches, & a small catterpillar [sic]...Notwithstanding the ravages of insects, they have equally suffered as much

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<sup>20</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated August 22, 1784, from Alexander Anderson to William Forsyth, f .56-57.

<sup>21</sup> For instance, William Hooker was Wight's collaborator at one point; Noltie, "The Hooker Lecture: Robert Wight and the Illustration of Indian Botany," 13.

from bad usage, by having the backs broken off & otherwise mutilated, as if from having been the play things of children.”<sup>22</sup> Caley complained that many papers of Alexander Anderson’s were strewn about the leaky superintendent’s house in an unsalvageable state. When the time came for Caley to quit the garden in 1822, he reported the garden’s holdings to the deputy Secretary at War. Caley noted that there were a few botanical books and tools, all in poor condition, which owed their existence to his efforts to collect and preserve them on his arrival. Caley also suggested that it was unlikely that anyone else in the West Indies would be interested in them.<sup>23</sup> Caley had little hope that the next superintendent would start from a better position than he had, since no one on the island would safeguard the books in the interim.

The hindrance posed by the dearth of research materials was likely part of the impetus for the printed works of Wallich, Roxburgh, and others. While printing a flora could showcase a superintendent’s taxonomical work and help him establish himself as a scientific botanist rather than a mere gardener, the work would have also been very practical. Besides helping current and future superintendents keep track of the local plants that had been identified and categorized, it could help the army of plant hunters, enthusiasts, and others who might exchange specimens understand which plants were rare and valuable, and which were not. Printed floras or at least a herbarium were necessary for superintendents to identify local plants and prevent unnecessary duplication of their work.

This isolation extended beyond the lack of books. As George Caley intimated above, he felt that St. Vincent, and even the West Indies, lacked people who could appreciate botanical literature. The superintendents of the botanical gardens often felt that they were laboring alone, in an environment where few could truly enter into their endeavors. Alexander Anderson had the

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<sup>22</sup> *IP Corr JB*, Vol. 8, Letter 147, dated August 27, 1816 from George Caley to Sir Joseph Banks, 170.

<sup>23</sup> TNA, WO 43/150, letter received May 29, 1822, George Caley to William Merry, Deputy Secy at War, unpaginated.

good fortune of being superintendent of the St. Vincent botanic garden while a former superintendent, Dr. Young, still lived on the island. However, Anderson complained that Young was of no help to him. Though he lived with Anderson, Young was “indolent” and of little help to Anderson.<sup>24</sup> Anderson later complained, “Dr. Young is no good at keeping the place up when I go on excursions.”<sup>25</sup> The superintendents in India fared a bit better since learned organizations such as the Asiatic Society were already providing an outlet for individuals interested in the natural history, languages, and cultures of India. And as described in chapter one, a network of botanical gardens and agricultural and horticultural societies brought together garden superintendents and local landowners to share information about plant naturalization. But at the same time, Nathaniel Wallich profusely thanked correspondents who sent books to him.<sup>26</sup> The isolation at these botanical outposts was real and had consequences for the superintendents’ ability to conduct their work.

The superintendents of the botanic gardens were set apart from many of their fellow Britons in the colonies by their botanical knowledge and habits. Their specialized knowledge, connections with powerful men back in mainland Britain, and responsibility for a government institution elevated them above the average colonist. However, they were often born into the upper working classes or lower professions, which could make conversations with gentleman naturalists and high ranking colonial officials difficult, if the two sides did not agree on the superintendent’s class. Finding information on the early lives of the superintendents can be difficult because they were not of elevated rank. Little information exists on William Roxburgh’s

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<sup>24</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated July 16, 1788, from Alexander Anderson to William Forsyth, f. 124-125.

<sup>25</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated September 27, 1788, from Alexander Anderson to William Forsyth, f. 129.

<sup>26</sup> See Jstor Global Plants, RBGK, Directors’ Correspondence, letter dated , October 8, 1819, from Nathaniel Wallich to William Hooker, <http://plants.jstor.org/stable/10.5555/al.ap.visual.kdcas960>, accessed April 22, 2015; Jstor Global Plants, RBGK, Directors’ Correspondence, letter dated February 20, 1819, from Nathaniel Wallich to Sir William Jackson Hooker, <http://plants.jstor.org/stable/10.5555/al.ap.visual.kdcas959>, accessed April 22, 2015.

life before his education in medicine at the Edinburgh University and tenure at the botanic garden at Calcutta. His biographer Tim Robinson has speculated that he was the illegitimate son of country gentry in Ayrshire, Scotland.<sup>27</sup> Alexander Anderson, the celebrated third superintendent of the St. Vincent Botanic Garden, also has scanty documentation for his early years. George Caley, who presided over the St. Vincent Garden during its demise, was the son of a minor farmer and horse dealer.<sup>28</sup> Dr. Young, son of the superintendent before Alexander Anderson, suggested that Caley was uncomfortable in the company of gentlemen.<sup>29</sup> The superintendents were not born into the upper classes, but their botanical knowledge led them to interact with men far beyond their status. These superintendents were essentially setting the agenda for the botanical gardens, and they frequently met with and corresponded with the colonial governors and government both in London and in the colony.

The interaction of different social orders that occurred in the course of running the colonial botanic gardens was not seamless. As we saw in chapter two, George Caley had difficulty adapting to the demands of the governor and the local society of St. Vincent. He had a reputation for being a difficult personality. Caley may indeed have been a difficult person; his attitude has been repeatedly blamed for the closure of the St. Vincent Garden.<sup>30</sup> However, it is important to consider who wrote the critical reports of his personality and think about the frequency with which this particular charge was levied on government naturalists and superintendents of colonial botanic gardens. For instance, Allan Cunningham is an important figure in Australian botany who, like Caley, had trouble with colonial officials early in his

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<sup>27</sup> Tim Robinson, *William Roxburgh: The Founding Father of Indian Botany* (Cambridge: Cambridge University Press, 2008), 4-9.

<sup>28</sup> Joan Webb, *George Caley: 19<sup>th</sup> Century Naturalist*, Chipping Norton, New South Wales: Surrey Beatty & Sons Pty Limited, 1995), 1-3.

<sup>29</sup> Donal P. McCracken, *Gardens of Empire: Botanical Institutions of the Victorian British Empire* (London: Leicester University Press, 1997), pp. 192-193. Joseph Banks suggested that Caley would have been killed in a duel if he had been born a gentleman, Secord, "Corresponding Interests," 403.

<sup>30</sup> McCracken, *Gardens of Empire*, 199; Webb, *George Caley*, 154-156.



career. Cunningham was the son of a Scottish gardener, and his troubles with the governor of New South Wales have also been attributed to his “fiery temperament.”<sup>31</sup> In 1832, he turned down the superintendency of the Sydney Botanic Garden in favor of his brother Richard, yet authored a plan for the garden which was influential in its development. That year, he was also elected a fellow of the Linnean Society of London.<sup>32</sup> Cunningham had the respect of his peers and some influence in government since his advice on the botanic garden was taken seriously. Yet, at the beginning of his career, when he was in New South Wales collecting plants in 1817, Cunningham had a misunderstanding with Governor Macquarie. Cunningham was in Australia to collect plants for Sir Joseph Banks and Kew Gardens, and had expected that the colony would provide him with lodging and basic supplies. He soon found that Governor Macquarie was not prepared to fulfill all of his requests, so Cunningham wrote to Sir Joseph Banks to explain the situation. Macquarie heard of Cunningham’s report and wrote to Banks himself to complain of it.<sup>33</sup> Macquarie argued about Cunningham, “...I have been in the frequent habit of inviting him to and receiving him at my table with the civility and attention due to a gentleman and that I have merited such a return from this unbred illiterate man whose only pretensions to personal attention [attention] from [from] me arose from the opinion you have entertained of his usefulness in the line of [of] his profession.”<sup>34</sup> Governor Macquarie’s response to Cunningham’s behavior reveals how uncertain a naturalist’s position might be. Though Cunningham was in New South Wales on official business from Kew, he was not guaranteed the support of the colonial governor. And colonial governors were not in the habit of having social inferiors report on their behavior to

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<sup>31</sup> Philip A. Clarke, *Aboriginal Plant Collectors: Botanists and Australian Aboriginal People in the Nineteenth Century*, (Kenthurst, Australia, Rosenberg Publishing, 2008), 69 and 79.

<sup>32</sup> Lionel Gilbert, *The Royal Botanic Gardens, Sydney: A History 1816-1985* (Melbourne: Oxford University Press, 1986), 50-52.

<sup>33</sup> SL NSW, M730, Kew Collector’s Series, Microfilm, letter dated August 1818, from Sir Joseph Banks to Allan Cunningham, frame 458.

<sup>34</sup> SL NSW, M730, Kew Collector’s Series, Microfilm, letter dated December 18, 1817, from Governor Macquarie to Sir Joseph Banks, frame 458, decoded from copy in code by Allan Cunningham (Kew Collector, vol. 7, p. 33).

powerful men in London. The manner of Macquarie's criticism of Cunningham is telling; he claimed to have treated Cunningham like a gentleman, even though he was not one. Cunningham's knowledge as judged by the elite Sir Joseph Banks was the only thing that made him worth Macquarie's notice; in the early nineteenth century, there were few educational certifications of botanical knowledge that would have been acknowledged by people outside of the botanical community. Cunningham's later success suggests that he was not as illiterate and ill-bred as Macquarie had claimed. Cunningham's humble birth combined with his valuable knowledge and powerful connections made his social position ambiguous, and this ambiguity was a likely contributor to Macquarie's dissatisfaction with him. He was a man out of place; Macquarie did not know how to treat him, and it is possible that Cunningham himself did not yet know how to act.

Cunningham and Caley's difficulties were not isolated incidents. Alexander Anderson also had trouble with the colonial governor once he arrived at his post in St. Vincent in 1785. On his arrival, he saw that Governor Lincoln was using the garden as pasture land for his cattle and other grazing animals, and the superintendent's house was occupied by some of his family members. Though he had received orders indicating that Anderson would arrive to take possession of the botanic garden, Lincoln seemed to impede Anderson's progress at every turn.<sup>35</sup> This turn of events was unfortunate and unexpected. Governor Lincoln had written to the Secretary of War earlier that year to praise the initiative to keep the garden, suggesting that it might lead to agricultural and medical discoveries. Lincoln understood that his authority over the garden only extended to approving Anderson's accounts. The governor, however, believed that that level of supervision was insufficient, and told government, "I cannot help saying that in

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<sup>35</sup> Alexander Anderson, *The St. Vincent Botanic Garden*, ed. by Richard A and Elizabeth S. Howard (London: The Linnean Society of London, 1983), 22-35.

my apprehension it would be of advantage to His Majesty's Service that the Governor for the time being should have a great deal of control over this Officer; this Sentiment arises from no desire of extending my authority, but from a fondness I have for the Science, & of my opinion of the inefficacy of the late establishment." Lincoln further explained that vegetables fetched a good price in town, and it would be difficult for the War Office to keep the garden focused on the proper objects without overt supervision.<sup>36</sup> Whether his interest was truly to assist the successful development of the garden or do something more nefarious, Lincoln did not believe that Anderson should have the authority to run the garden as he saw fit, even if he stayed within his budget. Perhaps Lincoln did not like the idea of there being a government officer on the island not subject to his authority. Governor Lincoln also informed the War Office of the claim of a man called Zwarts to the lands of the botanic garden, a hold-over from the period of French occupation that would need to be resolved before Anderson took possession of the garden.<sup>37</sup> Whatever the primary reason, Governor Lincoln had no intention of immediately turning the botanic garden over to Alexander Anderson when he arrived.

Governor Lincoln had his ideas about the making of a successful garden at St. Vincent, and Alexander Anderson had his own, which were almost directly contradictory. Anderson had already been in the Caribbean for a few years working as a hospital mate in Grenada. Under the patronage of General Edward Mathew, the governor of Grenada, he was traveling the islands to collect natural history specimens and write impressions of the geography.<sup>38</sup> As early as 1784,

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<sup>36</sup> TNA, WO 40/4, letter dated April 4, 1785, from Governor Lincoln to Sir George Yonge, Secretary at War.

<sup>37</sup> TNA, WO 40/4, letter dated April 4, 1785, from Governor Lincoln to Sir George Yonge, Secretary at War, also called Zweerts, Anderson, *The St. Vincent Botanic Garden*, 18-21. Anderson felt that this claim was simply a ruse, finding it unlikely that the French government, which was so keen to promote natural history, would have granted the garden to a private individual. Anderson also argued that Lincoln had immediately taken possession of the garden when he arrived on the island, suggesting that Zwarts' claim was not of any concern to Lincoln until he was faced with the prospect of having to turn the garden over to Anderson.

<sup>38</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated December 17, 1783, from Alexander Anderson to William Forsyth, f. 40.

Anderson knew that Mathew and others in Grenada wanted him to head a new botanic garden there. Anderson seemed hopeful at the prospect, but was adamant that he would not undertake such a position unless the garden had proper backing from the king. He cited St. Vincent as an example, stating that the garden had gone to seed, and Governor Lincoln had “taken possession of it and will probably keep it for his own conveniency.”<sup>39</sup> However, Anderson could not help but covet the St. Vincent garden after visiting it and examining the fertility of the soil and the favorability of the situation. He wrote to a friend in London, William Forsyth, and said that he would prefer an appointment at St. Vincent, if only the garden were “put on some solid foundation, and not dependent on a Governor.” Anderson had met Governor Lincoln and apprehended that there had been a “misunderstanding” between Lincoln and his patron in the islands, General Mathew, which might account for Lincoln’s coldness toward himself. He reiterated to Forsyth, “But dependence on Governours [sic] here is precarious without being supported from home.”<sup>40</sup> To Anderson, having the steady support of patrons at home in Britain was the only way for the superintendent of a colonial botanic garden to counter the powerful local interests who might have their own designs on botanic garden lands. Furthermore, from observing the behavior of Lincoln and Mathew, Anderson was aware of the way that local personal disagreements could spill into matters of administration and governance.

The St. Vincent Botanic Garden eventually received support from the government in Britain, at least on paper, and Anderson was appointed superintendent with the blessing of Sir Joseph Banks. When Anderson arrived, considering his earlier reservations, he must have expected that this backing would be enough for him to immediately take possession of the

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<sup>39</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated June 1, 1784, from Alexander Anderson to William Forsyth, f. 50-51; RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated June 7, 1784, from Alexander Anderson to William Forsyth, f. 52-53, quotation.

<sup>40</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated June 26, 1784, from Alexander Anderson to William Forsyth, f. 54.

garden. Instead, he found Governor Lincoln's relatives living in the superintendent's house and Lincoln's animals grazing in the garden. Governor Lincoln insisted that he could not hand the garden over to Anderson because of Zwarts' unresolved claim. However, this claim apparently did not prevent Lincoln from treating the lands like his own. Lincoln offered Anderson a spot at his table and a room in his house until matters were resolved, perhaps to sweeten the deal, but Anderson immediately rejected this offer and insisted on gaining possession as the government orders indicated. Lincoln felt that this response was rude, but he was willing to make allowances for Anderson's "inexperience of the World" and show Anderson documents regarding Zwarts' claim.<sup>41</sup> It was perhaps his inexperience in dealing with powerful men that led Anderson to persist in his demands for the garden. A battle of wills ensued and slights accrued to both sides. Anderson fenced off a dirt path passing through the garden in an effort to keep the governor's slaves from driving his grazing animals on it.<sup>42</sup> Lincoln was incensed and argued that Anderson's dirt path was a public road.<sup>43</sup> Angry letters were exchanged. In one letter, Lincoln cast aspersions on Anderson's friend, former superintendent Young. Anderson confided to William Forsyth about his letter in reply, "I wrote him a very severe one, too much so to one in his line..."<sup>44</sup> Though Anderson had the backing of influential people at home, and had been loath to put himself within the power of a local governor, he knew that there were bounds of civility that he should not cross.

Class and the honor due to a man of consequence were foremost in Governor Lincoln's mind when trying to make sense of the impasse between him and Anderson. Lincoln wrote a

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<sup>41</sup> Anderson, *The St. Vincent Botanic Garden*, 23-32, and TNA, WO 40/4, letter dated May 29, 1785, from Governor Lincoln to Alexander Anderson, p. 1-3, quotation at p. 2.

<sup>42</sup> TNA, WO 40/4, letter dated May 30, 1785, from Alexander Anderson to Governor Lincoln, p. 4.

<sup>43</sup> TNA, WO 40/4, letter dated May 29, 1785, from Governor Lincoln to Alexander Anderson, p. 4-5.

<sup>44</sup> RBGK, Forsyth Correspondence, FOR/1/4, letter dated June 1, 1785, from Alexander Anderson to William Forsyth, f.75-76; Anderson had been an orderly in a hospital headed by Dr. Young on St. Lucia in 1783. Dr. Young was the former superintendent of the botanic garden, Richard A. Howard, "The St. Vincent Botanic Garden – The Early Years," *Arnoldia* (Winter 1997-1998): 15.

letter to Anderson regarding two personal meetings they had had, and called the judgment of others into the matter, saying, "...the Gentlemen who were present at the conversation on both Days declared that I had behaved with unmerited moderation to you."<sup>45</sup> Lincoln later wrote Anderson, that in his efforts to take possession of the garden, "your present conduct is equally indelicate to me, both in my publick Character & private Station, & your perseverance in it, but too plainly marks the turn of your temper & the impracticability of my exercising that control over your conduct & proceedings & the regulation of your Expenses which I am instructed to do."<sup>46</sup> Though Governor Lincoln had received orders from the government explaining Anderson's appointment and the control, or lack thereof, that the governor could expect to exercise over him, Lincoln did not expect to be so directly contradicted by an inferior. Lincoln presumably felt that Zwarts' claim and orders on his own authority would be sufficient to maintain the status quo, which was his own possession of the superintendent's house and grounds until the claim could be settled.

Anderson had been clear to Governor Lincoln about the motivations for his own conduct near the beginning of their impasse. He wrote Governor Lincoln,

"But Sir, my wish is, to make myself agreeable to you by every means in my power & with this intention came I to the Island. At the same time, I beg leave to tell you, my conduct will be regulated by my instructions from home, and my right I will insist for. It was by His Majesty's desire I asked possession of this place, for so doing, I think there was no occasion for your being vexed at me. I have no sinister view in my conduct, but

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<sup>45</sup> TNA, WO 40/4, letter dated May 29, 1785, from Governor Lincoln to Alexander Anderson, p. 4.

<sup>46</sup> TNA, WO 40/4, letter dated May 30, 1785, from Governor Lincoln to Alexander Anderson, p. 1-2.

actuated by a desire to be of service to my Country from my appointment, & to promote Science as far as my ability will permit.”<sup>47</sup>

Anderson saw fit to request everything that his government orders said that he was entitled to, and when denied that, he believed he was empowered to order Lincoln’s slaves out of the garden and literally fence in those parts that he felt were being encroached upon. However, Lincoln was not prepared for someone like Anderson to, on the authority of his own orders from government, insist on those being followed to the letter, claim or no claim. In the next month, Anderson complained to Forsyth that he was forced to stay near the garden to protect it. He wrote, “...but being confined to take care of the House & Garden, as well as I can, & being alone I can hardly venture half a mile from it, or every thing that remains in the Garden would be soon destroyed, & to preserve them as well as I can I labour every day like a Nigroe [sic].”<sup>48</sup> Anderson was willing to physically guard the land that he believed had been placed in his care.

As much as a year later, Anderson still had complaints about Governor Lincoln. He did not know how much he was allowed to spend on contingencies for the garden, and he felt that Lincoln withheld this information from him so that he would be forced to wait for instructions from the Secretary of War instead.<sup>49</sup> But in his account of the history of the St. Vincent Botanic Garden of unknown date, he noted that his relationship with Lincoln began to improve immediately after the Secretary of War ruled in September 1785 that Zwart’s claim was invalid and ordered that the whole of the garden should be turned over to Anderson. Afterward, Anderson found Lincoln to have an interest in science and a desire to assist him in improving the

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<sup>47</sup> TNA, WO 40/4, letter dated May 29, 1785, from Alexander Anderson to Governor Lincoln, unpaginated.

<sup>48</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated June 24, 1785, from Alexander Anderson to William Forsyth, f. 81-82.

<sup>49</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated April 12, 1786, from Alexander Anderson to William Forsyth, f. 95, and here, Anderson complains that contingency funds should not be left up to the governor, because it will provide opportunities for a “squabble.”

garden. Anderson excused the inclusion of the earlier unpleasant episodes between himself and General Lincoln in the garden's history with, "I wish also to point out to men in elevated stations the impropriety to attempt opposition to science or useful institutions and that they will gain more credit to themselves and merit more the approbation of their sovereign by countenancing and supporting them."<sup>50</sup> Whereas Governor Lincoln may have been a representative of His Majesty's Government, Anderson was a representative of Science, and he was confident that the court of opinion would eventually fall to the side of the poor naturalist laboring in a colonial botanic garden.

Anderson prevailed in 1785, but Lincoln could have easily won the contest. Banks supported Anderson's side of the story and helped him carry the day. However, like many of his time, Banks was, on other occasions, willing to assume that his fellow elite men were of good character, no matter their social inferiors might say. In 1817, when George Caley was trying to protect the St. Vincent garden from yet another troublesome governor, Banks revised his reading of the difficulties that Anderson, and his successor, William Lockhead, experienced with the island's local government. Banks concluded that Anderson and Lockhead must have neglected the garden and their duties because nothing else could have "induced the Governor to depasture his Bullocks in the Garden as was done in Mr. Lockhead's time & to defend for some time his Right of so doing against all Principles of Laws."<sup>51</sup> Even Banks, patron baronet of working naturalists across the world, was eager to believe that the governors harrying his protégés may have had logical reasons for their behavior. Banks had helped several of his naturalists resist imperious governors during his years as a booster for natural history. He also knew that it was at times necessary for his naturalists to relax some policies to curry favor with local elites in order

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<sup>50</sup> Anderson, *The St. Vincent Botanic Garden*, 35-38.

<sup>51</sup> SL NSW, M730, undated letter from Sir Joseph Banks to Lord Palmerston, responding to Palmerston's letter of December 5, 1817, frame 117.



to do their jobs.<sup>52</sup> And yet, Banks defaulted to norms and proved himself willing to ascribe fair play to men of elite status and deficiency to working naturalists he had once respected.

Anderson's expertise as a professed scientist brought him to the attention of men like Sir Joseph Banks, and his knowledge and their connections made it possible for him to contradict his social betters without losing his position. However, the relationship between a garden superintendent and his governor did not need to be antagonistic. Lincoln and Anderson eventually learned to work together, namely after orders clarified the situation of the garden, and in turn, the nature of their relationship. Anderson's scientific expertise had made his class identity ambiguous; Lincoln was not prepared to have someone of Anderson's stature interpret orders from London and tell him what needed to be done. But eventually both parties negotiated a way of relating that was acceptable to each other. Like Allan Cunningham, Anderson's later accolades suggest that he was not a difficult man to work with. And like Cunningham and Governor Macquarie in Sydney, Anderson and Lincoln had to resolve their differences and learn their places relative to control of the St. Vincent Botanic Garden.

In traveling far away from home to pursue a career in science, the superintendents of the colonial botanic gardens launched themselves into an unfamiliar situation. Though confronted with a wealth of new flora and fauna to examine, the superintendents had to work around the dearth of reference materials, equipment, and even encouragement from other scientifically minded individuals. They also had to confront local officials who might refuse to recognize their authority and pursue different plans for the local botanic garden. The colonies were a place for men to make their fortunes, but as Nechtman has shown for men who went back to Britain wealthy, they could not buck existing attitudes about class status and class fixity. The same was

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<sup>52</sup> In the same letter where he reevaluates Anderson's and Lockhead's character, Banks implores Caley to socialize and curry favor with locals to gain friends for the garden, SL NSW, M730, undated letter from Sir Joseph Banks to Lord Palmerston, responding to Palmerston's letter of December 5, 1817, frame 117.

true for the professed botanists who made their careers in the colonies. Some gentleman naturalists might appreciate their knowledge and skills and treat them with respect, yet others in the world were not bound to recognize their value. In the absence of standard educational credentialing, the word of a gentleman naturalist, such as Sir Joseph Banks, was all that the colonial naturalists had to certify their worth. Though the loosening of some social codes allowed men like Anderson to travel abroad to make their careers, the societies they found were not entirely ready to absorb these upstarts on their own terms. However, the superintendents and government naturalists could at times counter these local powers despite being outclassed. Because their scientific expertise or at least their utility had been recognized by elites in Britain, they were sometimes able to effectively counter hostile or ambivalent local conditions. But the question remains: did this influence mean that the superintendents of the botanic gardens had scientific reputations?

Early modes of development describe the colonies as sites for the collection of specimens and not scientific work, but greater scholarly attention to these places once called peripheries has led to a reevaluation of their importance for scientific research. Mark Harrison argues that the colonies were actually the site of the bulk of scientific activity, rather than empty spaces waiting to accept Western practices.<sup>53</sup> However, this acknowledgement of the importance of colonial spaces for scientific work is in the scholarly literature and does not reflect the sentiments of gentleman naturalists of the late eighteenth and early nineteenth centuries. Though some of the superintendents in the colonial botanic gardens may have won a scientific reputation in their own time, their authority was not a settled issue.<sup>54</sup> Some recent scholarship continues to stress the

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<sup>53</sup> Mark Harrison, "Science and the British Empire," *Isis* 96, no. 1 (March 2005): 60.

<sup>54</sup> For discussion of authority of government naturalists, see E.C. Spary, "Of Nutmegs and Botanists: The Colonial Cultivation of Botanical Identity," in *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*, ed. Londa Schiebinger and Claudia Swan (Philadelphia: University of Pennsylvania Press, 2005), 187-203.

journey and the return as instrumental in the making of scientists and scientific knowledge in this period of transition. Some scholars have argued that despite the existence of scientific societies and the development of scientific institutions in the colonies, colonial scientists could only hope for recognition if they returned to metropolitan areas in Europe to continue their work.<sup>55</sup> In his study of the practices of science as exemplified by the career of J.D. Hooker, Jim Endersby compares Hooker with a friend and classmate in medicine at Glasgow University, Thomas Thomson. While Hooker joined the navy and was able to return to Britain after his voyage, Thomson became a surgeon for the East India Company. By the time they met again in India in the late 1840s, Thomson lagged behind Hooker in published work, and many of his published works had been co-written with Hooker. Endersby argues that Thomson's most significant work was the first volume of the *Flora Indica*, and it failed to win him patronage from the East India Company. Thomson returned to India where he became superintendent of the botanic garden at Calcutta and the professor of botany at the Calcutta Medical College. Endersby suggests that Thomson was disappointed by the trajectory of his career, and Thomson's "modest" botanical reputation compared with Hooker's knighthood and Royal Society Medal was the result of his distance from the "centers of scientific society and patronage."<sup>56</sup> Endersby's reasoning for the difference in career trajectories is compelling, and it is almost true by definition that more money and greater titles existed in mainland Britain than abroad. However, J.D. Hooker, leader of the premier botanic garden in Britain, son of celebrated botanist William Hooker, may not be an apt comparison for most botanists of the period, whether they made their careers in the colonies or

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<sup>55</sup> See Endersby, *Imperial Nature* and Janet Browne, "Passports to Success: The Correspondence of Charles Darwin by Charles Darwin," *Journal of the History of Biology* 21, no. 2 (Summer 1988): 343-349; Pratik Chakrabarti, *Western Science in Modern India: Metropolitan Methods, Colonial Practices* (Delhi: Permanent Black, 2004), 80-94.

<sup>56</sup> Endersby, *Imperial Nature*, 50-53.

within Britain. What is a scientific reputation? Does it only count if individuals in London knew Thomas Thomson's name?

Whether others saw it or not, the superintendents in the colonial botanic gardens considered themselves men of science. As the complaints about their relative isolation in the colonies show, they regretted being cut off from others of their kind and admitted that their work would go more quickly if they had the help of others like them. Though there may not have been other men of science readily to hand, the superintendents sought them out. Alexander Anderson maintained a friendship with a former superintendent of the St. Vincent garden, George Young. Most of the superintendents maintained correspondence with a network of individuals interested in natural history. They were also active members of scientific societies, locally and in Britain. Roxburgh, Wallich, and Anderson all had reports read at Linnean Society meetings.<sup>57</sup> Roxburgh was on the publishing committee of the Asiatic Society, and he and Wallich published papers in the transactions of that organization.<sup>58</sup> Even one of Roxburgh's assistants, Christopher Smith, had been elected a member of the Linnean Society before he took his post at the Calcutta botanic garden.<sup>59</sup>

Besides the company they kept or wished to keep, the superintendents in the colonies tried to perform the practices of science as described by Endersby. They collected plants, created

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<sup>57</sup> Linnean Society, Catalogue, William Roxburgh, Account of the Tusseh and Arrindy silkworms of Bengal. Read January 5, 1802, with 2 pen and watercolour drawings; Aylmer Bourke Lambert, An account of a species of *Brownea* by the late Dr. Anderson of St. Vincents. Communicated by A. B. Lambert Esqr. Read November 17, 1812; and Nathaniel Wallich, Description of a new genus belonging to the Nymphaeaceae, Read May 1, 1827.

<sup>58</sup> Robinson, *William Roxburgh*, 113.

<sup>59</sup> Robinson, *William Roxburgh*, 47; Roxburgh himself was Fellow of the American Philosophical Society of Philadelphia, Corresponding Member of the Society for the Encouragement of Arts, Fellow of the Royal Society of the Encouragement of Arts, Fellow of the Royal Society of Physicians at Edinburgh, Fellow of the Linnean Society of London, Fellow of the Linnean Society of Philadelphia, Fellow of the Royal Society of Edinburgh, and Honorary Member of the Society of Friends of Natural History at Berlin William, see Roxburgh, *Hortus Bengalensis or a Catalogue of the Plants Growing in the Honorable East India Company's Botanic Garden at Calcutta* (Serampore, India: Mission Press, 1814), Introduction, iii. <http://www.biodiversitylibrary.org/bibliography/95337#/summary>.

herbariums, and published floras.<sup>60</sup> They pushed the government to support them on collecting trips within their regions to assist them in creating those floras and herbaria. As a result of the stigmas against their class identity and the regions where they made their careers, the colonial superintendents were positioned to be merely plant collectors for the elite naturalists in Britain. Instead, they maneuvered to create independent scientific identities. For many of the superintendents, it worked. They were recognized by learned societies in Britain and noted within their local communities as men of education with knowledge of natural history. And the power they could command, even against a colonial governor, is evidence enough of the local influence they held, which they earned through their scientific reputations.

### **John Tyley and Botanical Artists**

Superintendents to the botanic gardens lamented their lack of tools, scientific equipment, and books with useful botanical information and illustrations. They also longed to socialize with others interested in botany and natural history. In metropolitan centers, they would have had a bevy of botanical societies and gardens to visit and many likeminded friends to meet, but the situation in the colonies was very different. Before George Caley took his post at the Saint Vincent Botanical Garden, he was in Manchester, which his biographer Joan Webb has blamed for his relative obscurity, arguing that he “stagnated first in Manchester and then in the island of St. Vincent.”<sup>61</sup> And yet, Caley’s weather diary shows that in Manchester he regularly visited botanical meetings in Middleton and Boyton and met with his friend Robert Brown.<sup>62</sup> The situation in the colonies was completely different. Scientific societies were not as prevalent, and

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<sup>60</sup> Or, as in Alexander Anderson’s case, left unpublished manuscripts on the history of his botanic garden and the geography and history of St. Vincent, see Howard, “The St. Vincent Botanic Garden – The Early Years,” 19. It seems that Caley chose not to publish.

<sup>61</sup> Webb, *George Caley*, xi.

<sup>62</sup> See, for example the SL NSW, MAV/FM4/10949, George Caley Travel Diary, entries November 2, 1812, February 1, 1813, July 26, 1813, October 11, 1813, June 28, 1815, October 5, 1815, p. 141, 157, 192, 206, 300, 313.

the small settler population meant that it was simply less likely for superintendents to find local enthusiasts to provide them with conversation, specimens, and encouragement.

Besides the desire for local intellectual friends, the superintendents of the botanical gardens wanted people with skill in gardening, drawing, and practical botany to work beside them and truly enter into the spirit of the endeavor. After arriving at Saint Vincent in 1785, Alexander Anderson longed for an assistant to help with him in his travails. He found the garden in disarray and performed physical labor to try to bring it to perfection. His fellow workers in the garden were slaves that he hired, and he dreamed of a time when he might have assistance from someone with the expertise to oversee the slaves and leave him to more learned exertions. He wrote to his friend William Forsyth, "...if I find the allowance will permit me to hire a white man to supervise in my absence, I shall travel..."<sup>63</sup> If Anderson had an assistant, he could leave the garden and record his observations on the flora and fauna of Saint Vincent and neighboring islands. More importantly, he would be able to collect live plants and create herbarium specimens for his own use and for exchange with his correspondents abroad. But merely lacking conversation with others with scientific interests slowed Anderson down. He lamented to Forsyth after six months of being in the garden, "Notwithstanding my strong attachment to natural pursuits, for want of the proper assistance of Books & Men of Science my progress has been but little..."<sup>64</sup>

Eventually Anderson was able to hire an assistant, but a string of unsuccessful assistants led him to complain that good help was hard to find. The scarcity of skilled workers led Alexander Anderson to tell the Secretary of War, Sir George Yonge, of his difficulties in 1793.

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<sup>63</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated November 4, 1785, from Alexander Anderson to William Forsyth, f.85v.

<sup>64</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated April 12, 1786, from Alexander Anderson to William Forsyth, f. 94.

“I have been much distressed for want of an assistant,” Anderson lamented. He continued, “...all the white men I can get here soon become inattentive and cannot be trusted by reason of the bad company they associate with & a habit of drinking they soon acquire...”<sup>65</sup> Though Anderson had initially longed merely for a “white man” to supervise the slaves working in the garden, he eventually realized that white skin was not the most important quality in an assistant.

Anderson’s difficulty in finding a suitable helper created an opportunity for a man of color named John Tyley. After complaining in a letter to Sir George Yonge about his feckless white assistants, Anderson mentioned that he “had been lucky enough to procure from Antigua, a Molatoo [sic] man.” Anderson spoke well of Tyley’s character and rated his education as “tolerable.”<sup>66</sup> “Tolerable” is more complimentary than it sounds; Anderson once wrote that his patron General Mathew had a “tolerably good idea of all the sciences in general.”<sup>67</sup> Anderson feared that he would be unable to retain Tyley because his salary was insufficient.<sup>68</sup> After the failure of a string of white assistants, it was a boon to find a steady worker. However, it soon became clear that Tyley’s talents extended beyond a tolerable education.

By the next year, Anderson wrote to William Forsyth about Tyley’s real talent. Anderson told Forsyth that he was getting drawings of all the new species he could find, and that they were all the work of Tyley, a man of about 20, who had lived with him for the last year. Anderson explained that Tyley was self-taught, and lamented his own inability to serve as Tyley’s patron. “I wish he may have encouragement in proportion to his merits and I think it is a pity such Talents should be buried in this part of the world & I wish my finances would afford to take him

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<sup>65</sup> TNA, WO 40/4, letter dated June 3, 1793, from Alexander Anderson to Sir George Yonge, unpaginated.

<sup>66</sup> TNA, WO 40/4, letter dated June 3, 1793, from Alexander Anderson to Sir George Yonge, unpaginated.

<sup>67</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated September 11, 1783, from Alexander Anderson to William Forsyth, f. 38-39.

<sup>68</sup> TNA, WO 40/4, letter dated June 3, 1793, from Alexander Anderson to Sir George Yonge, unpaginated.

out of obscurity,” wrote Anderson.<sup>69</sup> Anderson thought Tyley might be a good assistant to a gentleman who wished to travel and study natural history. Anderson asked Forsyth, “If you think he could meet with any encouragement in England, I will thank you to let me know... Could I afford to give him proper encouragement, I would retain him for some years to travel with me thro’ the Islands – would views or Landscapes of the West Indies sail to his advantage in England?”<sup>70</sup> Anderson also sent one of Tyley’s drawings to Forsyth, perhaps as a bit of an advertisement.<sup>71</sup> Anderson himself had been supported by Sir Joseph Banks and William Forsyth who recognized his skill in botany; he in turn recognized Tyley’s skill and felt that it might give Tyley unexpected opportunities. However, Anderson could at that time only see Tyley as an assistant to a gentleman naturalist. Tyley’s abilities may have set him apart from other people of color in the West Indies, but even Anderson, whose knowledge had helped him transcend his social class, could not imagine a similar outcome for Tyley.

Anderson might have foreseen a limit to the possibilities of Tyley’s future, but he valued his abilities, treated him well, and sought to retain his services. Anderson wrote to government to request an increase in Tyley’s salary, suggesting that eight shillings a day might be enough to keep him.<sup>72</sup> When Governor Bentinck wrote to the Secretary at War to speak warmly of Anderson and recommend an increase in his salary of ten shillings a day, he praised Tyley too, and asked for an increase to his three shillings per diem. Bentinck described Tyley as “man of colour with excellent talents for drawing...He is the only man of that turn I believe in the West

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<sup>69</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated July 23, 1794, from Alexander Anderson to William Forsyth, f. 155-56.

<sup>70</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated July 23, 1794, from Alexander Anderson to William Forsyth, f. 155-156.

<sup>71</sup> Some of Tyley’s work is held at the Linnean Society and the Hunt Institute for Botanical Documentation in Pittsburgh, see Howard, “The St. Vincent Botanic Garden – The Early Years,” 12-21, Tyley is mentioned on p. 19 with a reproduction of one of his watercolors on p. 21.

<sup>72</sup> TNA, WO 40/4, letter dated June 3, 1793, from Alexander Anderson to George Yonge, unpaginated.



Indies & should be encourag'd. Pray take these people under your patronage."<sup>73</sup> Bentinck praised the botanic garden and seemed to believe that its worth was in part a result of Anderson and Tyley's efforts. Clearly, Anderson was not the only one to recognize Tyley's worth. The Governor tried to mobilize some patronage for him in the form of a salary increase because he, too, recognized the rarity of Tyley's ability. Bentinck's letter was ultimately successful; Anderson and Tyley earned salary increases, and a more modern house was built for Anderson in the botanic garden.<sup>74</sup>

Tyley's position was remarkable, but it was not uncommon for people of color to serve as botanical artists in colonial gardens. The garden at Calcutta consistently had a group of Indian painters who made botanical drawings of collected plants.<sup>75</sup> Many of the images in *Flora Indica* were from this group of artists. Several of the satellite botanic gardens in India had artists as well. Though Indian artists were crucial for creating botanical drawings at the colonial gardens in India, they did not have the same opportunities as John Tyley, likely due to the principle of scarcity. India already had a tradition of botanical art, and plenty of artists employed in royal courts and textile industries. In the north, there were artists who had painted for Mughal rulers. The garden superintendents saw that these artists were skilled and could adjust their style for botanical drawing. East India Company officials and local Indian rulers had also already created a demand for natural history drawings.<sup>76</sup> In the Caribbean, however, Anderson was desperate for

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<sup>73</sup> TNA, WO 40/4, letter dated April 11, 1798, from William Bentinck to William Windham, Secy at War, p. 1; at this time Anderson only received 10 shillings a day.

<sup>74</sup> TNA, WO 40/4, letter dated November 1, 1798, William Bentinck to William Windham, Secy at War, p. 1-2.

<sup>75</sup> H.J. Noltie, "The Hooker Lecture: Robert Wight and the Illustration of Indian Botany," 23-25; Mildred Archer, *Natural History Drawings in the India Office Library* (London: Published for the Commonwealth Relations Office by Her Majesty's Stationery Office, 1962), 19-26; Noltie, *The Dapuri Drawings: Alexander Gibson and the Bombay Botanic Gardens*, 79-80.

<sup>76</sup> H.J. Noltie, *The Cleghorn Collection: South Indian Botanical Drawings, 1845 to 1860* (Edinburgh: Royal Botanic Garden, Edinburgh, 2016), 5-9; H.J. Noltie, *Robert Wight and the Botanical Drawings of Rungiah and Govindoo, Book 2, Botanical Drawings by Rungiah & Govindoo: The Wight Collection* (Edinburgh: Royal Botanic Gardens Edinburgh, 2007), 13-35. Wight was rare in that the names of his favorite artists are known.

a steady assistant and Tyley's skill was perceived to be uncommon. Tyley was unique because he was individually credited for his work. The literature on Indian artists makes clear that the superintendents who hired them directed their work and saw the artists as instruments for recording botanical structures. Though scholars now recognize differences in the style of the botanical drawings produced by colonized people under the direction of European naturalists, contemporaries denied that they had botanical expertise.<sup>77</sup>

Botanical drawings were useful tools for naturalists, particularly those working in the empire. Plant specimens, both living and dried, could easily decay. Dried plants no longer displayed colors *in vivo*, and living plants only showed one stage of the plant's growth at a time. Images represented a convenient way for naturalists in the empire to record the appearance of a plant at all stages of its growth cycle. These drawings could stay on site and help the naturalists keep track of the local plants they had named or identified. Images were also easy to send to patrons at home, who could compare the images with the floras and herbarium specimens to which they had access. Anderson used Tyley's drawings in this way; he sent drawings to Banks in London, who would write back with identifications for the plants with which he was familiar.<sup>78</sup>

Botanical drawings also provided an avenue for advertising the work done by naturalists in the colonies. In her work on botanical drawings in the Spanish empire, Bleichmar points out that drawings can travel across time and space more easily than plant specimens, therefore they

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<sup>77</sup> Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007), 55-113; Joseph Banks gives Roxburgh the credit for the skillful drawings made by his artists, see *IP Corr JB*, Vol 4, Letter 131, dated July 4, 1794, from Banks to the Court of Directors, EIC, 215-217. Bleichmar discusses how the Spanish naturalists hiring artists to draw plants in Spanish empire denied that the artist had any botanical expertise, yet she argues that they had a definitive style, see Daniela Bleichmar, *Visible Empire: Botanical Expeditions & Visual Culture in the Hispanic Enlightenment* (Chicago: The University of Chicago Press, 2012), 39-40 and 80-122.

<sup>78</sup> See *IP Corr JB*, Vol 4, Letter 109, dated December 29, 1793, from Alexander Anderson to Banks, 187-188, for a letter Anderson sent with images asking for identifications. For Banks' response, see *IP Corr JB*, Vol 4, Letter 128, dated Summer 1794, from Banks to Alexander Anderson, 212-213. For more on uses of images, see Bleichmar, *Visible Empire*, 101-122

can be useful tools for trying to obtain funding or honoring existing patrons.<sup>79</sup> Anderson used Tyley's drawings to advocate for the garden in this way. In 1794, he was preparing a catalogue of the garden to send to Banks and the Secretary at War, George Yonge. He wrote to Yonge about his efforts and explained that he was also getting drawings of the new species, presumably to send to Banks and Yonge as well.<sup>80</sup> A published flora might be a substantial tool for a garden superintendent to make his work easier and prove his worth, but Anderson could put Tyley's drawings to work in a similar way, immediately. The botanical illustrations Anderson sent to the mainland were tangible evidence that the St. Vincent garden was a repository for the desired plants and continuing proof of Anderson's ability to procure, identify, and cultivate those plants. Secondly, the drawings demonstrated that Anderson was able to recognize and utilize local talent. For these reasons, Tyley was not just another worker.

Tyley was valued for his contributions to the success of the botanic garden, but he also seems to have had a real connection with Anderson. Anderson's nephew, who was also called Alexander Anderson, left his home in New York to visit the St. Vincent garden in 1799. At that point, Tyley had worked there for about seven years. Anderson's nephew was also a doctor, but had a talent for engraving. During his visit, he recorded in his diary, "Mr. Tyley [sic] (my uncle's draughts-man, a mulatto) drank a glass of wine with us after dinner."<sup>81</sup> Since Tyley went over at night to visit Anderson and drink with him and his family, he seems to have been on very friendly terms with his employer. Anderson the nephew spoke favorably of Tyley in his diary, writing, "Had some conversation with his [Anderson's] draughtsman Tyley [sic], a mulatto man

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<sup>79</sup> Bleichmar, *Visible Empire*, 8-10 and 100-104.

<sup>80</sup> TNA, WO 40/4, letter dated May 1, 1794, from Alexander Anderson to Sir George Yonge, unpaginated.

<sup>81</sup> Jane R. Pomeroy, *Alexander Anderson's New York City Diary: 1793 to 1799* (New Castle, DE: Oak Knoll Press, The American Antiquarian Society, 2014), Vol 2, entry for April 27, 1799, 612.

very well inform'd.”<sup>82</sup> When it was time for Anderson, the nephew, to return to his home in New York, he recorded, “Mr. Tyley gave me some drawings of his, and I receiv'd a few from my uncle with an intention of engraving them should I reach my native country.”<sup>83</sup> Besides the drawings sent to Forsyth, Yonge, and Banks, Tyley's work was destined to travel to the United States, where they were meant to be reproduced and see greater circulation.

Though Tyley's talent made him valuable in the St. Vincent Garden, it could not protect him from expulsion from the island when he made the authorities uneasy. As an educated man of color, he may have been a leader in his community.<sup>84</sup> However, he was not satisfied with the position that people of color occupied in his society. He corresponded with William Dowding, a fellow man of mixed race who advocated for the rights of free people of color in the eastern Caribbean. In 1790 in Dominica, Dowding had petitioned the governor on behalf of indebted free people of color. Dowding had been in trouble with the authorities on other islands. He was tried in Grenada in 1791 for sending a letter to George Washington expressing the wish of free people of color from the British colonies in the Caribbean to start a settlement in the United States. Dowding was also said to have struck a white man on Martinique, and for that crime, he was pilloried and banished from the island for nine years.<sup>85</sup> In 1800, the government found that Dowding and Tyley had carried on a correspondence, along with other free people of color on Martinique and Antigua, which was “very improper, and perhaps seditious...grossly abusive of the white inhabitants of the West Indies.” Local officials noted that this sort of agitation had been

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<sup>82</sup> Pomeroy, *Alexander Anderson's New York City Diary: 1793 to 1799*, Vol 2, entry for May 7, 1799, 614.

<sup>83</sup> Pomeroy, *Alexander Anderson's New York City Diary: 1793 to 1799*, Vol 2, entry for May 27, 1799, 617.

<sup>84</sup> He was after his return to Antigua; he was one of six signatories on a petition from the free people of color of Antigua requesting civil rights, TNA, CO 318/76, “To Henry Maddock and Fortunatus Dwaris, His Majesty's Commissioners of Inquiry into the Administration of Justice in the Windward and Leeward Islands, at Present in the Island of Antigua,” dated October 8, 1823, f. 122-125.

<sup>85</sup> James Epstein, *Scandal of Colonial Rule: Power and Subversion in the British Atlantic during the Age of Revolution* (Cambridge: Cambridge University Press, 2012), pp. 117-119. Many thanks to Jim Epstein for the tip on the connection between Dowding and Tyley. Eliga Gould and Peter Onuf, *Empire and Nation: The American Revolution in the Atlantic World* (Baltimore: Johns Hopkins Press, 2005), 283-284.

fairly common since the French Revolution had begun. The exact nature of all of the letters is unknown; Tyley received a warning that his home would be searched and was able to tear up his letters “and scatter them among the canes contiguous to his residence” before the search party arrived.<sup>86</sup>

Authorities were particularly nervous about plots amongst the people of color during this time. Fédon’s Rebellion in Grenada and the revolution on Haiti had led authorities to suspect other plots among the free black population across the colonies.<sup>87</sup> There were efforts to curtail the movements of free people of color, and colonial governments became more vigilant in their search for signs of unrest. After Dowding and Tyley’s correspondence was discovered, the president of the assembly in St. Vincent wrote to other British possessions in the West Indies about the possibility of an uprising of the free people of color, and received assurances that all was well.<sup>88</sup>

Tyley’s foray into activism cost him his job at the botanical garden.<sup>89</sup> He and Dowding were tried and found guilty for “Seditious Libel,” exiled from St. Vincent, and sent to the president of the council in Barbados, since one of their most enthusiastic correspondents lived there.<sup>90</sup> Even had Tyley been found innocent, the president of the St. Vincent assembly, with the support of the Duke of Portland, the Home Secretary, would not have supported reinstating him at the garden. Both men were anxious to preserve “a distinction of Colour between the

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<sup>86</sup> TNA, CO 260/16, letter dated June 5, 1800, from Drewy Ottley to Duke of Portland, unpaginated, p. 1-3 of document.

<sup>87</sup> Gould and Enuf, *Empire and Nation*, 283.

<sup>88</sup> TNA, CO 260/16, Despatch dated June 5, 1800, Drewy Ottley to Duke of Portland, unpaginated, p. 3 of document.

<sup>89</sup> From accounting slips in TNA, WO 40/4, slip dated December 24, 1803, Tyley’s replacement seems to have been a John Barber, who was paid at the same rate of 5 shillings a day, Tyley’s salary according to a slip dated January 1, 1800.

<sup>90</sup> TNA, CO 260/16, letter dated October 5, 1800, from Drewy Ottley to Duke of Portland, unpaginated, p. 2 of document; they were sent to President Bishop.

Inhabitants” of the British colonies. Both men saw Tyley’s actions and the general agitation of free people of color for more rights as a threat to that distinction.<sup>91</sup>

Tyley was seen by some as a serious threat to the stability of society in the British West Indies. However, his expertise in drawing and the botanical knowledge that he learned in the St. Vincent garden would give him an opportunity to work as a naturalist despite his political leanings. In June of 1802, Alderman Hibbert and John Woodford of Vauxhall wrote to Governor Picton in Trinidad to ask for Tyley’s safe passage to the island from his home in Antigua. They noted that they wished to send an “experienced naturalist and draftsman” to explore the plant life of Trinidad. These men planned to support Tyley there for a year or two, and they asked the government for passage and rations for him as though he were a subaltern officer. They felt that their plan would have public benefit, in encouraging exchange of plants across the islands, and thus it was appropriate to ask for a modicum of government support.<sup>92</sup>

Alderman Hibbert was George Hibbert, Alderman of London from 1798 to 1803, first chairman of the West India Dock Company, and junior partner in the West Indies trading firm of Hibbert, Purrier, and Horton. He was well connected within the learned societies of the day, with his election as a fellow of the Royal Society in 1811 and a fellow of the Society of Arts in 1812.<sup>93</sup> He was also a correspondent of James Edward Smith of the Linnean Society.<sup>94</sup> Besides

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<sup>91</sup> TNA, CO 260/16, draft dated October 1800, from Duke of Portland to Drewy Ottley, unpaginated, p. 1-3 of document; and TNA, CO 260/16, letter dated June 5, 1800, from Drewy Ottley to Duke of Portland, unpaginated, p. 4 of document.

<sup>92</sup> TNA, CO 295/2, letter dated June 11, 1802, from Alderman Hibbert and John Woodford to Governor Picton, f. 201-202, quotation f. 202.

<sup>93</sup> David Hancock, “Hibbert, George (1757–1837),” *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online ed, Jan 2008 [<http://www.oxforddnb.com.proxy.library.vanderbilt.edu/view/article/13194>] (accessed 9 Aug 2017). A Mr. Woodford was mentioned on p. 628 of *Curtis’s Botanical Magazine, Or, Flower-Garden Displayed* 17 (1803), in reference to the *Petrea Volubilis*, Twining Petra, “Imported by Mr. Woodford from St. Vincent’s, in whose stove at Vauxhall, it flowered, as we believe, for the first time in this country, in August last: in the West-Indies its blossoms are produced in November.” Alderman Hibbert is also a contributor to that volume (p. 597).

his connection to James Edward Smith, Hibbert was very involved in botanical circles. Hibbert had a famous collection of Proteaceae, looked after by his gardener Joseph Knight, who wrote *On the Cultivation of the Plants Belonging to the Natural Order of Proteaceae, with Their Generic As Well As Specific Characters and Places Where They Grow Wild*. When Hibbert tired of his collection, he gave them to Knight who used them as the germ of the nursery business he established in 1809.<sup>95</sup> George Hibbert and his partner in the Tyley venture, E.J.A. Woodford, were also patrons of the first nurseries London specializing in Australian plants.<sup>96</sup>

George Hibbert and the Hibbert family had also been long involved in the British West Indies. Hibbert, Purrier, and Horton, at 9 Mincing Lane, was a family business well connected to circles of botanical exchange in the Caribbean. George's older brothers, Thomas and Robert, lived in Jamaica to safeguard the family business. Their uncle, Thomas Hibbert (died 1780) had been a planter and leading merchant there.<sup>97</sup> Hinton East, owner of a famed private botanic garden in Jamaica, was friendly with the firm and used it to facilitate some of his plant exchanges with Sir Joseph Banks.<sup>98</sup> The Hibberts were social climbers. They had made their fortune first as merchants, then as slave traders and planters. They parlayed this money into status by buying great houses in the English countryside, establishing charitable institutions, and

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<sup>94</sup> See Linnean Society of London, MS 301, LINNSOC-JES-COR-22-110 to LINNSOC-JES-COR-22-112, Letters dated October 1, 1806; February 18, 1825; and April 29, 1825 from George Hibbert to J.E. Smith, from JStor Global Plants (<http://plants.jstor.org/stable/10.5555/al.ap.visual.linnsoc-jes-cor-22-110>), accessed August 10, 2017.

<sup>95</sup> R.M. Barker and W.R. Barker, "Botanical Contributions Overlooked: The Role and Recognition of Collectors, Horticulturalists, Explorers and Others in the Early Documentation of the Australian Flora," in ed. P.S. Short *History of Systematic Botany in Australia. Proceedings of a Symposium Held at the University of Melbourne* (Australian Systematic Botany Society, Melbourne, 1990), 45.

<sup>96</sup> Tony Cavanagh, "Australian Plants Cultivated in England, 1771-1800," in *History of Systematic Botany in Australasia. Proceedings of a Symposium Held at the University of Melbourne*, ed. P.S. Short (Melbourne, Australia: Australian Systematic Botany Society, 1990), 273-284.

<sup>97</sup> "Hibbert, George (1757-1837), of Clapham, Surr," in Member Biographies, *History of Parliament Online*, <http://www.historyofparliamentonline.org/volume/1790-1820/member/hibbert-george-1757-1837> (accessed October 14, 2017); for more about the Hibbert family's business and connection to the Caribbean, see Katie Donington, "Transforming Capital: Slavery, Family, Commerce and the Making of the Hibbert Family," in *Legacies of British Slave-Ownership: Colonial Slavery and the Formation of Victorian Britain* (Cambridge: Cambridge University Press, 2014), 203-249.

<sup>98</sup> *IP Corr JB*, Vol 2, Letter 48, letter dated July 19, 1784, from Hinton East to Joseph Banks, 62-63.

buying rotten boroughs. George's interest in art, books, and exotic plants helped him style himself as a man of learning, another performance to efface the family's origins in trade and assure their rise into the highest circles.<sup>99</sup>

Alderman George Hibbert probably became connected to Tyley through his family connections. While Thomas Hibbert, brother to George, lived on Jamaica, he corresponded with Alexander Anderson.<sup>100</sup> Anderson, through his connection to Thomas Hibbert, likely put Tyley in touch with Alderman Hibbert and John Woodford. Anderson himself was botanizing on Trinidad that year.<sup>101</sup> The timing of Anderson's trip and the passport request could mean that Anderson expected Trinidad to be a site of reunion for the two men, where they could work together as they had done before Tyley's expulsion from St. Vincent. Anderson had won his botanical post with the support of his social betters; it is likely that he in turn vouched for Tyley to help him win a job as a naturalist and collector. His word on Tyley's capability for performing botanical work sufficed for Hibbert and Woodford, who would have been unable to judge his qualifications from London. Hibbert and Woodford thought well enough of Tyley to call him a gentleman and refer to him as "Mr. Tyley" in their request to government.<sup>102</sup>

If Tyley had been a white settler and not a free man of color with a past, Hibbert and Woodford would likely have been successful in their bid to send him to Trinidad. Governor Picton was generally supportive of botanical efforts in the Caribbean. When Anderson collected plants on Trinidad in July of 1802, Picton provided help in the form of a government ship and

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<sup>99</sup> Donington, "Transforming Capital: Slavery, Family, Commerce and the Making of the Hibbert Family," 203-249.

<sup>100</sup> Thomas Hibbert of Jamaica, see Richard Howard, "The St Vincent Botanic Garden – The Early Years" in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*, ed. Robert S. Anderson, Richard Gove, and Karis Hiebert (Oxford: McMillan Caribbean, 2006), 127.

<sup>101</sup> Lansdown Guilding, *An Account of the Botanic Garden*, letter dated July 28, 1802, from Alexander Anderson to Society of Arts, 16-17.

<sup>102</sup> TNA, CO 295/2, letter dated June 11, 1802, from John Woodford to John Sullivan, f. 201-202.



told him of his wishes for a botanic garden on the island.<sup>103</sup> Tyley also had Anderson, the head of the only royal botanic garden in the region, to vouch for his merit. Furthermore, his prospective employer, George Hibbert, was well placed to have local government respond to his request since he had family ties to a West India trading house and planters on Jamaica.

Hibbert and Woodford were either unaware or unconcerned by the activities that led to Tyley's expulsion from St. Vincent. Anderson was obviously aware of Tyley's political leanings, but continued to support him. Unfortunately, Governor Picton of Trinidad was both aware and concerned. Picton was a military man who had been charged with bringing order to Trinidad, where free people of color outnumbered white settlers. Until 1797, Trinidad had been a Spanish colony with a large population of French speaking whites and people of color who had migrated there during and after the French Revolution.<sup>104</sup> Trinidad was a society with clear divisions based upon race, and Spanish law remained in force because some feared that British law would lead nonwhites to step outside of their subordinate place.<sup>105</sup> When people of color with special skills and education asked for legal sanction to use their talents, the administration of Trinidad would step in to prevent their rise.<sup>106</sup> British West Indian society as a whole was highly racialized. As governor, maintaining this dynamic of power would have been one of Picton's responsibilities. It was expected of him by government at home, as well as the planter elites of the island.

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<sup>103</sup> Lansdown Guilding, *An Account of the Botanic Garden*, letter dated July 28, 1802, from Alexander Anderson to Society of Arts, 16-17.

<sup>104</sup> Epstein, *Scandal of Empire*, 90-126.

<sup>105</sup> Epstein, *Scandal of Empire*, 138-139 and 144-148.

<sup>106</sup> Consider the case of Francis Williams, a man who had been born a slave but obtained his freedom and received a medical diploma from the Royal College of Surgeons of London. He petitioned the Medical Board in Trinidad to be allowed to legally practice medicine there, but was denied both by that Board and then by the government on appeal. TNA, CO 295/58, Extract of a Communication from His Excellency Lieut Col AW Young, Administering the Government, to a Dr. A Williams, President of the Medical Board, Relative to Francis Williams' Petition, dated the December 21, 1821, to His Excellency, extract dated February 8, 1822, f. 187; TNA, CO 295/58, The Memorial of Francis Williams, copy dated February 26, 1822, f.178r-179v, and TNA, CO 295/58, letter dated December 19, 1821, from Dr. Alex Williams to Lieut Col Young, f.180r.

Hibbert and Woodford were in Britain, and it is possible that they were not familiar with the implications of giving a passport and government support to Tyley. At the same time, Hibbert's business and family ties to the Caribbean make it possible that he knew of Tyley's past. Though he had never been to Jamaica himself, he must have had some idea of the racial dynamics of the British Caribbean. His family's fortune was made from plantations and the slave trade, and he was an impassioned defender of the institution once he entered Parliament in 1806. He was involved in institutions to protect the West India interest, and once it became clear that slavery would be phased out, Hibbert threw his support on the side of compensation.<sup>107</sup> As someone this connected to the institution of slavery, it is difficult to believe that Hibbert did not know that the existence of a man like Tyley was destabilizing to British West Indian society. For whatever reason, his desire for Trinidad's plants led him to overlook the threat that Tyley posed to the social order of the island.

As a man on the spot, Picton was very well informed about Tyley's conviction and was not willing to overlook his past. In his reply to Woodford and Hibbert's request, Picton outlined Tyley's "seditious" actions on St. Vincent in 1800 and noted that everyone in Trinidad was aware of Tyley's character. People of color saw him "as a Champion and Martyr in their cause."<sup>108</sup> Allowing him on the island would be a dangerous mistake. News of Tyley's botanical expertise had traveled to London through Anderson's intercession, but news of his political activism had traveled across the Caribbean. Picton denied the passport request and scuttled Tyley's chance to become a paid naturalist.

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<sup>107</sup> See Donington, "Transforming Capital: Slavery, Family, Commerce and the Making of the Hibbert Family," 203-249.

<sup>108</sup> TNA, CO 295/2, letter dated September 18, 1802, from Governor Picton to Mr. Sullivan, Esq. Downing Street, f. 155. Picton tells Sullivan that he's responding to his letter of June 25<sup>th</sup> regarding the request of Hibbert and Woodford.

The details of Tyley's life after the failure of the plan to send him to Trinidad are sparse, but he continued to find supporters in the region who recognized the value of his skill. In 1815, a doctor on Antigua, William Hamilton, wrote to Sir Joseph Banks about him, calling him Tyley. Hamilton praised Tyley's skill as a botanical artist and rued the "system of the most ingeniously cruel persecution" which had driven him from St. Vincent. Perhaps to convince Banks of his own veracity, Hamilton named others who knew of Tyley, including the family of Sir Ralph Woodford, the governor of Trinidad, and a Mrs. Ricketts of Baker Street, London, who was the wife of a former governor of Barbados. As a further advertisement, Hamilton enclosed a drawing that Tyley had given him.<sup>109</sup> Proximity on Antigua had thrown Tyley and Hamilton together, but since Anderson was known to correspond with governors of Barbados and Trinidad, Tyley's more exalted connections were likely the result of his influence. However, since the authorities on St. Vincent planned to send Tyley to Barbados after his trial in 1800, he may have known Mrs. Ricketts personally.<sup>110</sup> Despite Tyley's political involvement, he continued to find people in power who knew about his political sentiments but continued their connection to him, presumably due to his artistic abilities and knowledge of plants. Though his political engagement had cost him dearly, Tyley never gave up his hopes for improving the lot of people of color in the Caribbean. He was a signatory on an 1823 petition from free people of color on Antigua to a

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<sup>109</sup> *Scientific Correspondence of Sir Joseph Banks*, ed. Neil Chambers, (London: Pickering & Chatto, 2007), Vol 6, Letter 2049, dated October 22, 1815, William Hamilton to Banks, 184-185. The governor was George Poyntz Ricketts, governor of Barbados from 1794-1800. See "George Poyntz Ricketts I," *Legacies of British Slave-ownership Database*, <http://www.depts-live.ucl.ac.uk/lbs/person/view/2146647767> (accessed 19th December 2017).

<sup>110</sup> Anderson was a known correspondent of Mrs. David Parry, wife of the governor of Barbados from 1782 to 1794 and Lord Seaforth, governor of Barbados from 1801 to 1806. Howard, "The St Vincent Botanic Garden – The Early Years," 127. It's likely that Anderson also corresponded with George Poyntz Ricketts, whose term came between Parry and Seaforth. For Tyley's probable trip to Barbados, see TNA, CO 260/16, letter dated October 5, 1800, from Drewy Ottley to Duke of Portland, unpaginated, p. 2 of document.

royal commission to investigate the administration of justice on the Windward and Leeward Islands.<sup>111</sup>

In the 1790s, when Anderson sought to find more opportunities for Tyley, he never saw Tyley as more than the assistant to a gentleman naturalist. However, Tyley eventually won patrons who offered to finance him as a naturalist in his own right, despite his conviction for sedition. Though that opportunity did not materialize, he continued to exercise his talent and come to the notice of botanically minded people, some with connections to government. The value of his perceived knowledge and skills allowed him to step outside of the usual boundaries for one of his race and class in some environments, literal and metaphorical, but outside the botanical community, he had to contend with the limitations placed on people of his kind.

Tyley was unable to travel, but the drawings he made for Anderson found their way to London. After Anderson's death, his executors passed them to A.B. Lambert for donation to the Linnean Society, arguably the most important British organizations for the study of botany in the period. In the *Transactions* issue announcing the donation, Tyley is not mentioned at all.<sup>112</sup> His work became part of his patron's legacy.

## **Washington and Laborers**

Below the superintendent and his botanical artists and assistants, there were others who did the physical labor in the gardens.<sup>113</sup> The nature of this labor and the individuals who

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<sup>111</sup> TNA, CO 318/76, "To Henry Maddock and Fortunatus Dwaris, His Majesty's Commissioners of Inquiry into the Administration of Justice in the Windward and Leeward Islands, at Present in the Island of Antigua," dated October 8, 1823, f. 122-125.

<sup>112</sup> "Donations to the Museum of the Linnean Society," *Transactions of the Linnean Society of London* 11, part 1 (1815): 430.

<sup>113</sup> Daniel Rood suggests that part of global scientific practice was simply managing labor because so much of the work in the colonies relied on subaltern groups, see Daniel Rood, "Toward a Global Labor History of Science," in *Global Scientific Practice in an Age of Revolutions, 1750-1850*, ed. Patrick Manning & Daniel Rood (Pittsburgh, PA: University of Pittsburgh Press, 2016), 255-274.

performed it varied based on location. In India, most of the heavy work was done by poorly paid Indian laborers, though convicts were occasionally used. In Sydney, convicts provided the bulk of the heavy labor for maintaining the Domain and the Sydney Botanic Garden. In the St. Vincent garden, slaves hired from local landowners performed the heavy work. These workers were rarely recognized for any skill, though it did happen. In 1820 at the Calcutta garden, the superintendent wrote to the East India Company to praise his workers and ask for higher wages for some of them. A few were singled out and praised by name, including a man who was responsible for pruning trees and shrubs. A nursery worker with an extensive knowledge of plant cultivation and familiarity with the Linnean System was also particularly praised. Many of the salary increases were approved, but they were to be personal raises only, thus the increased salary would not be automatically granted to any successors in these positions.<sup>114</sup> The East India Company was apparently willing to recognize that these individuals brought a certain skill to their posts and performed their duties to a level not to be expected from the average worker.

It is not clear whether the slaves in the St. Vincent botanic garden had similar opportunities to convince the superintendents of the value of their work. The disease environment of in St. Vincent meant that livestock were not as available for routine farm work. For instance, instead of manuring the fields with a team of horses and a cart, as in Britain, slaves had to carry manure into the fields in trays and baskets balanced on their heads. Manure itself was also in short supply.<sup>115</sup> The livestock shortage forced slaves to do other types of work which would have normally been performed by animals. Islanders called on slaves to transport goods which in Britain would have been moved by horsepower. Caley adapted the tools of his trade to

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<sup>114</sup> BL, IOR/F/4/655/18040, Extract Bengal Public Consultations, June 30, 1820, letter from Wallich to Lushington dated June 14, 1820, p. 92-97. Shaik Mooty worked in the nursery, had been in the garden for 14 years, and succeeded his brother. The skilled pruner was called Jadoob. Many of these increases were “personal” meaning not to be extended to successors, per Lushington’s note on the Consultations, dated June 30, 1820, p. 98-99.

<sup>115</sup> TNA, WO 43/150, letter dated April 8, 1822, from George Caley to William Merry, Depty Secy at War, f. 276v.

accommodate this difference. He had plant boxes constructed specifically of a size that the slaves could still lift and carry balanced on their heads.<sup>116</sup>

At the St. Vincent garden, it was rare for any worker below the superintendent's assistant to be recognized. Many of the superintendents instead complained about the slaves. Anderson claimed, "I work harder than any of the Nigroes I have hired."<sup>117</sup> Anderson complained on another occasion that the slaves working in the garden "must be constantly attended and never can do anything by directions."<sup>118</sup> It is possible that when Anderson accepted the post at St. Vincent, he did not realize that as a result of the modest staff he would be allowed, the garden might require real physical work from him.<sup>119</sup> He seemed unaware that slaves would have had very little incentive to work particularly hard since they would receive no accolades or salary for doing so. Anderson's statements also represent a strange blindness to the importance of skill or basic familiarity with botanic gardening even for his heavy laborers. The slaves in Anderson's employ were presumably agricultural workers, but growing sugar cane or other cash crops would have required a completely different work flow than maintaining plants in the botanic garden. The botanic garden also offered low wages for hiring slaves, lower than other employers on the island. A later superintendent, George Caley, recognized that this practice encouraged slave owners to send their older and less vigorous slaves to the botanic garden.<sup>120</sup>

However, Anderson did recognize that at least some people of color on the island had skill in gardening. In the same letter in which he lamented the inability of the slaves to understand his directions, Anderson noted, "I have often viewed the Nigroe gardens in surprise

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<sup>116</sup> TNA, WO 43/150, letter dated April 8, 1822, from George Caley to Charles Brisbane, f.287r.

<sup>117</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated November 4, 1785, from Alexander Anderson to William Forsyth, f.85v.

<sup>118</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated June 6, 1786, from Alexander Anderson to William Forsyth, f. 97-98.

<sup>119</sup> According to an accounting slip in the TNA, WO 40/4, dated December 24, 1803, Anderson hired 21 slaves for a three month period.

<sup>120</sup> *IP Corr JB*, Vol 8, Letter 147, letter dated August 27, 1816, from George Caley to Banks, 171-172.

being filled with all kinds of vegetables in the greatest perfection while their master's garden was a bed of dry earth."<sup>121</sup> Despite his blanket statements about the slaves who worked for him, Anderson recognized that slaves might have knowledge of gardening techniques that were effective for St. Vincent's climate, techniques that were unknown to the planters.

Caley, too, understood that slaves could have knowledge unknown to planters on the island and even himself. He spoke to at least two slaves about a particular plant of which he sent a specimen to Sir Joseph Banks through his assistant, Robert Brown. Caley recorded the home territories of both slaves, Congo and its environs, using that information to get a sense of the plant's provenance. He shared with Brown what the slaves had told him about the plant's uses and life cycle, including the names that their people called the plant. Caley triangulated the information that he had, using a separate report he had heard of a specimen of the plant growing in the botanic garden in Martinique to confirm the veracity of what the slaves had told him and hazard a guess at the scientific name for the plant.<sup>122</sup> Though he did not credit his two informants by name, Caley included the slaves' local knowledge in his own reasoning about the mystery plant, and included this information in his report to a fellow naturalist.

The scarcity that helped create opportunities for John Tyley in the St. Vincent garden also made the labor and expertise of individual slaves valuable and worthy of comment. The garden's account slips during Anderson's tenure indicate the number of slaves he hired, the dates, and the name of the owner. Though certain owners' names reoccur, these slips do not provide definitive

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<sup>121</sup> RBGK, Forsyth Correspondence, Anderson Letters, FOR/1/4, letter dated June 6, 1786, from Alexander Anderson to William Forsyth, f. 97-98, Anderson continues with some of his desiccationist views, "This I readily found to be from the Nigroe [sic] tracing the footsteps of nature, by leaving every tree that would shelter the labours of his hand, while his master acted the contrary."

<sup>122</sup> SL NSW, MLMSS 6361, Joan Webb Transcript Book 5, Letter dated May 8, 1819, from George Caley to Robert Brown, p. 176-177.

evidence that Anderson repeatedly hired the same slaves.<sup>123</sup> However, at least one slave became enough of a presence in the garden to make Anderson fear losing him. In 1792, Anderson wrote to Sir George Yonge to provide a general account of the state of the garden. At the very end of this letter, Anderson described “a great loss” that had been narrowly averted. A slave called Mazaran had become ill with dysentery and almost died, but to Anderson’s relief, he was successfully nursed back to health. Anderson closed his story about Mazaran and that particular letter, with a simple statement about Mazarin’s character: “He is a very usefull [sic] man.”<sup>124</sup> Whatever work Mazaran might have performed in the garden, it was of sufficient quality to make him an individual to a man not particularly inclined to speak of slaves in that way. Mazaran’s case suggests that at times, a superintendent might recognize the worth of a slave’s contributions to the operation of the botanic gardens. However, the legal wrangling over a slave called Washington demonstrates more fully that both garden superintendents and government officials implicitly acknowledged that even a slave’s knowledge of the garden had value.

Part of Washington’s history is accessible, but only because he was the subject of a struggle between George Caley, a superintendent of the St. Vincent garden, and the colonial government. As described at length in chapter two, in 1821, Caley was disgruntled because he would shortly lose his post, and the St. Vincent Garden had lost financial support in favor of a garden in Trinidad. The St. Vincent garden would continue as a locally funded institution, with the support of the governor, Charles Brisbane, who seemed poised to appropriate the garden as his own pleasure ground. At that point, Caley purchased Washington from the estate of Hugh Perry Keane, who had been connected with the garden for some time. Keane happened to be in

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<sup>123</sup> For instance, TNA, WO 40/4, accounting slips for December 30, 1803 and January 4, 1800 indicate that Anderson hired slaves from Elizabeth Alexander. Slips from December 24, 1799 and December 26, 1803 indicate repeated hiring of labor from the same person, name indecipherable.

<sup>124</sup> TNA, WO 40/4, letter dated July 12, 1792, from Alexander Anderson to Sir George Yonge, p. 3.



London when Caley accepted the St. Vincent post, and Caley met with him to learn about the island. Keane had been the attorney of prior superintendent William Lockhead, and he had at times supplied the botanic garden with slave labor.<sup>125</sup> The slaves who worked in the garden were generally hired from local landowners, therefore this outright purchase was a departure from the norm. After his purchase, Washington was known to be attached to the garden, and it is possible that he had been among the group of Keane's slaves hired out to the garden for years. However, Caley never sought reimbursement for the purchase from the crown. As a result, when Caley departed for England in 1822, he left Washington with his attorney with specific instructions that he should not be allowed to work in the botanic garden. Caley's directive was in direct contradiction to the wishes of local government officials who had intended for Washington to be turned over to government as an African apprentice and continue working in the garden, now funded by the colony. In one of his letters to the War Office about the issue, Governor Brisbane exclaimed that Washington was working for Caley's attorney.<sup>126</sup>

Washington's status was uncertain, and Governor Brisbane and others in government exchanged letters about him over several years. Brisbane felt that Caley had behaved badly by not leaving Washington with government so that he could be put on a path to freedom, and wrote to the War Office for further instructions regarding the situation.<sup>127</sup> Brisbane also believed that Washington had been paid for by the crown. Washington entreated the Governor for some clarity

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<sup>125</sup> There's evidence that Keane provided slaves for the garden at least in Anderson's time. For evidence of Keane's past dealings with the botanic garden, see TNA, WO 40/4, accounting slips dated December 30, 1803 and January 17, 1800; SL NSW, MAV/FM4/10949, George Caley Travel Diary, entry for May 8, 1816, p. 343; TNA, CO 260/30, letter dated February 28, 1813 from Charles Brisbane to Earl Bathurst, f. 22. "Cayley's" purchase, see TNA, Collection: Office of Registry of Colonial Slaves and Slave Compensation Commission, Records, Class: T 71; Piece Number: 497, Frame 273, from Ancestry.com. *Slave Registers of former British Colonial Dependencies, 1813-1834* [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc, 2007, accessed April 2, 2015.

<sup>126</sup> TNA, CO 260/40, letter dated August 7, 1823, Charles Brisbane to Lord Bathurst, f. 56-57; and TNA, CO 261/13, letter dated March 13, 1826, Bathurst to Charles Brisbane, p. 160; TNA, CO 261/13, letter dated April 14, 1823, from Bathurst to Charles Brisbane, p. 107.

<sup>127</sup> TNA, CO 260/40, letter dated August 7, 1823, Charles Brisbane to Lord Bathurst, f. 56-57.

about his status. Brisbane actually responded; when one of his letters to the government about the situation went unanswered, Brisbane wrote again, explaining that he had been pushed to do it by Washington's queries.<sup>128</sup> Despite this confusion, it is apparent that the local government expected to employ Washington in the botanic garden after Caley left, and Caley prevented that, even after being entreated to transfer him to the crown. The War Office finally concluded in 1826 that since the botanic garden was no longer being funded by the imperial government, there was no reason to continue efforts to transfer Washington to the crown. Governor Brisbane was instructed to "take the proper steps for setting his [Washington's] mind at rest as to the fact of his being the property of Mr. Cayley [sic]."<sup>129</sup>

Though it is not definite that the government wanted to take advantage of skills Washington already had or had learned from working in the garden, it does seem that Caley withheld Washington's labor for a reason. Like Alexander Anderson, Caley was not particularly inclined to value the labor of the slaves in the garden very highly. In April of 1822, he reminded the Deputy Secretary at War that he had only slaves and not European gardeners working the garden, and that, "whoever has the management of a Botanic Garden here, must not only know how to do everything belonging to it, but must be able to do it with his own hard labor." Caley noted that he was obliged to physically work in the garden to such a degree that he "could scarcely crawl home."<sup>130</sup> Caley was likely highlighting his own exertions in the garden due to his uncertain future at that time, but his words were not those of a person who felt that slaves, in general, made good botanic garden workers. He may have been withholding Washington's labor purely from spite. However, Caley left the country without clear job prospects. He complained of

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<sup>128</sup> TNA, CO 260/42, letter dated October 5, 1825, Charles Brisbane to Wilmot Horton, f. 167.

<sup>129</sup> TNA, CO 261/13, letter dated March 13, 1826, Bathurst to Charles Brisbane, p. 160.

<sup>130</sup> TNA, WO43/150, letter dated April 8, 1822, from George Caley to William Merry, Deputy Secy at War, f. 273v-274r.

money that he was owed in that same letter. Why not raise money by selling Washington to someone in St. Vincent? Why retain the right to control Washington's labor?

Brisbane's persistent attempts to secure Washington's labor for the government also seem to be an implicit recognition that Washington was special in some way. Though Washington's experience in the botanic garden did not give him opportunities like John Tyley, it would have put him on a path to freedom as an apprenticed African.<sup>131</sup> Despite the extended wrangling over his status, later official documents for Washington do not reveal that he was distinctive in any way. The slave registers for St. Vincent indicate that Washington was eventually freed in George Caley's will upon his death in 1829.<sup>132</sup> Washington was noted to be 45 years of age, and his employment was "Labourer."<sup>133</sup>

## Conclusion

The transition from gentleman amateur to trained professional opened up a space for men of education who needed paying jobs to pursue careers in science. During this transition, there was a period when a man could hope to head a botanic garden in the British colonies if he had an interest in botany, some practical training, and an elite patron in Britain to vouch for his expertise. These patronage relationships could overturn social conventions. Anderson was able to contradict the local governor because he had powerful friends with an interest in Botany back in Britain. One might call Tyley a naturalist, in part because his social betters recognized him as

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<sup>131</sup> For an account of apprenticeships and the end of slavery in the British Caribbean, see Robin Blackburn, *The Overthrow of Colonial Slavery 1776-1848* (London: Verso, 2011), 419-472.

<sup>132</sup> Webb, *George Caley*, 159-160; TNA, PROB 11/1762, Will of George Caley, f.240-241r. Caley's biographer notes that there are no further details about Washington, but the National Archives have revealed otherwise.

<sup>133</sup> TNA, Collection: Office of Registry of Colonial Slaves and Slave Compensation Commission: Records, Class: T 71; Piece Number: 499, Frame 236, from Ancestry.com. Slave Registers of former British Colonial Dependencies, 1813-1834 [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc, 2007, accessed April 2, 2015.

one. And once Anderson came across John Tyley, he sought to mimic his own benefactors and become a patron himself.

Because the support of powerful people stood in for formal qualifications, men of uncertain birth, including people of color, were able to take advantage of surprising opportunities in the British colonies. The rarity of skill in botanical work in the colonies also meant that those who might never receive explicit recognition for knowledge were implicitly known to be valuable contributors to the work of the botanic gardens. Though archives contain hints about the value of the work of those at the bottom of the social spectrum, their contributions remain somewhat invisible. Deviations from the norm in the treatment of low status workers can give historians a sense of who had uncommon abilities. Expertise, or skill in botany, could be a destabilizing force in the social relationships and an alternate measure of value both inside and outside the colonial gardens.

## Chapter 5

### A New Type of Garden: Styles of Governance

#### **Introduction**

Botanic gardens existed in the British Isles for at least a century before the first colonial botanic gardens were funded by the British state. Some of the seventeenth-century British gardens were founded with a didactic purpose. Oxford's botanic garden was designed to help educate students studying medicine, and the Chelsea Physic Garden was created by the Society of Apothecaries to train the Society's apprentices.<sup>1</sup> The Royal Botanic Gardens, Kew, began its existence as a royal garden, strictly for the amusement of royals and their favorites. These gardens, by the nature of their establishment, allowed limited access and strictly controlled plant exchanges.

The botanic gardens in the British colonies were each founded for different purposes, but they all provided a variety of botanical services to their communities, setting them apart from botanic gardens in Britain and Europe more generally. Colonial gardens allowed access to the public much earlier and more consistently than similar gardens and museums in mainland Britain. Gardens in the empire provided plant materials and education services to their communities on a much wider scale than British gardens of the period. Colonial garden superintendents were also, depending on region, heavily involved in the development of prospective agricultural crops and conservation efforts. The gardens in the empire were unlike their mainland counterparts, and a close examination of their botanical programs reveals the

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<sup>1</sup> Sue Minter, *The Apothecaries' Garden: A New History of the Chelsea Physic Garden* (Phoenix Mill, UK: Sutton Publishing Limited, 2000), 1-14.

prevailing styles of colonial rule and the appearance of rule that local and imperial governments wanted to project. Their programs may have been free to the public, but certain groups received targeted attention from colonial garden staff, and all public access was intended to improve the public, where “improvement” was a standard set by government.

### **Breaking with Tradition: European Models, Mandates, and Plant Distribution**

When founding botanic gardens in the colonies, British officials had botanic gardens within Europe as models. Starting in the sixteenth century, major European universities like Padua, Leiden, and Heidelberg began to support gardens to teach students the *materia medica*. Their founders also tried to convey messages about religious and political power in their layout. Increasing interest in specimens from lands outside of Europe led European monarchs to create cabinets of curiosity to house minerals and preserved animal and vegetable specimens. Physic and botanic gardens housed the living plants brought back from foreign climes.<sup>2</sup> The Jardin du Roi, founded as a royal physic garden in 1626, grew into a renowned botanical collection and survived the French Revolution.<sup>3</sup> The Schönbrunn, founded in Austria in 1740, is another site that began as a royal garden but developed into a more extensive botanical collection.<sup>4</sup> Foreign powers, including the Dutch, French, and Spanish, began to support botanical exploration in their overseas possessions before General Robert Melville founded the first British colonial botanic garden in 1765 on St. Vincent after the French ceded the island. British officials observed the efforts by foreign powers and compared them to the relative inaction of the British state. The

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<sup>2</sup> Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Edens and the Origins of Environmentalism, 1600-1860* (Cambridge, UK: Cambridge University Press, 1995), 74-78; Arthur Hill, “The History and Function of Botanic Gardens,” *Annals of the Missouri Botanical Garden* 2, no. 1/2 (February 1, 1915): 191-196

<sup>3</sup> E.C. Spary, *Utopia’s Garden: French Natural History from Old Regime to Revolution* (Chicago: University of Chicago Press, 2000).

<sup>4</sup> C. Stuart Gager, “Botanic Gardens of the World: Materials for a History” *Brooklyn Botanic Garden Record* 27, no. 3 (July 1938): 63.

Dutch, with their domination of the European spice trade, were a particular object of British envy. After botanic gardens were founded in British territories, colonial officials and botanical workers continued to compare the progress of British government supported science with the botanical initiatives of other states.<sup>5</sup>

Within Britain, the earliest botanic gardens were established in the seventeenth century. Some of them were connected to Britain's premier universities, such as the garden founded at Oxford in 1621 and Cambridge in 1762.<sup>6</sup> The Chelsea Physic Garden, founded in 1673, trained the apprentices of the Society of Apothecaries in the botanical part of their trade.<sup>7</sup> These gardens resembled their continental European counterparts in that they existed to grow samples for compounding and teach a limited pool of individuals about the use of herbs in medicine. The heads of these gardens joined worldwide networks of plant exchange to obtain new species for cultivation.

In the eighteenth century, the British royal family took an interest in elevating one of their personal gardens into a repository for rare plants from around the world. The Royal Botanic Gardens, Kew grew out of a garden developed first by Frederick, Prince of Wales and then Dowager Princess Augusta in the 1760s. With the assistance of Lord Bute, and later, under George III's patronage with guidance from Sir Joseph Banks, Kew became one of the premier gardens of Europe. Banks himself saw the necessity of keeping Kew better stocked than foreign

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<sup>5</sup> See for instance, BL, IOR/F/4/134/2427, attachment to a letter dated August 24, 1800 from William Roxburgh to CR Crommelin, Secy to Govt in Public Dept, attachment written by William Urban Bruce, p. 75-76; BL, IOR/F/4/134/2427, letter dated August 11, 1796 from Joseph Banks to the Earl of Liverpool, p. 125-126.

<sup>6</sup> There were some private botanic gardens in Britain at this time, and staff at the University of Edinburgh also developed a botanic garden in the eighteenth century, see Hill, "The History and Function of Botanic Gardens," 196-202; Glasgow University had a physic garden officially from 1704, though there is some evidence that a small physic garden connected to a professor at the university existed as early as the sixteenth century, see A.D. Bowen, *The Lost Gardens of Glasgow University* (London: Christopher Helm, 1988), 8-10 and 48-65.

<sup>7</sup> Minter, *The Apothecaries' Garden*, 1-14.

royal gardens so that it could provide choicer materials for diplomatic exchange.<sup>8</sup> Though development of the Kew site fueled Banks' efforts to obtain plants from foreign climes, it was not the biggest or most richly funded royal garden. From 1800 to 1820, the year of Banks' death, the gardens at Windsor, Kensington Palace, and Hampton Court were better funded than Kew. The portion of the Kew grounds dedicated to exotic plant specimens was limited. It was still a royal garden for supplying Kew Palace, the royal residence in the garden. Sheep, cattle, and pheasants roamed the pleasure grounds, and 26 acres were planted in cereal crops. Kew also boasted a kitchen garden to supply the King's table.<sup>9</sup> Kew looms large in the literature on the history of botany in the British empire, but it is easy to overstate Kew's role in colonial botany and its stature as a royal garden in the late eighteenth and early nineteenth centuries.

Some historians have argued that the founders of colonial gardens used Kew as a model.<sup>10</sup> The functions of the colonial botanic gardens overlapped with those of Kew and other gardens in Europe, yet they provided additional services. The colonial garden's founders and early superintendents often left explicit commentary about the goals they expected the gardens to achieve. For instance, East India Company officials founded the Calcutta botanic garden with the stated purpose of ending or mitigating the recurring devastating famines in India. Other goals, such as the propagation of spices and discovery of useful and valuable Indian plants were quickly added to the garden's mandate.<sup>11</sup> In St. Vincent, Melville founded a garden to help acclimatize spices and other valuable plants to foster the cultivation of new cash crops both on

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<sup>8</sup> Ray Desmond, *The History of the Royal Botanic Gardens, Kew* (Kew, UK: Kew Publishing, 2007), 28-42, 92-104, and 111-124; Hill, "The History and Function of Botanic Gardens," 206-208; A.E Orchard and T.A. Orchard, *Allan Cunningham: Letters of a Botanist/Explorer* (Fyshwyck, Australia: Privately Published through New Millenium Print, 2015), Letter 1/b/1, dated September 1, 1814 from Joseph Banks to George Harrison, 5-7.

<sup>9</sup> Desmond, *The History of the Royal Botanic Gardens Kew*, 103 and 141.

<sup>10</sup> Pratik Chakrabarti, *Western Science in Modern India: Metropolitan Methods, Colonial Practices* (Delhi: Orient Longman Private Ltd, 2004), 10-11.

<sup>11</sup> *The Indian and Pacific Correspondence of Sir Joseph Banks*, ed. Neil Chambers, Vol. 2 (London: Pickering & Chatto, 2014), Letter 86, dated June 1, 1786 from Robert Kyd to the Court of Directors, the Honourable East India Company, 117-123.



the island and the British West Indies more generally. The superintendents at St. Vincent were also given the government's blessing to explore the Spanish Main to find new medicinal and useful plants.<sup>12</sup> In Sydney, the botanic garden was founded to help develop agriculture in the new colony. When conducting a commission of inquiry into governance of the young colony, John Bigge urged the governor to establish a garden, and explained in his published reports that the garden could aid the collection of plants for experiment and the diffusion of the valuable and useful plants throughout the settlement.<sup>13</sup> From the outset, these colonial gardens were designed to be unlike any botanic garden in Europe.

When praising the colonial gardens in material written for the scientific community, garden supporters focused on the gardens' unique features and how they related to metropolitan goals. In India, those close to the Calcutta botanic garden realized the benefits it provided to people and institutions in Europe and stressed those activities when publishing material for public consumption. In 1814, William Roxburgh published *Hortus Bengalensis*, a catalogue of plants growing in the Calcutta botanic garden. In the introduction to this work, local botanical enthusiast William Carey praises Roxburgh's efforts, and in so doing, enumerates the functions of the garden and of colonial botanic gardens, that he considered most important, or most important to publicize. The garden's experiments in cultivating medicinal plants and plants used in industries, like dyeing, received particular attention. Like its Caribbean counterpart, the Calcutta garden distributed a multitude of plants to many different types of recipient, but in the *Hortus*, Carey highlighted plant distributions to gardens in Europe. Carey cites the role of public

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<sup>12</sup> RBGK, Forsyth Correspondence, Anderson Letters, letter dated May 19, 1788 from Alexander Anderson to William Forsyth, f. 121; letters from Robert Melville to George Young quoted in Alexander Anderson, *The St. Vincent Botanic Garden*, ed. and trans. by Richard A and Elizabeth S. Howard (London: The Linnean Society of London, 1983), 4-15.

<sup>13</sup> John Thomas Bigge, *Report of the Commissioner of Inquiry on the State of Agriculture and Trade in the Colony of New South Wales* (London: s.n., 1823), 94.

and private colonial gardens for nurturing the plants that allowed the European botanic gardens to reach “perfection.” Carey argued that colonial botanic gardens were able to supply European gardens with exotic plants in a way that surpassed the efforts of plant collectors.<sup>14</sup> The readiness of colonial gardens to exchange plants was a boon for European gardens and contrasted with the relative stinginess of Kew Gardens’ plant exchange policies. Carey’s statement about the flow of plants is subversive; instead of seeing the Calcutta botanic garden as an institution dependent on metropolitan institutions, he claimed that metropolitan institutions were reliant on the largesse of the Calcutta botanic garden. Publicizing the benefits that colonial gardens conferred on institutions and patrons in Europe was a good strategy for ensuring continuing support.

The colonial gardens’ founders set the initial tone for their programs, and government officials had expectations, but the garden superintendents were responsible for interpreting these goals and translating them into action. The superintendents themselves understood their gardens and their role as distinct from their counterparts in Europe. In St. Vincent in 1785, Alexander Anderson was tapped to take the helm of the botanic garden once it moved from the control of the local governor to the purview of imperial government with Joseph Banks as an advisor. At that time, Anderson described how he perceived the garden’s functions and explicitly compared his garden to botanic gardens in Europe. Anderson explained to Sir George Yonge, Secretary at War, that colonial botanic gardens should not grow only a few specimens of each species. Instead, colonial gardens had to grow many individuals of a species to have a large supply for testing they could substitute for expensive articles imported from other nations. A healthy population of plants would also make it easier to distribute the plants useful for medicine or

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<sup>14</sup> Nathaniel Roxburgh, *Hortus Bengalensis* (Calcutta: Mission Press, 1814, reprint Leiden: Boerhaave Press, 1980), iii and v-vi.

commerce.<sup>15</sup> Colonel Robert Kyd, first superintendent of the Calcutta botanic garden, wrote to the East India Company less than a year after Anderson's missive and expressed the same idea. He suggested that the EIC should create a botanic garden "not for the purpose of collecting rare Plants (altho they also have their use) as things of mere Curiosity or furnishing articles for the Gratification of Luxury, but for establishing a stock for the [sic] disseminating such articles as may prove beneficial to the Inhabitants as well as the Natives of Great Britain & ultimately may tend to the Extension of the National Commerce and Riches."<sup>16</sup> In this way, the colonial gardens would enable the introduction of new plants to their regions by supplying the public. Nathaniel Wallich, a successor to Kyd, explained to government in the 1830s that the Calcutta garden was both nurseryman and seedsman to people across India. Wallich argued that this sort of intervention was necessary because Europe had botanic gardens, nurseries, and horticultural societies where people could obtain plants, but he knew of no similar establishments worthy of those titles in Britain's eastern possessions. Colonists could not rely on private suppliers to find the plants that they wanted.<sup>17</sup>

Elite supporters of the gardens readily agreed that plant distributions were an integral part of the colonial gardens' missions. Ever watchful of the scientific projects of rival European nations, Joseph Banks wrote to government to publicize the efforts of the French royal garden on the Isle of France which kept a long list of plants ready for distribution to colonists.<sup>18</sup> For many years, the gardens at St. Vincent, Calcutta, and Sydney carried on expensive programs of plant distributions, of both useful and ornamental plants, with the sanction of government. Anderson answered a request for upland rice from farmers in Barbados. In India and Sydney, these

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<sup>15</sup> TNA, WO 40/4 letter dated May 30, 1785 from Alexander Anderson to Sir George Yonge, p. 3.

<sup>16</sup> BL, IOR/H/799, letter dated June 1, 1786 from Robert Kyd to the Board of Directors, p. 17, here Kyd also argues that plants should be distributed "gratis."

<sup>17</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836 from Nathaniel Wallich to HJ Prinsep, p. 53-54.

<sup>18</sup> BL, IOR/F/4/134/2427, letter dated August 11, 1796 from Joseph Banks to the Earl of Liverpool, p. 125-126.

programs persisted through eras of imperial cost cutting; the free program in India ceased in 1857. In New South Wales, distributions were on a scale that the superintendent, Charles Moore, mentioned that new provisions would have to be made for finance and personnel for him to continue sending plants to private and public institutions.<sup>19</sup>

In suggesting that a colonial botanic garden should grow many examples of particular species to have on hand to give to the public, for free, Anderson and Kyd broke with the pattern established by European botanic gardens. Kew did not freely distribute the plants it grew, and the plant distributions were either part of diplomacy or traditional plant exchanges. Banks wanted to make Kew the sole repository of rare plants from around the world to compete with other botanic gardens, primarily royal gardens, like the Schönbrunn. If Kew had sole possession of individual species, these plants increased in value for diplomatic plant exchanges. Kew simply did not provide free plants to whomever asked for them and provided only limited amounts of plants to those who wished to pay in money or in kind. The lack of access to Kew's plants frustrated botanical enthusiasts in Britain. William Herbert, Dean of Manchester, blamed Banks and exclaimed that Kew had provided no assistance when he was writing a scientific work on bulbous plants. A local resident of Kew Green suggested that Banks only kept Kew's monopoly on a plant for a year after it flowered, then distributed specimens to societies and elites.<sup>20</sup> This manufactured scarcity had consequences for the spirit of the relationship between the royal botanic garden and the botanical community in Britain. There was a case of theft in 1824 and

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<sup>19</sup> *Minutes of the Society for the Improvement of Planterhip in the Island of Barbados, instituted December 8<sup>th</sup>, 1804* (Liverpool: 1811), 54 and 68-69; British Library, IOR/E/4/830, Bengal Public Department Despatch, London May 16, 1855, p. 680-682; RBGS, P712.05 R4, Botanic Gardens Sydney Reports 1878-9, Ordered by the Legislative Assembly to be printed, prepared by Charles Moore, March 29, 1879, p. 3-4.

<sup>20</sup> Desmond, *The History of the Royal Botanic Gardens, Kew*, 129-133; Ray Desmond, *A Celebration of Flowers: Two Hundred Years of Curtis's Botanical Magazine* (Kew, UK: The Royal Botanic Gardens, Kew, in association with Collingridge, 1987), 58 and 66. Desmond cites complaints lodged in the *Gardener's Magazine* about the difficulty of obtaining plants from Kew.

Robert Sweet, a local botanist, was tried for receiving the stolen Australian plants.<sup>21</sup> Allan Cunningham, one of Kew's plant collectors in New South Wales, recommended to oversee William Townsend Aiton that he could prevent further thefts not through threats and harsh punishments, but by distributing some plants to the most respectable nurserymen, who would likely provide gifts of rare plants to Kew in return.<sup>22</sup> Cunningham's recommendation was particularly apt because Banks had cited possible benefits to the British nursery trade as an incentive for sending Cunningham to collect for Kew in New South Wales.<sup>23</sup> Though Kew was a part of plant exchanges in the late eighteenth and early nineteenth centuries, stimulating the wide cultivation of particular plants was not a significant part of its *raison d'être*.

Colonial garden superintendents were familiar with European botanic gardens. Many of these men had trained at Kew or the Chelsea Physic Garden, yet they helped create a new path for the gardens that they managed. From the first, they knew that the colonial botanic gardens would not be mere collections of exotic plants. The demands of empire and local settlers required the gardens to be sites for cultivating colonies of plants for dispersal. This particular choice blurred the line between botanic garden and farm or plantation, and the superintendents were keen to support the scientific reputations of their gardens. However, when defending his garden against proposed budget cuts, Nathaniel Wallich, director of the Calcutta botanic garden in the 1830s, conceded that gardens of Europe had greater scientific merit, but he ventured to claim for his own garden "a far more comprehensive, practical scale of general usefulness than belongs to

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<sup>21</sup> A gardener employed at Kew, Michael Hogan, was presumed to be the provider of some of the stolen plants. Sweet received the plants in his capacity as nurseryman at Colvill's, a London nursery known to have a good stock of Australian plants. See "February 1824, Trial of Robert Sweet (t18240218-88," *Old Bailey Proceedings Online*, version 8.0, accessed May 23, 2018, <https://www.oldbaileyonline.org/print.jsp?div=t18240218-88>; and *Cobbett's Weekly Register* 49, no. 9 (February 28, 1824): 532-540.

<sup>22</sup> Orchard and Orchard, *Allan Cunningham*, Letter 4/a/15 dated February 5, 1825 from Allan Cunningham to William Aiton, 186.

<sup>23</sup> Orchard and Orchard, *Allan Cunningham*, Letter 1/b/1 dated September 1, 1814 from Joseph Banks to George Harrison, 5-7.

any one of them.”<sup>24</sup> The superintendents would have understood science to be a universal good, but Wallich claimed a universal utility for colonial gardens that equaled or surpassed the value of science itself. The colonial gardens were open in a way that European botanic gardens never had been, and their programs aimed to reach the public writ large.

Though the colonial gardens differed from botanic gardens in Europe, they resembled each other in function, though the meaning and stated goals for the programs they had in common were not always the same. Any government aim, such as agricultural development, could have been pursued through a multitude of different methods. Scholars writing on British governance have pointed to the colonies as sites for experimenting with governmental programs.<sup>25</sup> Superintendent seeking to spread botanical knowledge or gardening skills in their communities had the freedom to take a variety of approaches. Closely examining a few programs in the colonial gardens can provide insight into the relationship between a botanic garden and its local community as well as the guiding ideologies of colonial administration and the character of colonial rule.

## **Plant Introductions: Agricultural Development, Cultural Imperialism, and Nursery Gardening**

Colonial botanic gardens all had programs for bringing plants into wider cultivation in their colony and region. However, each garden facilitated the spread of specific plants for different reasons and through different means, and with a variety of organizations working in concert with them. Experimental farms, free plant distributions, and cash prizes were the most

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<sup>24</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836 from Nathaniel Wallich to HJ Prinsep, Secretary to Govt, p. 42.

<sup>25</sup> See, though on a later period, Philippa Levine, *Prostitution, Race & Politics: Policing Venereal Disease in the British Empire* (New York: Routledge, 2003).

frequently used methods for encouraging colonial residents to add new plants to their repertoire. These practices promoted breadfruit cultivation in the West Indies, experimentation with tea in India, and other plant introductions easily understood through the economic pressures of empire. However, the Calcutta botanic garden's superintendents used free plant distributions, a costly practice, to support cultivation of ornamental garden plants. Choices like this one are harder to reconcile with the current ideas about the economic bases of empire. The botanic gardens efforts to introduce new plants reveals how colonial administrators sought to pursue colonial 'improvement' and how plants became objects of cultural imperialism.

Plant introductions were at the heart of the mission of each colonial botanic garden. Calcutta's botanic garden owed its existence to the suggestion of local East India Company office, Colonel Robert Kyd, that the Company should introduce sago trees to British India to provide emergency foodstuffs during famines. The same famines had led Hastings to create a public granary in the colony. Kyd pitched his idea that a government botanic garden could oversee sago introductions and provide a range of other botanical services. Kyd argued that introducing sago and similar trees would provide a bulwark against famine that was "more simple, less dependant [sic] to Government..."<sup>26</sup> Once the sago trees were distributed and planted, they would not require much upkeep, and that could devolve onto local actors. Once famine struck again, the East India Company could avoid criticism and take credit for providing the populace with the means to save themselves without additional financial outlay. Kyd and the EIC sought ways for providing "enlightened" government that would not require continuing financial support.

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<sup>26</sup> BL, IOR/H/799, Robert Kyd's letter dated April 15, 1786 in Extract of Bengal General Consultations, dated April 26, 1786, p.1-8 quotation at p. 4, at p. 7-8 Kyd speaks of De la Bourdonnaye, who introduced from Brazil the Maniac Root to Mauritius and Bourbon to save the inhabitants from famine caused by the annual hurricanes, therefore Kyd looks in part to the French for a model.

It does not appear that Kyd ever oversaw sago distribution throughout Bengal or received permission to do so.<sup>27</sup> However, this scheme was contemporaneous with William Bligh's voyage as captain of the *Bounty* to obtain breadfruit from Tahiti. Bligh's journey was a joint project of Joseph Banks and planters in the British West Indies to introduce breadfruit to feed slaves in the British Caribbean. In the Caribbean, Alexander Anderson, the superintendent of the St. Vincent botanic garden, played a leading role in distributing breadfruit to worthy recipients across the British settlements. Jamaica was a special case, where a special committee oversaw receipt of the plants into a nursery run by the head of the locally supported botanic garden. This same committee oversaw distribution of breadfruit plants to the parishes on the island, where local officials handled local dispersal.

In both the breadfruit and sago projects, the people driving the programs chose free plant distribution as the means for spreading the desired plants in their colony. This method presupposed local interest and an existing infrastructure to facilitate the spread of plants. The Standing Committee of West Indian Planters and Merchants had long considered the possible benefits of introducing breadfruit, and in 1775, offered to pay the costs of anyone who undertook their introduction. The Society of Arts, a British society for improvement and dissemination of useful knowledge, offered a gold medal for anyone bringing six live breadfruit plants from the

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<sup>27</sup> Zaheer Baber, *The Science of Empire: Scientific Knowledge, Civilization, and Colonial Rule in India* (Albany, NY: State University of New York Press, 1996), 168. When future Calcutta superintendent William Roxburgh was overseeing the Samulcotta garden, he asked the President in Council at Fort George if some sago trees could be forwarded from the Travancore to be cultivated in his garden as a source of emergency nutrition, suggesting that Kyd did not direct a major introduction project. See BL, IOR/P/241/21, letter dated December 8, 1790 from William Roxburgh to Charles Oakeley, f. 2v or p. 3297, [http://www.bl.uk/manuscripts/Viewer.aspx?ref=ior!p!241!21\\_20\\_Dec\\_1790\\_pp\\_3294-98\\_f001r](http://www.bl.uk/manuscripts/Viewer.aspx?ref=ior!p!241!21_20_Dec_1790_pp_3294-98_f001r). Roxburgh received sanction to proceed in early 1793, BL, IOR/P/241/37, letter dated February 9, 1793 from Robert Clerk to William Roxburgh, f. 1v or p. 644, [http://www.bl.uk/manuscripts/Viewer.aspx?ref=ior!p!241!37\\_Feb\\_1793\\_pp\\_643-45\\_f001r](http://www.bl.uk/manuscripts/Viewer.aspx?ref=ior!p!241!37_Feb_1793_pp_643-45_f001r).



East Indies to the West Indies.<sup>28</sup> No one had successfully claimed the prize, and government stepped in with Bligh's voyage to get the plants to the Caribbean. Because planter interest helped bring the plan to fruition, there was, in theory, a group of planters ready to receive the free breadfruit plants and take individual initiative to propagate them on their own land to cut down the expense, either in money or time lost to food cultivation, of keeping their slaves fed. The possible benefits to the planters were clear; the success of the plan hinged on whether the planters had the right sensibility to take advantage of an opportunity to improve the operation of their plantations.

As a strategy for plant introduction, free plant distributions supposed that recipients were not only motivated but either already had or could easily obtain the requisite skills for successfully growing the plants that they received. The St. Vincent botanic garden became a site of knowledge creation about the breadfruit in order to provide instruction to planters. Alexander Anderson retained some of the plants and raised a large crop in the botanic garden. This planting was a repository for continual distributions of the breadfruit plants, and as Anderson learned how to care for the breadfruit by growing the plants himself, he became a source of information on successfully growing breadfruit in the Caribbean. Any planter having difficulties raising the trees could turn to him for advice. Anderson's breadfruit plot was also a living example of the results that could be obtained from adopting the new foodstuff; the outcome of his plot could either incite or dampen planter enthusiasm for trying the new crop.

Planters had a few practical reasons for experimenting with breadfruit, but outside interests provided another. The Society of Arts offered a prize to the individual growing the greatest number of breadfruit, not less than one hundred, for local consumption, either in the

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<sup>28</sup> Dulcie Powell, "The Voyage of the Plant Nursery, H.M.S. *Providence*" *Economic Botany*, 31 (October-December 1977): 387-389.

British possessions of the West Indies or Africa.<sup>29</sup> This method for spurring breadfruit cultivation also supposed that there was a pool of people with the land, labor, and resources to experiment on a new crop for which there was little demand on the market. The prize would only be awarded after the applicants had sunk land, labor, and time into the project, which might not net them prize-money if they did not successfully raise more breadfruit trees than their competitors.

Banks, imperial government, the Standing Committee of West Indian Planters and Merchants, and the Society of Arts, chose tactics for encouraging breadfruit cultivation that could only succeed where planters had interest and spare land and labor to grow the crop. The program was entirely voluntary and had little role for government after the breadfruit plants were distributed, just like Kyd's proposed plan for distributing sago trees across India. The breadfruit plan did not have a strongly coercive element to it, but there would have been social pressure for planters to at least try the plants. The Standing Committee of West Indian Planters and Merchants was a well-connected organization of planters, and its involvement may have pushed uninterested planters to take notice. For enterprising garden superintendents, their job did not end with the distribution of target plants to the populace. Alexander Anderson did his best to market the breadfruit project to reluctant planters on his island. He tended his own crop, and once his breadfruit crop ripened, he brought the first fruit to the governor's mansion for an official tasting.<sup>30</sup>

Though the systematic distribution of free plants for experimentation was a novel form of intervention for the British government, prizes for agricultural experimentation were a method previously tested in Britain. The rage for agricultural improvement in Britain had gained traction in Scotland after the Act of Union of 1707. As the economies of England and Scotland became

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<sup>29</sup> *Transactions of the Society of Arts*, 12 (1794): 91-92.

<sup>30</sup> *IP Corr JB*, Vol 4, Letter 168, letter dated February 2, 1795 from Alexander Anderson to Joseph Banks, 266.

more integrated, Scotland's landowners became aware that their level of agricultural capitalization was lower than that of England. Famines in the eighteenth century also whet Scottish landowners' appetites for improved agricultural yields. Farming clubs and philosophical societies provided a home for would-be improvers who publicized their schemes in the societies' transactions and stood to win prizes for successful improvements.<sup>31</sup> The Society of Arts' use of prizes to spur breadfruit introduction in the empire was the transplantation of a method already used at home.

The sago and breadfruit schemes were not aimed at introducing cash crops, but the government's light touch carried over to programs to develop new economic crops. In India, the East India Company used a similar method to encourage the cultivation of tea. After losing the monopoly on the tea trade with China in 1833, the EIC followed up on an earlier discovery of a species of tea already growing in India. Many institutions, including the local botanic gardens, the Chelsea Physic Garden, and EIC staff, joined forces to create a hybrid strain that would flourish in Indian soils.<sup>32</sup> The EIC funded experimental tea plantations run by their botanical staff and imported Chinese gardeners, with general management from the superintendent of the local botanic garden. These experimental plantations allowed superintendents to learn how to manage tea plots and keep track of the yield and profit possible. By disseminating data on the profitability of tea cultivation and providing both plants and growing tips to interested parties, the government tea plantations were designed to spur private investment in tea cultivation. Once

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<sup>31</sup> John Gascoigne, *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture* (Cambridge, UK: Cambridge University Press, 1994), 185-207; T.C. Smout, "A New Look at the Scottish Improvers," *The Scottish Historical Review* 91, no. 231, part 1 (April 2012): 125-149, particularly 134-135.

<sup>32</sup> Jayeeta Sharma, "British Science, Chinese Skill and Assam Tea: Making Empire's Garden," *Indian Economic Social History Review* 43, no. 4 (2006): 429-455; Erika Rappaport, *A Thirst for Empire: How Tea Shaped the Modern World* (Princeton, NJ: Princeton University Press, 2017), 85-119; Deepak Kumar, "The Evolution of Colonial Science in India: Natural History and the East India Company," in *Imperialism and the Natural World*, ed. John M. McKenzie (Manchester, UK: Manchester University Press, 1990), 55-56; Markman Ellis, Richard Coulton, and Matthew Mauger, *Empire of Tea: The Asian Leaf that Conquered the World* (London: Reaktion Books, Ltd, 2015), 208-219.

that had been proven in Assam, the EIC withdrew and sold the government plantations. Private individuals and joint stock companies had begun entering the tea market, and the superintendent of the Saharanpur botanic garden noted that the industry “no longer requires the aid of Government ‘to induce parties to engage in an undertaking which experience has fully shewn promises, under proper and economical management to be highly remunerative.’” He recommended selling off the plantations, and the EIC readily complied.<sup>33</sup>

Immediate profit had never been the point of any of the government plantations; they existed to help government naturalists create and distribute the information that would encourage the public to grow tea and teach them how to do so. Indian tea cultivation was just one highly successful project in a line of EIC projects to introduce new crops, beginning with a few government plantations. According to Hugh Falconer, sometime superintendent of the Saharanpur botanic garden and later the Calcutta botanic garden, Bengal became an important exporter of indigo due to the efforts of government. Thanks to experimental plantations begun by the Calcutta botanic garden, sugar, coffee, tobacco, and cotton had all become articles cultivated in parts of the country, “European Capital and enterprise having followed in the direction which it had first pointed out.”<sup>34</sup>

In relying primarily on private enterprise with just a little boost from free plants and prizes, imperial government duplicated some of the methods used to pursue agricultural improvement in Britain. For all the anxiety about creole societies, the British government behaved as though planters in the Caribbean and even Indian landowners would respond to the

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<sup>33</sup> BL, IOR/F/4/1709/69024, Revenue Department, Further papers regarding the promotion of tea cultivation in Upper Assam, Vol. 2, September 1837 to February 1838; BL, IOR/E/4/786, letter dated February 4, 1846 from Bengal Revenue Department to William Jameson, Superintendent of Saharanpur Botanic Garden, p. 820-827, quotation of Bengal Revenue Dept quoting Jameson, p. 820-821.

<sup>34</sup> BL, IOR/F/4/2595/157429, letter dated Marcy 6, 1854 from Hugh Falconer to the Undersecy to Govt of Bengal, p. 34.

same social pressures and material encouragements that worked on the landed classes in Britain. Putting these programs in place in the colonies helped transport the model of the improving landowner into the colonial sphere. The experience of tea plantations illustrates that plant introductions were the goal, with as little continuing government involvement as possible. Once the elite classes knew what was possible from cultivating a new crop, government institutions would bow out and allow private establishments to supply the market. These methods are coherent with the laissez-faire ideology shared by members of the EIC command.

The government plantations and agricultural plant gifts were bids to shape the behavior of planters, European settlers, and Indian landowners. However, the botanic gardens, especially the Calcutta garden, also distributed a wide array of non-economic, ornamental plants to individuals of all classes. The plants were initially dispersed without fee of any kind, to requesters both inside and outside India. After 1829, the Finance Department ordered that the garden charge for pots and postage. Calcutta's program continued during EIC budget cuts in the 1830s.<sup>35</sup> Nathaniel Wallich, the superintendent, defended this program to government by highlighting its effect on garden culture in India. Indian states, of course, had a history of agriculture and gardening before the East India Company conquered large swaths of territory. Some of the colonial botanic gardens had once been the gardens of Indian rulers.<sup>36</sup> However, Wallich stressed the importance of increasing garden culture in the colony, suggesting that agriculture and gardening could improve the governed and "conciliate" them, because it was,

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<sup>35</sup> BL, IOR/F/4/2595/157429, letter dated March 6, 1854 from Hugh Falconer to the Undersecy to Govt of Bengal, p. 29-30.

<sup>36</sup> For instance, the Saharanpur botanic garden had been established by Zabita Khan in 1779, and was taken over by the EIC in 1817, see BL, IOR/F/4/587, letter dated October 28, 1817 from NB Edmonstone and G Dowdeswell to the Court of Directors, p. 1-2; Lalbagh, a garden of Tipu Sultan, was taken over by the Government of Mysore and became a government garden, see Patrick Bowe, "Lal Bagh – The Botanical Garden of Bangalore and Its Kew-Trained Gardeners," *Garden History* 40, no. 2 (Winter 2012): 228-238; some Mughal gardens became British public parks after the British takeover, see Jyoti P. Sharma, "The British Treatment of Historic Gardens in the Indian Subcontinent: The Transformation of Delhi's Nawab Safdarjung's Tomb Complex from a Funerary Garden into a Public Park," *Garden History* 35, no. 2 (Winter 2007): 210-228.

“Of all human occupations the most pure, useful and Civilized.” He was particularly pleased that Indians and Europeans of the middling classes were frequent applicants for plants.<sup>37</sup> The experimental plantations were aimed at integrating the upper classes into the goals of government, but these free ornamental plant distributions were a sop to a number of the rest of the population, an advertisement of the benefits of EIC governance. Wallich’s arguments convinced EIC command of the garden’s utility and the necessity of the free plant dispersals, and further budget cuts were not made at that time.<sup>38</sup>

The free plant distribution program was a victory for cultural and botanical imperialism over EIC officials’ predilection for market solutions to administrative problems. However, free market rhetoric would eventually bring the program to an end. The Agricultural and Horticultural Society, which was founded in 1820, had been a partner to the Calcutta botanic garden since its inception. The leaders of this society suggested to the governor that the Calcutta garden should cease handing out free plants, except for special cases. In 1854, this suggestion prompted the governor to query the Calcutta garden superintendent, Hugh Falconer, about the program. Falconer himself offered free market reasons for discontinuing the program, writing, “the present system tends to check private Enterprise and the progress of cultivation.” Kyd, the garden’s founder, had begun the program because British possessions in India did not have plant vendors that he considered worthy of the name. In 1854, the circumstances were different. Hugh Falconer observed that Bengal had Indian and European establishments to sell flowers, shrubs, and fruit trees to locals, and the profligate flow of free plants from the Calcutta botanic garden hindered their businesses. He felt that there was no reason for the program to continue, and the EIC agreed, ordering that it should end in 1857, to give recipients a chance to adapt to the new

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<sup>37</sup> BL, IOR/F/4/1761/72126, letter dated October 1, 1836 from Nathaniel Wallich to HJ Prinsep, Secy to Govt, p. 55.

<sup>38</sup> BL, IOR/E/4/760, Bengal Public Department, August 21, 1837, p. 246-247.

regime.<sup>39</sup> The Sydney botanic garden similarly modified its free plant distribution policies in the 1850s, after local nursery growers complained about the competition.<sup>40</sup>

Botanical gardens, local governments, and imperial government pursued multiple strategies for introducing desired plants, though their strategies were shaped by laissez-faire ideas. Government allowed the botanic gardens to run government plantations in order to encourage landed settlers to follow their example. The EIC was particularly hopeful that the free plants and information from a government plantation were all that private enterprise needed to jump start trade in entirely new agricultural products. The botanic gardens' gifts of ornamental plants were aimed at the lower orders with the design of disciplining the populace, however this goal would eventually be sacrificed to the demands of the market.

### **Plant Education: Who and Where**

As leaders of programs to introduce new plants, the colonial garden superintendents stood ready to advise those seeking instruction on how to care for the new varieties. However, the colonial superintendents were involved in other efforts to disseminate information on plant taxonomy, cultivation, and use, to audiences abroad and locally. Superintendents wrote floras for a worldwide scientific audience, provided public lectures for local botanical enthusiasts, and partnered with agricultural and horticultural societies to provide instruction on agricultural methods. These programs reveal the basic assumptions that superintendents and colonial administrators made about the societies they oversaw and the naturalist community more

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<sup>39</sup> BL, IOR/F/4/2595/157429, letter dated Marcy 6, 1854 from Hugh Falconer to the Undersecy to Govt of Bengal, p. 36-37, quotation at p. 36

<sup>40</sup> Lionel Gilbert, *The Royal Botanic Gardens, Sydney: A History 1816-1985* (Oxford: Oxford University Press, 1986), 93; SRA NSW, 4/7577, "1854, New South Wales, Botanic Gardens," publication ordered by colonial secretary, petition of TW Shepherd and M Guilfoyle, Nurserymen of the Colony, to the Members of the Legislative Council of New South Wales, p. 91-93; SRA NSW, 4/7577, "Management of the Botanic Gardens: Governor General's Message No. 116" dated December 15, 1855, p. 99.

broadly. Certain groups were targeted more than others and their lack of interest was a source of chagrin for superintendents and administrators alike.

The colonial botanic gardens' efforts toward public education were part of a larger effort toward greater dispersal of practical knowledge in the nineteenth century. The Society of Arts was founded in 1754 to encourage the spread of practical information through a published journal and prizes to encourage invention and dissemination of practical knowledge. The Society of Arts also played a role in the creation of the St. Vincent botanic garden and used prizes to encourage the introduction of useful plants to the British colonies.<sup>41</sup> In Britain, instruction in technical methods had been offered to the public in mechanic's institutes, the first of which was founded in 1804. Joel Mokyr has identified the institutes as part of a group of organizations spreading technical knowledge in Britain for the benefit of industrialization. These sorts of institutions spread to the colonies in the 1830s.<sup>42</sup> Some of the mechanics' organizations supported collections of natural history specimens; the New York Exhibition in 1853, the Paris exposition of 1855, and the London Kensington Exhibition of 1862 all featured collections from mechanics' institutes.<sup>43</sup> These institutions were not outwardly coercive, but all practical or useful knowledge is directed toward a goal judged desirable by someone, usually someone with power. Shapin and Barnes identify the mechanics institutes, which were consciously directed at subsets

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<sup>41</sup> Lansdown Guilding, *An Account of the Botanic Garden in the Island of St. Vincent* (Glasgow: Richard Griffin & Company, 1825), 5.

<sup>42</sup> Joel Mokyr, "The Institutional Origins of the Industrial Revolution," in *Institutions and Economic Performance*, ed. Elhanan Helpman (Cambridge: Harvard University Press, 2008), 70-71; Elizabeth Neswald, "Science, Sociability and the Improvement of Ireland: the Galway Mechanics' Institute, 1826-51," *British Journal for the History of Science* 39, no. 4 (December 2006): 503-534; Susan Keen, "Associations in Australian History: Their Contribution to Social Capital," *The Journal of Interdisciplinary History* 29, no. 4 (Spring 1999): 643-646; Ian Inkster, "Science and the Mechanics' Institutes, 1820-1850: The Case of Sheffield," *Annals of Science* 32, no. 5 (July 16, 1975): 451-474. Some are not so optimistic about the effect of these educational opportunities. Royal argues that working people were not attracted to the mechanics' institutes, and the institutes themselves found their working class clientele nearly illiterate and had to moderate expectations. See Edward Royal, "Mechanics' Institutes and the Working Classes, 1840-1860," *The Historical Journal* 14, no. 2 (June 1971): 305-321.

<sup>43</sup> John M. MacKenzie, *Museums and Empire: Natural History, Human Cultures, and Colonial Identities*, (Manchester: Manchester University Press, 2009), 26-33.



of the lower classes, as institutions of social coercion. The movement's leaders planned for scientific education to make the lower classes more receptive to the work structures required by industrial production and less prone to sensual indulgences like drunkenness and promiscuity. The institutes were not designed simply to instruct workers, but to transform their values and help them develop "internal moral control," where morality was dictated by the leaders of industrial society.<sup>44</sup>

Societies directed toward spreading agricultural information similarly sought to reform people by reforming the land.<sup>45</sup> In the eighteenth century, enlightenment principles created a model of elite landowner: the improver. Landowners came together in societies that exchanged plant materials and information about rational estate management. These societies sought to encourage new methods in agriculture, and they offered prizes for those who successfully cultivated new plants or developed machines to perform farm work. Membership in these societies was one way of taking part in the social life of the British upper classes. The brother of John Thomas Bigge, supporter of the Sydney Botanic Garden, joined a kaleidoscope of improving societies in Northumberland, to enter the social circles of the aristocratic people with whom he aspired to associate. In 1824, he was president of the Newcastle Mechanics' Institution and the Newcastle Literary and Philosophical Society. In the next decade, he helped found the Northumberland Agricultural Society and gained a reputation as a "fine old English gentleman."<sup>46</sup> All of these organizations rested on a certain social understanding, namely that elites would lead others to enlightenment.

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<sup>44</sup> Steven Shapin and Barry Barnes, "Science, Nature and Control: Interpreting Mechanic's Institutes" *Social Studies of Science* 7 (1977): 31-74, quotation 39.

<sup>45</sup> Gascoigne, *Joseph Banks and the English Enlightenment*, 185-188; T.C. Smout, "A New Look at the Scottish Improvers," *The Scottish Historical Review*, 91, no. 231, part 1(April 2012): 132.

<sup>46</sup> John Ritchie, *Punishment and Profit: The Reports of the Commissioner John Bigge on the Colonies of New south Wales and Van Diemen's Land, 1822-1823; Their Origins, Nature and Significance*, (Melbourne: Heinemann Melbourne, 1970), 34-35.

Though landowners both produced and shared knowledge through the transactions of their agricultural societies, they included the education of their social inferiors as part of their mandate. The Society of Improvers in the Knowledge of Agriculture in Scotland, founded in Edinburgh in 1723, is a prime example of this social distinction at work. The society's membership was full of aristocrats, with no one identifying as a farmer, tenant, land-steward, or the like. These elites wrote articles for the *Transactions* on animal husbandry, fertilizers, rat killing, and a range of other non-agricultural topics, which marked the authors as "improvers" in general, as befit their social status. The Society of Improvers wanted the lower classes to benefit from their knowledge, and a farm for orphans was proposed to raise the orphans in Christian virtues. The social basis for societies like these would widen at the end of the eighteenth century and the beginning of the nineteenth, but there was still a divide between the improvers and the laboring classes that they wished to educate. This social difference provided good cover for unsuccessful projects; failures of improving schemes were often blamed on lazy tenants.<sup>47</sup> Independent smallholders more interested in "best practice than in best theory" might not value the input of their social superiors, but they had limited opportunity to express their opinion.<sup>48</sup>

Agricultural societies in some of the colonies followed a similar model of elite participation with the goal of leading the lower orders of society by example. In British India, the colonial botanic gardens partnered with a network of agricultural and horticultural societies to develop agriculture in the colony. The societies themselves were populated by the landowning element of society, and the EIC was delighted that Indian landowners also took part, sometimes

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<sup>47</sup> Smout, "A New Look at the Scottish Improvers," 129-133, 135-136, 139-140, 145-146; Pamela Horn, "The Contribution of the Propagandist to Eighteenth-Century Agricultural Improvement," *The Historical Journal* 25, no. 2 (June 1982): 313-315.

<sup>48</sup> Stuart MacDonald, "Agricultural Improvement and the Neglected Labourer," *The Agricultural History Review* 31, no. 2 (1983): 82. MacDonald questions the assumptions attached to the idea that agricultural innovation starts at the top and diffuses down to agricultural laborers.

as part of the societies' leadership.<sup>49</sup> Ranajit Guha argues that land and control of land was the entire basis of British government in India. In the late eighteenth century, EIC officials realized that there would never be enough British immigration to the colony to create the landowning class to make elite Indian society in its image and bring stability to the colony. As a result, the EIC would have to rely on the upper-class Indians to turn into the improving landowners they wanted to see.<sup>50</sup> Indian involvement in the agricultural and horticultural societies was a welcome development to the EIC because it suggested a certain degree of assimilation. Some elite Indians may have joined the societies to display the "improving" social identity associated with the British elite. The elite Indians in the agricultural societies may not have all been landowners; British members included clergy, merchants, military officers, attorneys, and traders, who may have also been trying on an elite British social identity.<sup>51</sup>

The Agricultural and Horticultural Society was the flagship agricultural society in India which partnered directly with the Calcutta botanic garden and East India Company to improve agriculture in the colony. Despite the EIC delight in Indian participation, society leadership saw it as an organization for the uplift of a class of people different from the members themselves. In the 1836 *Transactions*, leadership begged forgiveness for the slow progress of the society's projects, reminding readers that India lacked "that numerous class at home to whom public exertion and public pursuits are alike a want and an amusement" and did not have many people

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<sup>49</sup> For instance, The Agricultural and Horticultural Society of India (Calcutta) kept data on the number of "Asiatic" members, see BL, IOR/L/PJ/3/1073 no. 4, Report of the Agricultural and Horticultural Society of India, January 15, 1858, p. 1-2; BL, IOR/F/4/1410/55646, letter dated September 3, 1831, Examiner's Office, Bombay Native Education Society's Rooms, February 11, 1830, p. 5-11; Kumar, "The Evolution of Colonial Science in India: Natural History and the East India Company," 56.

<sup>50</sup> Guha, *A Rule of Property for Bengal*, 1-10.

<sup>51</sup> The Agricultural and Horticultural Society of India (Calcutta) kept data on membership levels (honorary, associate, corresponding) and member occupations, with the following categories: civilian, merchants and traders, indigo and other tropical agriculturists, military officers, medical officers, clergy, law officers, with "Asiatic" as a separate category, see BL, IOR/L/PJ/3/1073 no. 4, Report of the Agricultural and Horticultural Society of India, January 15, 1858, p. 1-2

who could energetically work knowing that it was all “in the main, for another, and a separate class with whom they have but little in common.”<sup>52</sup> The EIC may have wished to co-opt elite Indians to government interests in agriculture, but it could not prevent society members from interpreting the society’s mission along racial lines. British members may have seen themselves as acting out an elite British identity but in a colonial space where the perception of racial difference created additional barriers to understanding.

In order to target the Indian farming classes, the society ran a gardening school for young men. At the time of the society’s 1858 report, the school had existed for nine years. The 1858 report praised one zamindar, Puddumlochun Mundul of Balasore, for funding the education of two young men. The school had seen a number of students, but only two of the men became gardeners, presumably Paddumlochun Mundul’s men, in part because pupils did not stay to complete the training. The society officers believed that the school would allow the students to command higher wages as gardeners and did not understand why the students did not stay. The society tried revising the terms, adding a salary during training, a completion certificate with a guarantee of a position and pay rate, or a stipend until a suitable position was found. The magistrates of several districts of Bengal helped publicize this offer, which yielded no response. One magistrate sent his own gardener for training rather than report a null result.<sup>53</sup> The people who actually worked the soil in India were not eager to be led by these societies.

The botanic gardens themselves offered practical gardening information to an often uninterested public from a range of socioeconomic levels. For the people at the top, the botanic gardens were a source of information, but engagement was voluntary. Superintendents stood

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<sup>52</sup> *Transactions of the Agricultural and Horticultural Society of India* 2 (1836): vii-viii. The author goes on to suggest that the Agricultural and Horticultural Society of India should not be measured against similar societies in Britain.

<sup>53</sup> BL, IOR/L/PJ/3/1073 no 4, Report of the Agricultural and Horticultural Society of India, January 15, 1858, p. 5-7.

ready to provide growing instructions, particularly for the organized plant introductions, such as breadfruit. In the Caribbean, superintendents would find that many planters were not interested in change or information. In Sydney, the superintendents there were specifically charged by government to give an annual course of public lectures on “Botanical subjects.” Government also ordered the Sydney superintendents to take steps, including keeping the plants labelled, to turn the garden into a metaphorical “School of horticulture where the best modern systems of cultivation may be exhibited to the public.”<sup>54</sup> In India, Wallich wanted the public to have access to written texts in addition to the visual educational experience that the garden could provide. He lobbied the East India Company to provide funding for a public botanic library at the Calcutta garden. The EIC agreed to purchase some of Wallich’s personal books to seed the library and granted £200 annually for the sitting superintendent to augment the collection.<sup>55</sup> Wallich convinced the EIC that a library was necessary because the science of botany had developed to a degree that it was difficult for individuals to afford the necessary foundational texts for study. While botanical enthusiasts in Europe had recourse to public and private libraries, Wallich claimed that India had only the College of Fort William and the Asiatic Society, and the botanic garden should be enabled to fill the breach.<sup>56</sup> It is difficult to gauge the public’s reception of this library, but the EIC was willing to generously fund the project in hopes of expanding Bengal’s base of public educational institutions.

Garden superintendents tried to spread knowledge through formal public lectures, informal conversations, and public libraries, but these all required the voluntary participation of

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<sup>54</sup> SRA NSW, 4/7577, Memo of the Colonial Secretary, E. Deas Thomson, on the Botanic Gardens, sent to Garden Committee and Charles Moore, dated March 7, 1848, p. 41-42.

<sup>55</sup> BL, IOR/F/4/624/15931, Extract Public Letter from Bengal dated July 31, 1820, p. 1-5

<sup>56</sup> BL, IOR/F/4/624/15931, Extract Bengal Public Consultations dated January 7, 1820, Nathaniel Wallich to C Lushington, Secy to Govt, p. 5-12; Wallich was also involved in the establishment of a natural history museum connected to the Asiatic Society in 1814, and he was its first curator, see MacKenzie, *Museums and Empire*, 236.

the public. The “improving” agricultural education that the imperial and local governments wanted the gardens to provide could be more effective with a captive audience. The gardens hosted an array of workers with limited ability to refuse to participate. Convicts, slaves, and the castes of Indian laborers fell into this category, though social and racial factors affected perceptions of their ability to learn. Some colonial botanic gardens turned to orphaned European boys, hoping to educate them in the ways of British gardening and agriculture, much like the Society of Improvers in the Knowledge of Agriculture in Edinburgh, which in the eighteenth century considered starting an orphan farm. Like convicts or slaves, the orphan boys were essentially a captive audience, but they would one day grow up and leave the gardens, taking their agricultural knowledge with them.

This sort of community outreach and education may have been of more help to superintendents than to the orphans themselves. Superintendents often had difficulty getting steady assistants with some knowledge of Linnean nomenclature and good gardening skills. By having charge of young boys, a superintendent could train up a future assistant for himself or a landowner. Unfortunately, the partnership between orphans and the botanic gardens did not turn out well. In 1819, Calcutta superintendent, Nathaniel Wallich sought out boys from the Lower Orphan School to train as gardeners. However, since he did not find students of the right age or education in the orphan school, he found boys from the Free School to educate with the approval of local government. Wallich requested and was granted a European overseer of the botanic garden who would also look after the boys and provide general instruction in reading, writing, and arithmetic when they were not gardening. Provisions were made for the boys to live in a

room added to the overseer's house.<sup>57</sup> Wallich had a second crop of lads indentured to him for five years in 1823. These three, Charles McLeod, John Linton, and James Haddis, were all destitute at the age of 17. They were discharged on the day that their indentures expired, but no provision had been made to find them work or further education. The secretary to the Military Orphan Society wrote to government about them, noting, "the line of business to which these orphans have been trained for the last 5 years seems to be utterly useless to themselves, unless Government should be pleased to employ them as they have no capital of their own nor does the Horticultural Society, or any individual require their services."<sup>58</sup> Rhetoric about the improving nature of agricultural and gardening knowledge was no doubt part of the reason these orphans were apprenticed to the garden, but society at large did not value these skills enough to keep the young men employed. The Military Orphan Society was actually ordered to be "more circumspect" in indenturing children in the future.<sup>59</sup>

In New South Wales, the partnership between botanic gardens and orphan boys did not have a happier ending. Four boys worked in the garden in 1829 under the superintendent Charles Fraser.<sup>60</sup> He later requested an additional boy from the orphan school to take the place of a worker, perhaps a convict laborer, Joseph McLandall, who had been released in 1833. At this point, government suddenly became solicitous of the moral health of the orphan boys, noting that it might be "objectionable" to have orphans working beside the convicts. It was noted that the orphans had not as a rule "turned out well" therefore Fraser's "Department would do better

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<sup>57</sup> The indentured boys were Henry Bruce, William Gomez, Julius Piquot, and Charles Bleeckford, see BL, IOR/F/4/621/15534, Extract Bengal Public Consultations dated July 23, 1819, p. 31-38; BL, IOR/F/4/655/18040, Extract Public Letter to Bengal dated July 4, 1821, p. 11-12.

<sup>58</sup> BL, IOR/F/4/1191/30877, letter dated March 27, 1828 from W. Hovenden, Secy to Military Orphan Society, to CF Metcalf, f.75-76, quotation at 75v-76r.

<sup>59</sup> BL, IOR/F/4/1191/30877, letter dated April 25, 1828 from W. Casement, Secy to Govt, to Secy to the Military Orphan Society, f. 78r.

<sup>60</sup> RBGS, Colonial Letter Book, letter dated March 24, 1830 from Alexander McLeay to Charles Fraser, unpaginated; and RBGS, Colonial Letter Book, letter from Alexander McLeay to Charles Fraser dated November 25, 1829, unpaginated.

without them.”<sup>61</sup> Two boys were still attached to the garden at that time.<sup>62</sup> It is not clear what happened to either the boys who had not turned out well, or the final two who remained in the garden, but like the orphan boys in India, their apprenticeship had presumably not led to moral improvement or a career.

The educational initiatives of the botanic gardens had mixed results. The garden staff found their greatest successes in helping willing landowners introduce new crops, like indigo, tea, and cotton, through schemes where the advice of garden superintendents was offered as an accessory to free plants. The educational opportunities aimed at uplifting the lower orders of colonial society were not very effective. Indian farmers were not convinced by British experimental methods, and the orphan apprentices found that there was not a market for their skills. This more coercive sort of education presupposed an idealized colonial society, where colonized subjects recognized British agricultural expertise and shared the goals of the governing class, and where colonial elites valued workers with the botanical skills gained from working in the gardens.

Some of the educational societies in Britain had an aspect of moral suasion like the colonial efforts, but others were entirely voluntary and self-organized. Artisan botanical societies were popular, and George Caley, first a plant collector in Australia and later superintendent of the St. Vincent botanic garden, was involved with the Middleton Botanical Society near Manchester both before and after his career in the empire. Anne Secord has written about the social environment and practical organization of these societies, which often met in a local pub.<sup>63</sup>

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<sup>61</sup> RBGS, Colonial Letter Book, letter dated October 30, 1833 from Thomas Harrington, for the Colonial Secretary, to Charles Fraser, unpaginated.

<sup>62</sup> RBGS, Colonial Letter Book, letter dated November 11, 1833 from T. Harrington to Charles Fraser, unpaginated.

<sup>63</sup> Anne Secord, “Science in the Pub: Artisan Botanist in Early-Nineteenth Century Lancashire,” *History of Science* 32, no. 97 (September 1994): 269-315; Joan Webb, *George Caley: 19<sup>th</sup> Century Naturalist* (Chipping Norton, NSW: Surrey Beatty & sons Pty Ltd, 1995), 6. The Middleton society met at the Ring O’Bells Pub which retained some of the society’s papers until the 1950s.



The communities around the botanic gardens would become receptive to that kind of “improvement” in the late nineteenth century, but early garden superintendents faced an often uninterested public.

### **Conserving Local Resources: Forest Management**

The colonial gardens were all used as bases for exploration of the local flora to determine which plants might be valuable for industry, medicine, or ornamental use. However, some of the superintendents found themselves working to preserve certain types of plants for strategic reasons, namely forests. McCracken has argued that formal colonial departments for forest conservation began in British possessions in the second half of the nineteenth century. He suggests that as the informal network of Kew and the colonial botanical gardens declined in the early 20<sup>th</sup> century, British forest conservation reached its heyday, buoyed by material demands of war and the budding environmental movement.<sup>64</sup> However, there were significant, formal efforts toward forest conservation in the late eighteenth and early nineteenth centuries, and the early colonial botanic gardens played a leading role. In the case of St. Vincent, a forest preserve was created on the island to draw rain and maintain its climate. The St. Vincent garden’s superintendent, Alexander Anderson, was committed to desiccationist theory and saw a warning in the climate of old sugar islands that had lost their forests to fuel the boilers for sugar production. In India, Richard Grove has argued that forest conservation followed similar lines, but the discourse of the East India Company officials and the garden superintendent running the program, hint instead at practical, military reasons. In either case, these conservation efforts had to work within the existing political and administrative frameworks and navigate attitudes about

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<sup>64</sup> Donal P. McCracken, “Fraternity in the Age of Jingoism: The British Imperial Botanic and Forestry Network” in *Science across the European Empires, 1800-1950*, ed. Benedikt Stuchtey (Oxford: Oxford University Press, 2005), 57-58 and 61-62.

private property. These episodes of forest conservation demonstrate the reach of the colonial botanic gardens and the landscape of colonial social and political norms that they worked within.

Richard Grove points out that forest conservation became a viable mode of thought in the late eighteenth century, in both mainland Britain and in the Caribbean. This move to maintain lands in a forested state directly contradicted common ideas about the proper use of colonial land. According to the widely held ideas of John Locke, cultivation of land was the key difference between wild areas and civilization. Colonization was acceptable on territory which was not cultivated to British standards, but failure to cultivate weakened an empire's legal justification to the land.<sup>65</sup> Though these ideas were a challenge to the movement to conserve forests in St. Vincent, there was clear evidence of the cost of inaction. In the British Caribbean of the mid-eighteenth century, the old sugar islands posed a warning to the new islands poised to become major sugar producers. Barbados, Antigua, and Jamaica had been financial powerhouses for the British empire. The financial returns to sugar cane cultivation spurred the clearing of land, and once the cane was mature, it required a steady supply of firewood to power the boilers that reduced cane juice to syrupy molasses en route to becoming sugar. The smaller sugar islands quickly became denuded of their original forests. Tapping into the new ideas about forest preservation, Grenada and Barbados established forest preserves in the 1760s. As older colonies, they had already experienced a rapid decline of local forests caused by their sugar economies. Britain had long lost its cover of primeval forests, but the new appreciation for forests bore fruit on the mainland, too. In London, the Society of Arts, which had incentivized the creation of the

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<sup>65</sup> Grove, *Green Imperialism*, 264-299; Judy Whitehead, "John Locke and the Governance of India's Landscape: The Category of Wasteland in Colonial Revenue and Forest Legislation," *Economic and Political Weekly* 45, no. 50 (December 11-17): 83-85.

St. Vincent garden, also offered prizes for tree planting in Britain and the colonies in the 1750s. People were beginning to see a link between forests, rainfall, and soil erosion.<sup>66</sup>

In a preemptive move of conservation, Alexander Anderson, superintendent of the St. Vincent garden, and a few members of the local assembly moved to protect St. Vincent's forests through creation of the King's Hill Forest Reserve in 1791. Though St. Vincent's forests were intact, Anderson had toured a few Caribbean islands before settling in St. Vincent, and he had seen firsthand how years of sugar cultivation and forest reduction could remake landscapes. These concerns shaped his management of the botanic garden. In a report to government in 1791, he explained that he had allotted the hilly parts of the St. Vincent garden with poor soil for the cultivation of "forest trees and valuable woods." In the same report, he railed against the "stupidity" of planters in other islands, who had left Barbados, Antigua, and St. Kitts almost denuded of trees, thereby threatening the fecundity of the land. Anderson hoped that St. Vincent might be spared that fate, because the interior forests of the island were so inaccessible that they could never be logged. These surviving forests could ensure that St. Vincent would always receive rain.<sup>67</sup>

Anderson's beliefs about the connection between forests and rainfall were longstanding. A year after arriving in St. Vincent, he outlined how he would have managed the garden had he received it as an uncleared tract of land. Anderson suggested that he would have left many of the trees and cleared the undergrowth, sowing seeds in the shade of the trees, since the woods of tropical areas were both shady and moist. Anderson observed the role that shade trees played in keeping areas moist by comparing two different styles of gardening on the island. Slaves were

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<sup>66</sup> For an extended account of this response to desiccationist theory in St. Vincent and Tobago, see Richard Grove, "The British empire and the Origins of Forest Conservation in the Eastern Caribbean 1700-1800" in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*, ed. Robert S. Anderson, Richard Grove, and Karis Hiebert, (Oxford: McMillan Caribbean, 2006), 132-173.

<sup>67</sup> TNA, WO 40/4 letter dated October 18, 1791 from Alexander Anderson to Sir George Yonge, unpaginated.

often expected to grow their own food, so they tended gardens on tracts of land earmarked for this purpose. Anderson reported that slaves planted their vegetables in the shade of established trees, and as a result had verdant gardens. By contrast, “their master’s garden was a bed of dry earth,” because planters followed European methods and placed their gardens on cleared fields.<sup>68</sup> Observations like this guided Anderson’s care of the garden and led him to push for conservation of the island’s trees.

These observations of climate change led Anderson to join with assembly member William Bannatyne to propose creating a forest reserve. The original bill was tabled in the assembly on November 13, 1788, but after years of opposition, the Kings Hill Forest Bill was finally passed in 1791. The bill encountered resistance from planters who feared its effects on a variety of fronts. First, they thought that the reserved forest might aid the native Caribs in their periodic insurrections on the islands. Caribs might shelter in the forests and be difficult to dislodge. Secondly, the planters feared that any land set aside for forest conservation might infringe on their desires to expand sugar and cotton cultivation to forested lands. The bill as originally proposed set aside that forest for the use of the colony, the bill as amended and passed noted that His Majesty’s Commissioners set aside the forest for the purpose of attracting clouds and rain. While local concerns initially pushed the bill, in its final form, the reserve was under the purview of the Crown.<sup>69</sup>

In stepping in to secure the King’s Hill forest, the Crown ensured its survival. The King’s Hill Forest Reserve weathered the War Office’s abandonment of the St. Vincent botanic garden

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<sup>68</sup> RBGK, Forsyth Correspondence, Anderson Letters, letter dated June 6, 1789 from Alexander Anderson to William Forsyth, f. 97.

<sup>69</sup> Grove, “The British Empire and the Origins of Forest Conservation in the Eastern Caribbean 1700-1800,” 154-159.

in 1822 and endures to this day.<sup>70</sup> The contentious relationship between the St. Vincent botanic garden and local government, including the planter elite, suggests that government projects with spotty local support were not destined for long lives unless they had continued protection from imperial government. One of the planters' initial complaints about the reserve touched on the island's sore point: sugar production. The St. Vincent garden ran afoul of planters who saw no purpose in its existence because sugar cane was the dominant agricultural product on the island. The constant trespassing in the garden from the neighboring sugar estate was just a symptom of this overall conviction. For the reserve, the planters did not like what was essentially a zoning restriction. To declare King's Hill a forest reserve was to trespass on the perceived right to develop the whole island for sugar production. The reserve's inaccessibility may have been some protection, but assemblies in the Caribbean were fickle. Just as Jamaica's locally supported botanic gardens met their end when the island assembly changed its policy, the King's Hill Forest Reserve could have fallen to a concerted planter movement against it, had it not had the Crown's support.

The Kings Hill Forest Act was initiated by local action and had local reach, but it can be grouped with similar forest reservation acts passed in the eighteenth century as a result of changing ideas about forests and climate. These bills aimed to maintain the climate, and by extension, the arability of islands in the British Caribbean. The entrance of the Crown to protect the forest of St. Vincent reveals that this local concern with rainfall also had imperial implications. As the recognized government representative of botanical matters on St. Vincent, it was appropriate for Alexander Anderson to support this project.

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<sup>70</sup> "International (2018) Important Bird Areas factsheet: King's Hill Forest Reserve," *Bird Life*, accessed May 23, 2018, <http://www.birdlife.org>.

The botanic garden in Calcutta was similarly involved in forest conservation well before the second half of the nineteenth century, which was the age of greater centralization of imperial rule. Richard Grove has connected Indian forest management to widespread acceptance of the desiccationist ideas that spurred Anderson's activism on St. Vincent in the 1790s. The Calcutta superintendents pushing conservation measures may have been concerned with climate change, but the correspondence exchanged between superintendents and other East India Company officials reveals a fixation on maintaining timber reserves for military use, either for ships or general building material. Preserving these materials for EIC use was trickier than Anderson's maneuvering to secure the King's Hill Forest Reserve. The King's Hill land was inaccessible and either uninhabited or inhabited by Caribs, an indigenous group whose property rights were not respected by British settlers. To preserve the forest there, the Crown could simply designate the land as Crown lands to place them off limits for general use. In India, however, creating permanent titles to property and reducing customary obligations was one of the major initiatives of the early company-state. Shaped by East India Company officials espousing physiocratic, mercantilist, and free trade ideas, the Permanent Settlement in 1793 established property rights in Bengal in order to also set taxation levels.<sup>71</sup> Madras, Bombay, and the Northwest Provinces received their own settlements codifying land ownership and tax burdens in the 1820s and 1830s.<sup>72</sup> The remaining stands of mature trees suitable for naval timber might lay on private land, and it would have been bad form for the East India Company to harvest mature trees or even appropriate entire tracts of forest after making a show about creating regular property rights

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<sup>71</sup> Ranajit Guha, *A Rule of Property for Bengal: An Essay on the Idea of Permanent Settlement* (Durham, NC: Duke University Press, 1996), 1-57 and 170-215.

<sup>72</sup> Neil Charlesworth, *British Rule and the Indian Economy, 1800-1914* (London: The Macmillan Press, Ltd., 1982), 17-19.

in the 1780s. Such a move to alienate private property from its owners would have contradicted the aims that guided EIC policy.

Efforts to preserve forests or encourage tree cultivation did not take shape in the botanical community in India until later in the eighteenth century. Richard Grove credits desiccationist theory, holism from German Romantic thought, and developing orientalist theories with this development. He ties the East India Company acceptance of these ideas to their growing reliance on a network of Scottish surgeons for scientific expertise and the overall professionalization of this class of men as scientific workers.<sup>73</sup> Others have challenged Grove's thesis and instead point to the economic and strategic benefits that would accrue to the EIC as the impetus for state action.<sup>74</sup> The rhetoric of officials involved with growing or preserving trees indicates that the EIC was not concerned with preserving forests in general, like Anderson and assemblyman Bannatyne in St. Vincent. In India, the EIC targeted specific trees for preservation or cultivation, including teak, mahogany, and sissoo (Indian rosewood). Bamboo, though not a tree, entered these conversations because it was also a useful building material for which the EIC sought new supplies.<sup>75</sup> This EIC fixation on a subset of trees that were particularly useful as building materials and naval timber suggests that economic and strategic variables were the primary drivers of their efforts toward forest conservation.

Instead of working to gain local and Crown protection of certain lands for a forest reserve, the superintendents at the Calcutta gardens created and maintained plantations of valuable trees. Colonel Robert Kyd planted teak trees during his tenure as the first superintendent

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<sup>73</sup> Grove, *Green Imperialism*, 381-472.

<sup>74</sup> Pallavi Das, "Hugh Cleghorn and Forest Conservancy in India" *Environment and History* 11, no. 1 (February 2005): 64-67; Henry J. Noltie, *Indian Forester, Scottish Laird: The Botanical Lives of Hugh Cleghorn of Stravithie* (Edinburgh, UK: Royal Botanic Garden Edinburgh, 2016), ix-x; Gregory Barton, *Empire Forestry and the Origins of Environmentalism* (Cambridge, UK: Cambridge University Press, 2002), 6-37.

<sup>75</sup> For instance, Wallich pushed for more formal organization of existing and proposed teak, mahogany, sissoo, and bamboo plantations in the 1820s, they were all grouped together under him in a department called "Government Plantations," see BL, IOR/F/4/760, Extract Bengal Public Consultations, dated February 13, 1823, p. 167.

of the Calcutta botanic garden.<sup>76</sup> His successor, William Roxburgh, successfully lobbied for government plantations of teak. Roxburgh was concerned that there would be an insufficient supply of teak to meet the military needs of the EIC.<sup>77</sup> He distributed both plants and seeds to officials in various districts of Bengal as instructed by government, but also to anyone willing to grow them. He also grew large plots of teak trees in the botanic gardens and extended these plots to newly purchased land. Roxburgh had the wood from his plantations evaluated for quality, and using growth data from the plantations managed by himself and other officials, Roxburgh calculated the profit that would accrue to each biggah of land planted in teak. He pondered what methods might induce Indians to grow the trees and settled upon small prizes and cultivation instructions with a quality report printed in native languages.<sup>78</sup>

With the plantations of teak growing to maturity, the EIC tried to reserve existing stands of timber for Company use. In 1800, the leadership of the Bengal and Bombay presidencies tried to prevent private citizens from cutting down teak trees under twenty one inches in circumference, presumably to avoid gaps in production. However, with no clear mechanism for oversight or punishment, this prohibition had little effect on behavior. In 1805, the EIC proclaimed that the company assumed all forest rights that had been claimed by past indigenous rulers.<sup>79</sup>

In Bengal, Wallich was Roxburgh's successor at the Calcutta botanic garden, and continued planting teak in the colony until there were several government timber plantations.<sup>80</sup>

The ones connected to the Calcutta garden were joined by one at Bhauleah in 1800, and

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<sup>76</sup> Grove, *Green Imperialism*, 405-407.

<sup>77</sup> BL, IOR/P/11/55, letter dated March 10, 1826 from Nathaniel Wallich to Lushington, Chief Secy to Govt General Dept, p. 85-86.

<sup>78</sup> 1104 rupees, Tim Robinson, *William Roxburgh: The Founding Father of Indian Botany* (Chichester, UK: Phillimore & Co. Ltd, 2008), 130-131.

<sup>79</sup> Grove, *Green Imperialism*, 393 and 395.

<sup>80</sup> Grove, *Green Imperialism*, 405-407.



plantations at Kishnaguri Sylhet and Bancoorah in 1812 and 1814. These plantations provided seedlings that went to all parts of India and foreign countries.<sup>81</sup> Wallich noted that the EIC had established laws for the “management and preservation” of forests and cultivation of “both public and private interest” in Indian forests.<sup>82</sup> Perhaps in promulgating laws limiting civilian access to the trees while also running teak plantations, keeping track of profits, and shipping seeds around the country, the EIC wished for private individuals to enter the teak trade and ameliorate the shortage.

Shortages of other trees made them candidates for government management along with teak. Wallich recommended planting additional forests of sissou (Indian rosewood), either alone or mixed with teak and mahogany.<sup>83</sup> He had already grown tracts of sissou in the botanic garden, but he pushed for aggressive expansion, remarking that his experimental scheme was no longer an experiment since the “Public Service” required it; the Ordnance Department needed supplies. He also wanted the teak and additional sissou plantations organized under a separate government department called Government Plantations, with himself as the Superintendent General.<sup>84</sup> While pushing for additional government plantations, Wallich declared the failure of earlier methods of preservation. He drew attention to previous government efforts to restrict forest access through laws which had failed to preserve the necessary trees.<sup>85</sup> At the same time, Wallich encouraged government to sanction the creation of bamboo plantations, too, for incorporation into the new department of Government Plantations. This time he explicitly blamed Native people for the scarcity of the material. Bamboo was used by Indians for construction, and “the considerable

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<sup>81</sup> BL, IOR/P/11/55, letter dated March 10, 1826 from Nathaniel Wallich to Lushington, p. 88.

<sup>82</sup> BL, IOR/F/4/655/18040, Extract Bengal Public Consultations dated June 6, 1820, p. 70-71 and 78-83, quotations p. 78-79.

<sup>83</sup> BL, IOR/F/4/655/18040, Extract Bengal Public Consultations dated June 6, 1820, p. 70-71 and 78-83.

<sup>84</sup> BL, IOR/F/4/760/20668, letter dated January 29, 1823 from Nathaniel Wallich to Lushington, p. 158 (quotation), p. 167.

<sup>85</sup> BL, IOR/F/4/760/20668, letter dated May 24, 1820 from Nathaniel Wallich to Lushington, Extract Bengal Public Consultations, June 6, 1820, p. 56-57.

clumps in the neighbourhood of Moorshedabad from which the Commissariat used to derive its chief supplies” had been extinguished. Wallich, without recognizing the irony, lamented the “well known aversion of the Natives to provide for the coming day.”<sup>86</sup>

By the 1820s, the EIC’s main tactic for arresting the timber shortages had been starting new government plantations. New plantings could be a safeguard against future shortages, but they had little effect on the immediate situation. Wallich pointed out the utility in preserving old forests because it would take awhile for the new plantations to provide timber. However, the superintendent knew the difficulty of selectively preserving old stands of trees. Rules restricting timber use had been promulgated with little effect on the decimation of economically valuable trees. Furthermore, rules about forest use could very easily impinge on individual rights to private property. When trying to determine a course of action, Wallich, involved officials, and the EIC command danced around the issues of private property. Wallich and the Forest Committee were anxious to know other ways that Gerard, the man on the spot, could devise for saving a supply of sissoo for government “without prejudice to individual rights, or materially affecting the ordinary consumption of the community.”<sup>87</sup> Gerard thought that the lands reserved for forests could help defray their own expenses if local Indians were allowed to fell trees not marked out for government but charged a duty for the privilege.

Captain Gerard and the EIC command were not above a bit of subterfuge when it came to reserving existing tracts of forests. Gerard reported that the Nepalese government farmed out forest districts to the highest bidder. The EIC might be able to lease land there and preserve those forests for their own use. The wood they received there would be free of duties, which would be a good savings. Gerard felt that forest laws would be pointless because there were no longer any

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<sup>86</sup> BL, IOR/F/4/760/20668, letter dated May 24, 1820 from Nathaniel Wallich to Lushington, Extract Bengal Public Consultations, June 6, 1820, p. 60-62.

<sup>87</sup> BL, IOR/F/4/760/20668, letter dated May 29, 1823 from Nathaniel Wallich to Gerard, p. 249-258, quotation 258.

good forests in the EIC to manage; all the best forests were in foreign countries, therefore more active measures were required.<sup>88</sup> The EIC was willing to consider the subterfuge of having someone pose as a private individual to contract with the Nepalese government to farm forests, particularly sissoo, on behalf of the EIC. The measure was approved, though the EIC thought it best to consult with the Resident at Kathmandu and the Political Agent on the northeastern frontier before taking the final step.<sup>89</sup>

There was not full agreement amongst the presidencies of the worth of the plantations and forest protections. Sir Thomas Munro, governor of Madras, was a firm believer in the power of the market to respond to demand and increased prices. He also disagreed with the way the forest measures interfered with what he understood to be indigenous property rights. Certain that private enterprise could provide the needed timber, he curtailed government support for teak plantations in western India.<sup>90</sup> In 1826, Wallich questioned whether the shortage predicted by his predecessor, William Roxburgh, would ever come to pass. Wallich thought that recent conquests in eastern India would yield extensive teak forests which would forever spare the empire from shortage. The matter was a topic of correspondence because plans had been made to sell part of the teak plantation attached to the botanic garden.<sup>91</sup> Wallich did not advocate for the closure of all of the plantations, but his support for the plantation model was contingent on the threat of shortage. The EIC continued to face shortages for different varieties of timber and partnered with the Calcutta garden to pursue a variety of strategies to maintain supply, continuing through what some scholars have identified as the age of formal forest management in the 1860s.<sup>92</sup>

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<sup>88</sup> BL, IOR/F/4/760/20668, letter dated June 9, 1823 from Gerard to Forest Committee, p. 261-268, districts for rent were in Turrace.

<sup>89</sup> BL, IOR/F/760/20668, Extract Public Letter from Bengal, July 31, 1823, p. 11-14.

<sup>90</sup> Grove, *Green Imperialism*, 396-399.

<sup>91</sup> BL, IOR/P/11/55, letter dated March 10, 1826 from Nathaniel Wallich to Lushington, p. 77-87.

<sup>92</sup> See Barton, *Empire Forestry and the Origins of Environmentalism*, and McCracken, "Fraternity in the Age of Jingoism: The British Imperial Botanic and Forestry Network."

Colonial garden superintendents became involved in forest preservation and management for different reasons, but all aimed to maintain the viability of the colonial settlements. They also set the precedent that monitoring forest health was one of the responsibilities of a colonial botanic garden superintendent. Staff at the Singapore botanic garden, which opened in 1862, saw the quick degradation of the settlement's forests with concern. Beginning in the 1870s, the superintendents at Singapore started tree nurseries and plantations. They were asked by local government to write reports on existing forests, and in the 1880s, they headed the government Forest Department, which established and policed reserves and managed new plantations.<sup>93</sup> Though separated by time and space, the Singapore superintendents maneuvered through the web of motivations of local government, imperial government, and the general public to pursue the same methods used by their predecessors in India and St. Vincent.

### **Visitation of the Gardens**

Foreign, royal, and university botanic gardens were the progenitors of the institutions created in the British colonies, yet the degree of public access differed between British colonial gardens and those on the mainland. Some of the royal botanic gardens in Europe were open to the public. The Schönbrunn of Austria housed a menagerie and was open to the public without fee.<sup>94</sup> The Jardin du Roi also allowed access to the elite public.<sup>95</sup> However, these gardens are unique in this respect, and the British botanic gardens were not for the general public's use in the

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<sup>93</sup> Timothy P. Barnard, *Nature's Colony: Empire, Nation and Environment in the Singapore Botanic Gardens*, (Singapore: Nus Press, 2016), 50-83. Nota bene – this is the second garden established in Singapore. Raffle's garden was defunct by the 1830s.

<sup>94</sup> Henry III's menagerie housed at the Tower of London was another royal menagerie open to the public, but for a fee of sixpence. See Sofia Åkerberg, *Knowledge and Pleasure at Regent's Park: The Gardens of the Zoological Society of London during the Nineteenth Century* (Umeå, Sweden: Department of Historical Studies, Umea University, 2001), 22-24.

<sup>95</sup> Spary, *Utopia's Garden*, 23-25; C. Stuart Gager, "Botanic Gardens of the World: Materials for a History," 208-209.

late eighteenth century and the first decades of the nineteenth. Kew Gardens in London was a royal garden during this entire period, and only accessible to the royal family and those with connections to them. Other botanical gardens were generally attached to a university, or in the case of the Chelsea Physic Garden, to the Worshipful Society of Apothecaries. Those connected to universities or a guild were bounded by a wall and had limited clientele.<sup>96</sup> These restrictions to access kept these gardens from being properly public gardens.

Despite the exclusivity of their counterparts on the mainland in the late eighteenth and early nineteenth centuries, British colonial gardens allowed free public access. Though its location outside of town necessarily affected the number and type of its patrons, the Calcutta botanic garden had free access to all classes of people.<sup>97</sup> St. Vincent's garden was public, though visitation was limited during the tenure of its last superintendent, due to constant thefts.<sup>98</sup> Superintendents at the St. Vincent garden were also known to hold dinners there for the governors. Once the garden was claimed by the colony and Governor Brisbane effectively took over, he continued the practice of holding dinner parties for elite visitors on the garden grounds.<sup>99</sup> In New South Wales, the Sydney botanic garden had a companion piece of ground, the Domain, which had long been open for leisure of the "respectable Class of Inhabitants," and the garden itself was similarly open to visitors.<sup>100</sup> These colonial gardens were sites for public sociability, but they still had limitations on who could access them. In Sydney, convicts were not

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<sup>96</sup> Hill, "The History and Function of Botanic Gardens," 198 and 203-204; Minter, *The Apothecaries' Garden*, 31-35 – for instance, artists visited the garden and those making illustrated herbals.

<sup>97</sup> BL, IOR/R/4/1761/72126, letter dated October 1, 1836 from Nathaniel Wallich to HJ Prinsep, Secretary to Government, p. 70-71.

<sup>98</sup> SL NSW, M1192, letter dated November 9, 1816 from George Caley to Sir Joseph Banks, p. 121-122.

<sup>99</sup> TNA, CO 260/48, letter dated April 29, 1831 from H. Darris to Lord Howick, f. 320-321; Frederic William Naylor Bayley, *Four Years' Residence in the West Indies, during the Years 1826, 7, 8 and 9* (London: William Kidd, 1833), 223-224 and 299-302.

<sup>100</sup> The land where the Sydney garden and Domain were established in the 1820s had long been a site for recreation even before it was officially a botanic garden and park, see "Government Public Notice," *The Sydney Gazette* 14, no. 659 (July 6, 1816): 1, <https://trove.nla.gov.au/newspaper/page/493073>.

allowed on the grounds except to work, and slaves in St. Vincent and Jamaica were similarly excluded. However, the colonial gardens were unique for allowing almost universal entry to British and European settlers.

The antecedents of public access to colonial botanic gardens may not lie in the great botanic gardens of Europe, but instead in Britain's pleasure gardens in the first half of the eighteenth century.<sup>101</sup> Some gardens in London were accessible to anyone with the ability to pay. Vauxhall Gardens, in Kensington, had a one shilling entry fee and a mixed class of patrons starting in the 1720s. A garden called Ranelagh opened in 1742, with a two shilling entry fee. Both gardens became part of the London season, and with entry fees comparable to the cost of cheap seats at the theatre, they had the capacity to be sites for the mixing of different social classes. Elites who were involved with the administration of the colonial botanic gardens, such as Lord Palmerston, sometime secretary at war, and George III and George IV visited Vauxhall and Ranelagh. In practice though, accounts of elite patrons reveal that while different social groups might have been present in the garden at the same time, individuals did not socialize between groups. The elites patronized particular walks and spaces of the gardens at particular times, thereby keeping themselves apart from the lower orders. Elite guests were part of the spectacle that the other orders of society came to see. The gardens were a place to see and be seen, but they were not conducive to actual mixing of the social groups.<sup>102</sup>

If patrons in late eighteenth century Britain wanted a more enlightened garden experience, they could pay a fee and visit William Curtis's botanic garden, and in the early

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<sup>101</sup> Or perhaps in the British Museum, which was created by Hans Sloane's bequest and money raised by a national lottery; the British Museum opened to the public, for free, in 1759, see James Delbourgo, *Collecting the World: Hans Sloane and the Origins of the British Museum*, (Cambridge, MA: The Belknap Press of Harvard University Press, 2017).

<sup>102</sup> Hannah Greig, "'All Together and All Distinct': Public Sociability and Social Exclusivity in London's Pleasure Gardens, ca. 1740-1800" *Journal of British Studies*, vol 51, no 1 (January 2012): 50-75.

nineteenth century, they could join a local subscription botanic garden. After a stint as plant demonstrator at the Chelsea Physic Garden, Curtis opened his own botanic garden at Lambeth in 1779, and moved to Brompton in 1789. Though some of his customers trampled plants, stole flowers, and made love connections in the garden, Curtis's establishment was a serious institution. He remained connected to networks of colonial botany and helped train some of Banks' protégés. To his subscribers, Curtis's garden also offered educational opportunities and plant materials.<sup>103</sup> With these services on offer, Curtis had created something like a subscription botanical society, but housed within a specific physical location. In the early nineteenth century, citizens of some British cities pulled together to create subscription botanic gardens along similar lines. Liverpool was first in 1802, and Hull subscribers formed a garden in 1812. Sheffield, Birmingham, and others would soon follow. These locations sought to provide refined leisure to their subscribers, therefore staff were careful to consider both educational and aesthetic considerations when laying out the garden grounds.<sup>104</sup>

The colonial botanic gardens were somewhat like the subscription botanic gardens in Britain in that they offered educational opportunities and rational leisure to their patrons, but the colonial gardens provided free, government-funded rational leisure. The superintendents of the colonial gardens had always taken aesthetic matters into consideration. Colonel Robert Kyd, the first superintendent at the Calcutta garden, had wanted his garden to be a respite for British officials who found that their health would benefit from a retreat on the garden grounds, which were across the Hooghly River from town.<sup>105</sup> In later years, an interim superintendent took issue

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<sup>103</sup> Paul Elliott, *Enlightenment, Modernity and Science: Geographies of Scientific Culture and Improvement in Georgian England* (London: I.B. Tauris & Co Ltd, 2010), 142-151; Webb, *George Caley*, 7 and 10.

<sup>104</sup> Elliott, *Enlightenment, Modernity and Science*, 153-165.

<sup>105</sup> *IP Corr JB*, Vol 3, Letter 123, letter dated January 17, 1791 from Joseph Banks to Court of Directors, EIC, 186; in this, he seems to have wanted the botanic garden to provide one of the services that the Hill Stations would later provide, i.e. refuge for EIC employees during the hottest part of the year. For the history and function of the Hill Stations, see Dane Kennedy, *Magic Mountains: Hill Stations and the British Raj* (Berkeley, CA: University of

with Wallich's artful plant arrangements and nearly destroyed the garden in an attempt to create a scientific arrangement that grouped the plants by their classification. By removing trees and leaving plants to grow in exposed beds, William Griffith ensured that the garden plants wilted in the baking sun.<sup>106</sup>

In St. Vincent in 1818, George Caley had similar complaints about the work of his predecessors, doubting their ability to run the place based on the look of the garden. He took issue with the number of trees spread across the grounds. Caley did not realize that the tropical climate had led Anderson, as a desiccationist, to plant trees to shade his valuable plants and help encourage rain in the area.<sup>107</sup> The climatic differences between the colonies and Britain meant that the colonial gardens had to be laid out under different governing principles. Caley's main complaint about the overabundance of trees was aesthetic. He felt that the mature trees ruined the prospect from the superintendent's house down to the newest portion of the garden. He planned to remove vegetation to create a vista, lay out a few walking paths, level some areas, plant ornamentals, and fence off half an acre for a "regular Garden."<sup>108</sup> Government officials intended the colonial botanic gardens as sites for pursuing economic botany, but superintendents also tried to create welcoming plots for colonial sociability. This attention to aesthetics went hand in hand with public accessibility. Once Kew Gardens became a public institution in 1841, it opened for public visitation. Superintendent William Hooker wished to run the garden with the greatest attention to scientific and economic botany, but pressure from MPs and Kew commissioners

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California Press, 1996); Eugenia Herbert, *Flora's Empire: British Gardens in India* (Philadelphia: University of Pennsylvania Press, 2011), 97-136.

<sup>106</sup> Herbert, *Flora's Empire*, 147-151.

<sup>107</sup> *IP Corr JB*, Vol 8, Letter 184, letter dated July 19, 1818 from George Caley to Sir Joseph Banks, 259-261; RBGK, Forsyth Correspondence, Anderson Letters, letter dated June 6, 1789 from Alexander Anderson to William Forsyth, f. 97.

<sup>108</sup> *IP Corr JB*, Vol 8, Letter 184, letter dated July 19, 1818 from George Caley to Sir Joseph Banks, 260.



forced him to improve the aesthetic appeal of the garden, including planting flower beds for public amusement.<sup>109</sup>

The Sydney botanic garden superintendents went further than their counterparts in India and the Caribbean in their attention to the appearance of public grounds in their community. Allan Cunningham had once complained about his time being taken by the decidedly unscientific activities of laying out walking paths in the Domain.<sup>110</sup> However, one of his successors, Charles Moore, embraced the opportunity to embrace the aesthetic possibilities of the superintendent's post and shaped the design of nearly all public parks in the colony. He chose an artful layout for the Sydney garden itself, building the design around a fern gully, which itself became a model for the Melbourne Botanic Garden in the 1870s. As superintendent, he had much control over the sorts of plants cultivated in the garden for distribution to the populace. In this way, he influenced the appearance of private gardens across the settlement. In his position as botanical advisor in the colony, officials asked Moore for lists of recommended plants whenever gardens for local institutions were being planted. Moore often provided the raw materials as well, giving the gardens in front of hospitals, government buildings, railway stations, and an asylum the stamp of his botanical preferences. Over his fifty-year career, Moore shaped the botanical aesthetic of public grounds across New South Wales and included the improvement of public taste as one of his responsibilities.<sup>111</sup>

Like the public pleasure gardens in Britain, the colonial botanic gardens were designed to provide some visual pleasure to their visitors. However, unlike the public gardens in London, the

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<sup>109</sup> Herbert, *Flora's Empire*, 151.

<sup>110</sup> Orchard and Orchard, *Allan Cunningham*, Letter 6/c/1, letter dated April 15, 1837 from Allan Cunningham to William J. Hooker, 436

<sup>111</sup> Colleen Morris, "Planting New South Wales: The Role of the Sydney Botanic Gardens," in *Gardens of History and Imagination: Growing New South Wales*, ed. Gretchen Poiner and Sybil Jack (Sydney: Sydney University Press, 2016), 172-184.

colonial gardens were government institutions pursuing economic and scientific botany programs. The colonial gardens tried to engage their local communities through educational programs and plant distributions. In this didactic mission, the colonial gardens resembled the Chelsea Physic Garden and the botanic gardens attached to universities. But in focusing their educational efforts more broadly to include the bulk of their communities, the colonial gardens may be viewed instead as many have interpreted natural history museums in Britain and the colonies, as spaces to educate and discipline the populace.<sup>112</sup> However, these museums and exhibitions were a feature of the second half of the nineteenth century and the increasing focus on empire. The earliest museums, like the early botanic gardens on the British mainland, had restricted clientele. Even the British Museum, founded in 1753 and touted as the first public British museum, admitted visitors only after examining their “credentials,” up to fifteen people at a time. Museum trustees and curators continued to object to wider public access into the nineteenth century.<sup>113</sup> The gardens were sites for public leisure much earlier than the heyday of public museums in the latter part of the nineteenth century, and there is no evidence to suggest that the botanic gardens charged an entry fee in these early years or closely scrutinized prospective visitors.

Colonial garden superintendents had no illusions that the open access policy was simply to provide recreation for the colony. When facing the prospect of budget cuts in the 1830s, Nathaniel Wallich, the superintendent at the Calcutta garden, made explicit reference to public visitation as a benefit that his garden provided to the local community. The garden was across

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<sup>112</sup> See, for instance, John M. MacKenzie, *Museums and Empire: Natural History, Human Cultures, and Colonial Identities* (Manchester: Manchester University Press, 2009) or Susan Sheets-Pyenson, *Cathedrals of Science: The Development of Colonial Natural History Museums during the Late Nineteenth Century* (Kingston and Montreal: McGill-Queen’s University Press, 1988); Tony Bennett, *The Birth of the Museum: History, Theory, Politics* (London: Routledge, Taylor & Francis Group, 1995), 59-88.

<sup>113</sup> Bennett, *The Birth of the Museum*, 69-71; Delbourgo, *Collecting the World*, 318-321 and 328-337.

the Hooghly river about four miles from the town of Calcutta, accessible by Hasting's Bridge. Wallich believed that the distance from town allowed him to keep the garden in better repair, yet it also helped the garden draw greater crowds. Wallich stressed to government in Britain that the grounds were patronized by "people of all nations and ranks both European and natives" who were "freely admitted" and given "liberty to walk all over the grounds and to examine every plant and species of cultivation." People of all classes had visited the garden for "very many years...for the sake of harmless rational and useful recreation," and in the hot and cold season on Sundays and holidays, individuals and families went to the garden for "a day of coolness pure air and relaxation."<sup>114</sup> In defending the use of his botanic garden, Wallich employed the language of rational leisure and wide public access. The garden at Calcutta was not designed to benefit just the elite landowners by providing help in acclimatizing new cash crops. Wallich saw his garden as a community institution that provided free plants, opportunities for education, and a site for recreation. By including Indians and British people in its mission, the Calcutta garden was a strategy for conciliating the Indian populace to British rule.

All of the colonial garden superintendents sought to educate their publics through rational recreation, but the meaning and degree of access depended upon the institution. The botanic garden in Sydney was not quite as open in its public access policy, and the difference lies in its history as a prison colony. The Sydney botanic garden was developed on crown lands set aside by the first governor, Governor Phillip, for the use of the colony. Subsequent governors leased the land, but Governor Bligh and Macquarie voided the active leases and used the land as a buffer between the convicts of the colony and the governor's mansion. The land comprised two distinct pieces, one was the government garden, and the other was the Domain. The Domain was

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<sup>114</sup> BL, IOR/R/4/1761/72126, letter dated October 1, 1836 from Nathaniel Wallich to HJ Prinsep, Secretary to Government, p. 70-71.

somewhat like the park of a great house in Britain. Though Macquarie enclosed these grounds with a fence, he allowed visitors to the space before the land was officially set aside as a botanic garden and the Domain. Macquarie was careful to specify that the garden was open only to the better class of people; convicts were strictly forbidden in the garden, except while they did the heavy labor on the grounds.<sup>115</sup> Prospective patrons of gardens in Europe might be screened by an entry fee; in New South Wales, a proclamation determined who was worthy of passing into the walled garden. Once the area next to the old governor's mansion was developed into a botanic garden by Macquarie's successor, Thomas Brisbane, public access to the garden and Domain continued. Instead of keeping the prisoners locked up as in Britain, in Sydney, the haunts of polite society were walled off from the prison colony.

Government officials in Britain and the colonies may have intended the colonial gardens to be sites for rational leisure, but they could not control how the public used these spaces. Theft occurred in all colonial botanic gardens, and the responses of garden staff and colonial administrations to these crimes reflect the strength of the ties that the gardens had to their local community. The St. Vincent botanic garden had a particularly contentious relationship with the citizens of Kingston. Even the garden's most celebrated superintendent, Alexander Anderson, experienced thefts of plants and fruit, including valuable spices, during his tenure. One of the early incidents was the theft of the first crop of breadfruit. After he discovered the theft, Anderson destroyed some of the unripe fruit in a fit of pique. In later years, Anderson seems to have relied on ignorance of the populace to provide some protection for his plants. He was said to have resisted pointing out to visitors which trees in the garden were the valuable spice trees.<sup>116</sup> By withholding information about the plants, Anderson betrayed the garden's mission to spread

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<sup>115</sup> Gilbert, *The Royal Botanic Gardens, Sydney*, 24-25.

<sup>116</sup> *IP Corr JB*, Vol 8, Letter 184, letter dated July 19, 1818 from George Caley to Sir Joseph Banks, 261.

botanical knowledge. However, this strategy demonstrates Anderson's lack of institutional support to create real deterrents to theft. His successors adopted other strategies. Lockhead put an advertisement in the local paper that trespassers would be shot, and his successor, George Caley, curtailed the garden's public hours in response to theft.<sup>117</sup> The continuing problem with theft in the St. Vincent garden and the apparent reliance on solutions developed by the superintendent alone demonstrate the weak support from local government. The superintendents in St. Vincent had to rely on personal relationships to run the garden and respond to challenges. By contrast, theft in the Calcutta botanic garden was handled with greater cooperation between the garden and local authorities. In 1851, a theft of rare fruit from the garden led an investigation into who had jurisdiction over the perpetrator. Both the Advocate General and the local Mahommedan Law Officer weighed in on whether the local Magistrate could sentence the guilty party. Local government wanted to "make an example of any individual who may abuse the privilege of access to the Botanical Garden by committing depredations..."<sup>118</sup> Unlike in St. Vincent, where theft was an act committed by the thief on the superintendent, in Calcutta, a theft from the garden was an interaction between the thief and the machinery of colonial administration. The Calcutta garden was an institution of government, and the other arms of government moved to protect it.

After the Royal Botanic Gardens, Kew became a public garden in 1841, the number of botanic gardens in the British colonies increased. Some of these remained little more than botanic stations for the acclimatization and transfer of plants, but many grew into gardens with extensive grounds for public recreation. However, it is notable that before this transition point, the only colonies with botanic gardens, India, Australia, and Trinidad, were also the colonies

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<sup>117</sup> *IP Corr JB*, Vol 8, Letter 184, letter dated July 19, 1818 from George Caley to Sir Joseph Banks, 270; SL NSW, M1192, letter dated November 9, 1816 from George Caley to Sir Joseph Banks, p. 121-122.

<sup>118</sup> BL, IOR/E/4/820, Bengal Public Department, letter signed June 29, 1853 in reply to letter dated August 7, 1851, p. 1057.

with the most autocratic governments.<sup>119</sup> In light of the difficulties the superintendents in St. Vincent and Jamaica had in maintaining their gardens in colonies with a modicum of self-government through elected assemblies, it could be that only colonies administered directly from London had the proper administrative environment for supporting a botanic garden against a hostile or ambivalent local populace. However, the attention that early superintendents paid to making their gardens a pleasant place for public recreation suggests another reason. The colonies with the most autocratic governments were in greater need of demonstrating good governance through the agricultural improvement and botanical projects that botanic gardens arguably supplied. However, good governance could also be modeled through the promotion of a genteel yet rational public sphere. Though imperial government abrogated the rights of British subjects and withheld such rights from convicts and populations of color in the colonies of direct rule, the orderly public walks of the colonial gardens justified the enlightened nature of that form of government. In the early part of its history, the New South Wales settlement hovered between being merely a prison camp or a colony. Perhaps to erase this ambiguity, its botanic garden took the lead in not only providing recreation for citizens, but for managing the landscaping of public buildings and train stations throughout the colony. The unusual lack of imperial oversight over the garden suggests that it was most important as a symbol of the colony's development from a prison settlement into something more.

## **Conclusion**

The colonial botanic gardens were a site for imperial dreams. The disparate goals that local and imperial governments set for the gardens gave them a form unlike anything in Europe.

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<sup>119</sup> Ceylon, Singapore, and Penang had gardens for a portion of this period, and were also autocratic colonies, either Crown colonies or under East India Company rule.

Economic botany and protection of colonial plant wealth was their primary mission, but they were open for visitation and provided free plants and education. Their unprecedented level of engagement with the local communities made them a vehicle for imperial values as they tried to encourage acceptance of British-style property rights, agricultural development, and gardening. Engagement with the gardens was, in theory, voluntary, but superintendents and local and imperial governments set the terms on which plants would be distributed, who could visit or learn, when, and for what purpose. Tapping into Enlightenment ideals of improvement, the gardens were sites for colonists to perform elite British identities and for lower classes to be educated and reformed. India, Australia, and the British West Indies had complex societies with racial and class boundaries that prevented the formation of “improvement” organizations to the degree that they existed in Britain. As a result, colonial gardens served a dual purpose; they were a government-funded attempt to promote economic botany and recreate Britain’s values and polite society in the empire.

## CONCLUSION

This local study of British colonial botanic gardens in India, Australia, and the Caribbean offers a counter-narrative to the older models of colonial scientific dependence and centralized control in the late eighteenth and early nineteenth centuries. Richard Drayton has suggested that the death of Banks in 1820 and changes in the outlook of the ruling party in Britain led to retrenchment and withdrawal of government support for scientific efforts in the colonies. He argues that the “direct consequence of the retreat of Crown patronage during the 1820s and 1830s was that science became dependent on the private support of local gentlemen.” He explains that planters kept the St. Vincent garden open with the governor’s assistance, and the Sydney Botanic Garden, founded in 1818, existed thanks to a partnership of official and private assistance.<sup>1</sup> However, the St. Vincent garden’s early years were characterized by a mix of official and private support, and the gardens in Jamaica had always been dependent on the support of local elites. The governor and planters that Drayton credits with saving the St. Vincent garden were also the ones who harried it to death, causing the Crown to abandon it to the colony, which itself withdrew financial support in the 1820s. The Sydney garden was founded in 1820 as a response to an official investigation into Macquarie’s administration. With Commissioner Bigge pushing for the creation of the garden, it was a botanical institution supported from London as part of an empire-wide project of reform. The only other colonial gardens in existence in the 1820s and 1830s were the group of gardens in East India Company territories, an inconstant garden in Ceylon, and the garden in Trinidad which benefited from the St. Vincent garden’s closure.

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<sup>1</sup> Richard Drayton, *Nature’s Government: Science, Imperial Britain, and the ‘Improvement’ of the World*, (New Haven, CT: Yale University Press, 2000), p. 132-133



Drayton and others have made compelling arguments about the formation of a system of institutions and organizations working for agricultural improvement, economic botany, and scientific production in Britain and across the empire. They speak of multiple imperial projects, of the use of science to know, rule, and capitalize on imperial territory. They write about changing attitudes toward nature, governance, and political economy that shaped the goals of government supported science. Uncovering these trends is an important endeavor, but the method misses the local variations that demonstrate the texture of science and empire.

The story of the colonial botanic gardens has been told as one of success, of the expansion of a network of institutions pursuing the same goals, led from the center. However, the colonial gardens themselves and the programs they oversaw meant different things to different people. In St. Vincent, governors saw the garden as an unwelcome institution independent of their authority. Planters saw it as a pointless intrusion into local affairs, perhaps reminiscent of the London government's unwelcome intervention in the slave trade. Superintendents saw it as a godsend, a way for them to pursue their vocation. A career as a superintendent would have also been a learning experience, because their interactions with Banks, military service, or training at Kew or other British gardens would not have prepared them for interacting with governors and elite groups in the colonies. It is unclear what slaves working in the garden may have thought of that institution. Imperial government merely wanted the garden to develop new medicinal plants and cash crops, while sending some plants home for Kew. These are all imperial stories, too.

British imperial government could not simply reach more deeply into the life of its colonies by creating an institution or branch of government and sending out as specialist. Colonial societies had a power and dynamic of their own that government had to respect in order for a new initiative, botanical and agricultural management, to take place. The functionaries sent

out, the garden superintendents, lacked the social standing to push through any opposition they experienced. They had to navigate alien social and political landscapes to run their gardens. In encounters with people uninterested in botany, the superintendents only had their new, government title and the word of a distant elite patron to indicate that they were worth the attention of the local power. Some, through favors, were able to develop some local social standing to help advocate for the institutions in their care. Paradoxically, in this early attempt at increased imperial oversight of botanical projects through-government supported institutions, personal relationships were even more important for annexing the new powers and responsibilities to imperial government. Authority had to be created.

Scientific authority, too, had to be constructed, and it had a slippery meaning as it moved through the empire. For a naturalist in Jamaica, his knowledge may have meant nothing to the planter next door, but his expertise, combined with his location, meant everything to men like Sir Joseph Banks. Though society at large might not respect the gardens' purpose or the scientific credibility of their workers, those with a taste for natural history or an interest in plants respected people in the colonies with a modicum of botanical skill. This scarcity of botanical knowledge led to uncommon exchanges across class and racial boundaries. The quest for knowledge, gaining it and controlling it, pushed garden superintendents to query slaves and led London slave-traders to hire a man of color as an independent naturalist on Trinidad. The same reverence for botanical skill allowed lower class superintendents to engage in political infighting with governors and win. But these social codes could not be entirely broken. Slaves stayed slaves, uncredited for their specimens and expertise. Tyley, the naturalist of color, was prevented from taking his post in Trinidad by British fears of racial revolution. And one superintendent, George

Caley, ultimately lost his fight with the local governor and remains known in the secondary literature, perhaps unfairly, as a troublesome, lower-class man.

Colonial botanical collections represent a desire by imperial government to exercise greater oversight over colonized lands. Local elites in Britain, like Sir Joseph Banks, were useful for being a bulwark of protection against power hungry local elites or imperial cost cutting. The colonial gardens, whether funded by the Crown or local governments, had numerous ties with people and institutions in Europe. However, the direction of the colonial gardens did not entirely come from the center. Some colonial communities wanted greater government involvement in agricultural and scientific development. Garden superintendents pushed government to fund scientific projects and sometimes saved defunded programs through careful penny pinching and staff management. The programs and policies created by the overlapping desires of widely different groups were a light touch compared to the formal government departments that would characterize colonial governance in the second half of the nineteenth century. These methods fit with the transition from mercantile to laissez-faire, free trade systems in the move toward high empire.

The colonial gardens, in design and function, were different than any of the botanic gardens of Europe. They were important sites for regional plant introductions, experimentation, and conservation. The Royal Botanic Gardens, Kew, would eventually begin performing these practices, too, after it became a national garden. Engagement with people outside of polite botanical circles originated in the colonial gardens, and this mission went “home,” transforming Kew, the private, royal garden into a garden of empire. As physical spaces, allowing access to some and denying others, the colonial gardens embodied the social distinctions of their communities. The plants they contained were the end result of hordes of people funding,

collecting, shipping, planting, and laboring. Government officials saw their artful arrangement in the garden and the processes that put them there as representations of improvement and enlightenment ideals, which might transfer to the public through rational recreation. Supporters of the colonial gardens were not wrong in this, but they saw only an ideal. The gardens were also the embodiment of political fights, racist attitudes, imperial careerism, thankless drudgery, and local resistance which were all a part of the texture of empire.

## REFERENCES

### Archives

British Library, India Office Records.

Linnean Society, Anderson Manuscripts, MS 605, 606, 614-617, and Wallich Letter dated August 31, 1826.

National Archives, Colonial Office Papers, Court of Kings Bench Records, War Office Papers, Probate Records and Treasury Records.

New York Botanical Garden, Mertz Library, Hanging Files, Alexander Anderson.

Royal Botanic Garden, Kew, Director's Correspondence, Forsyth Letters.

Royal Botanic Garden, New South Wales, Colonial Letter Books and Botanic Gardens – Sydney Reports.

State Library of New South Wales, MLMSS 6361, MAV/FM4/10949, M730, M1192, and M1193.

State Record Authority, New South Wales, 4/7577, Letters Received and Minutes Botanic Gardens.

### Published Primary Sources

Anderson, Alexander. *The St. Vincent Botanic Garden*. Edited by Richard A. and Elizabeth S. Howard. Cambridge, MA: R.A. & E.S. Howard, 1983.

Anderson, Alexander. *Alexander Anderson's New York City Diary: 1793 to 1799*, ed Jane R. Pomeroy, New Castle, DE: Oak Knoll Press, The American Antiquarian Society, 2014.

*Asiatick Researches*.

Banks, Joseph. *Scientific Correspondence of Sir Joseph Banks, 1765-1820*. Edited by Neil Chambers, Vol. 1-8. London: Pickering & Chatto, 2007.

Banks, Joseph. *The Indian and Pacific Correspondence of Sir Joseph Banks, 1768-1820*. Edited by Neil Chambers, Vol. 1-8. London: Pickering & Chatto, 2008.

Bayley, Frederic William Naylor. *Four Years' Residence in the West Indies, during the Years 1826, 7, 8, and 9*. London: William Kidd, 1833.

- Bigge, John Thomas. *Report of the Commissioner of Inquiry On the State of Agriculture And Trade In the Colony of New South Wales*. London: 1823.
- Birch, Arthur N. and Robinson, William. *The Colonial Office List for 1867 Comprising Historical and Statistical Information Respecting the Colonial Dependences of Great Britain with an Account of the Services of the Principal Officers of the Several Colonial Governments*, London: Harrison, 1867.
- Braim, Thomas Henry. *A History of New South Wales from Its Settlement to the Close of the Year 1844*, Vol 1, London: 1846. *The Making of the Modern World*. Web. 21 February 2018
- Carmichael, A.C. *Domestic Manners and Social Condition of the White, Coloured, and Negro Population of the West Indies*. Vol. 1, London: Whittaker, Treacher, and Co., 1833.
- Cobbett's Weekly Register*.
- Curtis's Botanical Magazine, Or, Flower-Garden Displayed*.
- Dalyell, R.A. *Memorandum on the Madras Famine of 1866*. Madras: Printed for the Information of the Madras Central Famine Relief Committee, 1916.
- Dancer, Thomas. *Some Observations Respecting the Botanical Garden*. Jamaica: His Majesty's Printing Office, 1804.
- Dancer, Thomas. *Catalogue of Plants, Exotic and Indigenous, in the Botanical Garden, Jamaica, St. Jago de la Vega, Jamaica*: 1792.
- Ellis, John. *Some Additional Observations on the Methods 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*, London: 1773.
- "Forsyth MSS," *Cottage Gardener*
- Grand, George Francis. *The Narrative of the Life of a Gentleman Long Resident in India*. Calcutta: Calcutta Historical Society, 1814.
- Guilding, Lansdown. *An Account of the Botanic Garden in the Island of St. Vincent: from Its First Establishment to Present Time*. Glasgow: Pub. By R. Griffin, Printed by Andrew and John M. Duncan, Printers to the University, 1825.
- Historical Records of Australia*, Series 1, Vol 8-12. Sydney: The Library Committee of the Commonwealth Parliament, 1916, 1917, 1919.
- Martin, R. Montgomery. *History of the West Indies: Comprising British Guiana, Barbadoes, St. Vincent's, St. Lucia, Dominica, Montserrat, Antigua, St. Christopher's, &c &c*. London: Whittaker & Co., 1837.

*Minutes of the Society for the Improvement of Plantership in the Island of Barbados, instituted December 8th, 1804*, Liverpool: 1811.

Orchard, A.E. and Orchard, T.A. *Allan Cunningham: Letters of a Botanist/Explorer*. Fyshwyck, Australia: Privately Published through New Millenium Print, 2015.

*Proceedings of the Agricultural and Horticultural Society of India*

Roxburg, William. *Flora Indica, or Descriptions of Indian Plants*. Serampore, India: Printed for W. Thacker and Co., Calcutta, and Parbury, Allen and Co., London, 1832.

Roxburgh, William. *Hortus Bengalensis or a Catalogue of the Plants Growing in the Honorable East India Company's Botanic Garden at Calcutta*. Serampore, India: Mission Press, 1814.

Roxburgh, William. *Plants of the Coast of Coromandel*. London: Printed by W. Bulmer and Co., Shakspeare Printing Office, For George Nicol, Bookseller to his Majesty, 1795.

*The Illustrated London News*.

*The New Jamaica Almanack, and Register, Calculated to the Meridian of the Island for the Year of Our Lord 1791*, Kingston, Jamaica: 1792.

*The Sydney Gazette*.

*Transactions of the Agricultural and Horticultural Society of India*.

*Transactions of the Linnean Society of London*.

*Transactions of the Society of Arts*.

## **Online Databases**

*Slave Registers of former British Colonial Dependencies, 1813-1834*, Ancestry.com.

*History of Parliament Online*, [www.historyofparliamentonline.org](http://www.historyofparliamentonline.org)

*JSTOR Global Plants*, [plants.jstor.org](http://plants.jstor.org)

*Legacies of British Slave-Ownership Database*, [www.ucl.ac.uk/lbs](http://www.ucl.ac.uk/lbs)

*Old Bailey Proceedings Online*, <https://www.oldbaileyonline.org>

*The Lachlan & Elizabeth Macquarie Archive*, [www.mq.edu.au/macquarie-archive/lema/](http://www.mq.edu.au/macquarie-archive/lema/)

## Secondary Literature

- Åkerberg, Sofia. *Knowledge and Pleasure at Regent's Park: The Gardens of the Zoological Society of London during the Nineteenth Century*. Umeå, Sweden: Department of Historical Studies, Umea University, 2001.
- Allan, Mea. *The Hookers of Kew: 1785-1911*. London: Joseph, 1967.
- Archer, Mildred. *Natural History Drawings in the India Office Library*. London: Published for the Commonwealth Relations Office by Her Majesty's Stationery Office, 1962.
- Axelby, Richard. "Calcutta Botanic Garden and the Colonial Re-ordering of the Indian Environment." *Archives of Natural History* 35, no. 1 (2008): 150-163.
- Baber, Zaheer. *The Science of Empire: Scientific Knowledge, Civilization, and Colonial Rule in India*. Albany, NY: State University of New York Press, 1996.
- Bandyopadhyay, Arun. "The Technology of Irrigation in a Colonial Agrarian Context: The Tamil Experience in the Early Nineteenth Century," in *Science and Empire: Essays in Indian Context*. ed Deepak Kumar, 87-100. Delhi: Anamika Prakashan, 1991.
- Barker, R.M. and Barker, W.R. "Botanical Contributions Overlooked: The Role and Recognition of Collectors, Horticulturalists, Explorers and Others in the Early Documentation of the Australian Flora," in *A History of Systematic Botany in Australia, Proceedings of a Symposium Held at the University of Melbourne*. ed P.S. Short, 37-85. Melbourne, Australia: Australian Systematic Botany Society, 1990.
- Barnard, Timothy P. *Nature's Colony: Empire, Nation and Environment in the Singapore Botanic Gardens*. Singapore: Nus Press, 2016.
- Barton, Gregory. *Empire Forestry and the Origins of Environmentalism*. Cambridge, UK: Cambridge University Press, 2002.
- Basalla, George. "The Spread of Western Science" *Science*, 156, no. 3775 (1967): 611-622.
- Bayly, C.A. *Empire & Information: Intelligence Gathering and Social Communication in India, 1780-1870*. Cambridge: Cambridge University Press, 1996.
- Bayly, C.A. *Imperial Meridian: The British Empire and the World 1780-1830*. London: Longman Group Ltd., 1989.
- Bennett, Tony. *The Birth of the Museum: History, Theory, Politics*. London: Routledge, Taylor & Francis Group, 1995.
- Benton, Lauren and Ford, Lisa. *Rage for Order: The British Empire and the Origins of International Law, 1800-1850*. Cambridge, MA: Harvard University Press, 2016.



- Blackburn, Robin. *The Overthrow of Colonial Slavery 1776-1848*. London: Verso, 2011.
- Bleichmar, Daniela. *Visible Empire: Botanical Expeditions & Visual Culture in the Hispanic Enlightenment*. Chicago: The University of Chicago Press, 2012.
- “Botanical Institutions of Jamaica,” *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew)* 1906, no 3 (1906): 61-68.
- "Botanical Station, St. Vincent." *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew)* 1892, no. 64 (1892): 92-104.
- Bowe, Patrick. “Lal Bagh – The Botanical Garden of Bangalore and Its Kew-Trained Gardeners,” *Garden History* 40, no. 2 (Winter 2012): 228-238.
- Bowen, A.D. *The Lost Gardens of Glasgow University*. London: Christopher Helm, 1988.
- Bowen, H.V. *The Business of Empire: The East India Company and Imperial Britain, 1756-1833*. Cambridge, UK: Cambridge University Press, 2006.
- Brockway, Lucile. *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens*. New York: Academic Press, 1979.
- Browne, Janet. “Passports to Success: The Correspondence of Charles Darwin by Charles Darwin.” *Journal of the History of Biology* 21, no. 2 (Summer 1988): 343-349.
- Burkill, I.H. *Chapters on the History of Botany in India*. Calcutta: Botanical Survey of India, 1965.
- Burnett, D. Graham. *Masters of All They Surveyed: Exploration, Geography, and a British El Dorado*. Chicago: The University of Chicago Press, 2000.
- Cain, P.J. and Hopkins, A.G. *British Imperialism, 1688-2000*. Harlow, UK: Pearson Education, Limited, 2001.
- Cameron-Smith, Barbara. *Starting From Scratch: Australia's First Farm*. Sydney: Royal Botanic Gardens, 1987.
- Candlin, Kit. *The Last Caribbean Frontier, 1795-1815*. Basingstoke, UK: Palgrave Macmillan, 2012.
- Carrington, Selwyn H.H. *The Sugar Industry and the Abolition of the Slave Trade, 1775-1810*. Gainesville, FL: University Press of Florida, 2002.
- Cavanagh, Tony. “Australian Plants Cultivated in England, 1771-1800.” in *History of Systematic Botany in Australasia. Proceedings of a Symposium Held at the University of Melbourne*. ed P.S. Short, 273-283. Melbourne, Australia: Australian Systematic Botany Society, 1990.

- Chakrabarti, Pratik. *Western Science in Modern India: Metropolitan Methods, Colonial Practices*. Delhi: Orient Longman Private Ltd, 2004.
- Chambers, David and Gillespie, Richard. "Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge," *Osiris* 15, no. 1 (January 1, 2000): 221-240.
- Charlesworth, Neil. *British Rule and the Indian Economy, 1800-1914*. London: The Macmillan Press, Ltd., 1982.
- Clarke, Philip A. *Aboriginal Plant Collectors: Botanists and Australian Aboriginal People in the Nineteenth Century*. Kenthurst, NSW: Rosenberg Publishing, 2008.
- Cohn, Bernard S. *Colonialism and Its Forms of Knowledge: The British in India*. Princeton, NJ: Princeton University Press, 1996.
- Cook, Harold. *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*. New Haven, CT: Yale University Press, 2007.
- Currey, J.E.B. *George Caley: Naturalist and Explorer*. Melbourne, Australia: Lansdowne Press, 1966.
- Darwin, John. *The Empire Project: The Rise and Fall of the British World-System, 1830-1970*. Cambridge: Cambridge University Press, 2009.
- Das, Pallavi. "Hugh Cleghorn and Forest Conservancy in India" *Environment and History* 11, no. 1 (February 2005): 55-82.
- Daston, Lorraine and Galison, Peter. *Objectivity*. New York: Zone Books, 2007.
- Davis, Mike. *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*. London: Verso, 2001.
- Delbourgo, James. *Collecting the World: Hans Sloane and the Origins of the British Museum*. Cambridge, MA: The Belknap Press of Harvard University Press, 2017.
- Desmond, Ray. *The History of the Royal Botanic Gardens Kew*. Kew, UK: Kew Publishing, 2007.
- Desmond, Ray. *A Celebration of Flowers: Two Hundred Years of Curtis's Botanical Magazine*. Kew, UK: The Royal Botanic Gardens, Kew, in association with Collingridge, 1987.
- Dirks, Nicholas B. *The Scandal of Empire: India and the Creation of Imperial Britain*. Cambridge: Harvard University Press, 2006.

- Donington, Katie. "Transforming Capital: Slavery, Family, Commerce and the Making of the Hibbert Family," in *Legacies of British Slave-Ownership: Colonial Slavery and the Formation of Victorian Britain*, 203-249. Cambridge: Cambridge University Press, 2014.
- Drayton, Richard. *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World*. New Haven, CT: Yale University Press, 2000.
- Driver, Felix. *Geography Militant: Cultures of Exploration and Empire*. Oxford: Blackwell Publishers, 2001.
- Dunn, Richard S. *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713*. New York: W.W. Norton & Company, Inc., 1972.
- Easterby-Smith, Sarah. *Cultivating Commerce: Cultures of Botany in Britain and France, 1760-1815*. Cambridge, Cambridge University Press, 2018.
- Edney, Matthew H. *Mapping an Empire: The Geographical Construction of British India*. Chicago: University of Chicago Press, 1997.
- Elliott, Paul. *Enlightenment, Modernity and Science: Geographies of Scientific Culture and Improvement in Georgian England*. London: I.B. Tauris & Co. Ltd, 2010.
- Ellis, Markman; Coulton, Richard; and Mauger, Matthew. *Empire of Tea: The Asian Leaf that Conquered the World*. London: Reaktion Books, Ltd, 2015.
- Endersby, Jim. *Imperial Nature: Joseph Hooker and the Practices of Victorian Science*. Chicago: The University of Chicago Press, 2008.
- Endersby, Jim. "A Garden Enclosed: Botanical Barter in Sydney, 1818-1839." *British Journal of the History of Science* 33, no. 118 (2000): 313-334.
- Epstein, James. *Scandal of Colonial Rule: Power and Subversion in the British Atlantic during the Age of Revolution*. Cambridge: Cambridge University Press, 2012.
- Fawcett, William. "The Public Gardens and Plantations of Jamaica" *Botanical Gazette* 24, no. 5 (November 1897): 345-369.
- Finney, C.M. *To Sail Beyond the Sunset: Natural History in Australia, 1699-1829*. Adelaide, NSW: Rigby Publishers, 1984.
- Gager, C. Stuart. "Botanic Gardens of the World: Materials for a History" *Brooklyn Botanic Garden Record* 27, no. 3 (July 1938): 151-406.
- Gallagher, John and Robinson, Ronald. "The Imperialism of Free Trade." *The Economic History Review* New Series 6, no. 1 (1953): 1-15.

- Gascoigne, John. *Science in the Service of Empire: Science, the British State, and the Uses of Science in the Age of Revolution*. Cambridge: Cambridge University Press, 1998.
- Gascoigne, John. *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture*. Cambridge: Cambridge University Press, 1994.
- Gibberd, Graham. "The Location of William Curtis's London Botanic Garden in Lambeth," *Garden History* 13, no. 1 (Spring 1985): 6-16.
- Gilbert, Lionel. *The Royal Botanic Gardens, Sydney: A History 1816-1985*. Oxford: Oxford University Press, 1986.
- Goswami, Manu. *Producing India: From Colonial Economy to National Space*. Chicago: University of Chicago Press, 2004.
- Gould, Eliga and Onuf, Peter. *Empire and Nation: The American Revolution in the Atlantic World*. Baltimore: Johns Hopkins Press, 2005.
- Greig, Hannah. "'All Together and All Distinct': Public Sociability and Social Exclusivity in London's Pleasure Gardens, ca. 1740-1800" *Journal of British Studies*, 51, no 1 (January 2012): 50-75
- Grove, Richard. "The British Empire and the Origins of Forest Conservation in the Eastern Caribbean 1700-1800" in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*, eds. Robert S. Anderson, Richard Grove, and Karis Hiebert, 132-173. Oxford: McMillan Caribbean, 2006.
- Grove, Richard. *Green Imperialism: Colonial Expansion, Tropical Edens and the Origins of Environmentalism, 1600-1860*. Cambridge, UK: Cambridge University Press, 1995.
- Guha, Ranajit. *Dominance without Hegemony: History and Power in Colonial India*. Cambridge, MA: Harvard University Press, 1998.
- Guha, Ranajit. *A Rule of Property for Bengal: An Essay on the Idea of Permanent Settlement*. Durham, NC: Duke University Press, 1996.
- Hancock, David. "Hibbert, George (1757–1837)," *Oxford Dictionary of National Biography*, Oxford University Press, 2004.
- Hamilton, Douglas. *Scotland, the Caribbean and the Atlantic World, 1750-1820*. Manchester: Manchester University Press, 2005.
- Harrison, Mark. "Networks of Knowledge: Science and Medicine in Early Colonial India, c. 1750-1820." In *India and the British Empire*. Edited by Douglas Peers and Nandini Gooptu, 191-211. Oxford: Oxford University Press, 2012.

- Harrison, Mark. "Science and the British Empire." *Isis*, 96 (2005): 56-63.
- Headrick, Daniel. *The Tentacles of Progress: Technology Transfer in the Age of Imperialism*. New York: Oxford University Press, 1988.
- Headrick, David. *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century*. New York: Oxford University Press, 1981.
- Herbert, Eugenia. *Flora's Empire: British Gardens in India*. Philadelphia: University of Pennsylvania Press, 2011.
- Hill, Arthur. "The History and Function of Botanic Gardens." *Annals of the Missouri Botanical Garden* 2, no. 1/2: (February 1, 1915): 185-240.
- Horn, Pamela. "The Contribution of the Propagandist to Eighteenth-Century Agricultural Improvement," *The Historical Journal* 25, no. 2 (June 1982): 313-329.
- Howard, Richard A. "Plant Capitalism and Company Science: The Indian Career of Nathaniel Wallich." *Modern Asian Studies* 42, no. 5 (2008): 899-928.
- Howard, Richard A. "The St. Vincent Botanic Garden – The Early Years" in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*, eds. Robert S. Anderson, Richard Grove, and Karis Hiebert, 122-131. Oxford: McMillan Caribbean, 2006.
- Howard, Richard A. "The St. Vincent Botanic Garden – The Early Years," *Arnoldia* (Winter 1997-1998): 12-21.
- Howard, R.A. and Howard, E.S. "The Reverend Lansdown Guilding, 1797-1831" *Phytologia*, 58, no. 2 (August 1985): 105-164.
- Howard, R.A. "Early Botanical Records from the West Indies, Particularly Barbados: Ligon (1657) to Lord Seaforth (1806)" *Botanical Journal of the Linnean Society* 79, no. 1 (July 1979): 65-96.
- Howard, R.A. "Modern Problems of the Years 1492-1800 in the Lesser Antilles" *Annals of the Missouri Botanical Garden*, 62, no. 2 (1975): 368–379.
- Inkster, Ian. "Science and the Mechanics' Institutes, 1820-1850: The Case of Sheffield," *Annals of Science* 32, no. 5 (July 16, 1975): 451-474.
- Keen, Susan. "Associations in Australian History: Their Contribution to Social Capital," *The Journal of Interdisciplinary History* 29, no. 4 (Spring 1999): 639-659.
- Kennedy, Dane. *The Magic Mountains: Hill Stations and the British Raj*. Berkeley: University of California Press, 1996.

- Koerner, Lisbet. *Linnaeus: Nature and Nation*. Cambridge: Harvard University Press, 2001.
- Kumar, Deepak. "The Evolution of Colonial Science in India: Natural History and the East India Company," in *Imperialism and the Natural World*. ed John M. MacKenzie, 51-66, Manchester, UK: Manchester University Press, 1990.
- Laidlaw, Zoë. *Colonial Connections, 1815-45: Patronage, the Information Revolution and Colonial Government*. Manchester, UK: Manchester University Press, 2012.
- Lambert, David and Lester, Alan. "Introduction: Imperial Spaces, Imperial Subjects" in *Colonial Lives Across the British Empire: Imperial Careering in the Long Nineteenth Century*. Edited by David Lambert and Alan Lester, 1-31. Cambridge: Cambridge University Press, 2006.
- Latour, Bruno. *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge: Harvard University Press, 1987.
- Lester, Alan. "Spatial Concepts and the Historical Geographies of British Colonialism," in *Writing Imperial Histories*. Edited by Andrew S. Thompson, 118-142, Manchester, UK: Manchester University Press.
- Lester, Alan. "Imperial Circuits and Networks: Geographies of the British Empire." *History Compass* 4, no. 1 (January 2006): 124-141.
- Levine, Philippa. *Prostitution, Race & Politics: Policing Venereal Disease in the British Empire*. New York: Routledge, 2003.
- Livingstone, David N. "Science and Place," in *Wrestling with Nature: From Omens to Science*. Edited by Peter Harrison, Ronald L. Numbers, and Michael H. Shank, 377-401. Chicago: The University of Chicago Press, 2011.
- Lucier, Paul. "The Professional and the Scientist in Nineteenth-Century America." *Isis* 100, no. 4 (December 2009): 699-732.
- Stuart MacDonald, "Agricultural Improvement and the Neglected Labourer," *The Agricultural History Review* 31, no. 2 (1983): 81-90.
- MacKenzie, John M. *Museums and Empire: Natural History, Human Cultures, and Colonial Identities*. Manchester: Manchester University Press, 2009.
- MacKenzie, John M., ed. *Imperialism and the Natural World*. Manchester, UK: Manchester University Press, 1990.

- MacLeod, Roy. "On Visiting the 'Moving Metropolis': Reflections on the Architecture of Imperial Science," in *Scientific Colonialism: A Cross-Cultural Comparison: Papers from a Conference at Melbourne, Australia May 1981*. Edited by Nathan Reingold and Marc Rothenberg. Washington, D.C.: Smithsonian Institution Press, 1987.
- Maiden, J.H. "History of the Sydney Botanic Gardens," *Royal Australian Historical Society Journal and Proceedings*, ed. R.H. Cambage, 14, no. 1 (1928): 1-42.
- Marshall, P.J. "Empire and Authority in the Later Eighteenth Century" in *'A Free though Conquering People.'* Aldershot, UK: Ashgate Publishing Limited, 2003, 105-122.
- Marshall, P.J. *Problems of Empire: Britain and India 1767-1813*. London: George Allen and Unwin, Ltd, 1968.
- McCracken, Donal P. "Fraternity in the Age of Jingoism: The British Imperial Botanic and Forestry Network." in *Science across the European Empires, 1800-1950*. ed Benedikt Stuchtey, 49-62, Oxford: Oxford University Press, 2005.
- McCracken, Donal P. *Gardens of Empire: Botanical Institutions of the Victorian British Empire*. London: Leicester University Press, 1997.
- McKenzie, Kirsten. *Imperial Underworld: An Escaped Convict and the Transformation of the British Colonial Order*. Cambridge: Cambridge University Press, 2015.
- McNeill, J.R. *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620*. Cambridge: Cambridge University Press, 2010.
- Meredith, David and Oxley, Deborah. "The Convict Economy." in *The Cambridge Economic History of Australia*. eds S Ville & G Withers, 97-122, Cambridge: Cambridge University Press, 2014.
- Metcalf, Thomas. *Ideologies of the Raj*. Cambridge: Cambridge University Press, 1995.
- Minter, Sue. *The Apothecaries' Garden: A New History of the Chelsea Physic Garden*. Phoenix Mill, UK: Sutton Publishing Limited, 2000.
- Mintz, Sydney W. "From Plantations to Peasantries in the Caribbean." in *Caribbean Contours*, eds Sidney W. Mintz and Sally Price, 127-154. Baltimore: The Johns Hopkins University Press, 1985.
- Mokyr, Joel. "The Institutional Origins of the Industrial Revolution." In *Institutions and Economic Performance*, ed Elhanan Helpman, 64-119. Cambridge: Harvard University Press, 2008.

- Morris, Colleen. "Planting New South Wales: The Role of the Sydney Botanic Gardens," in *Gardens of History and Imagination: Growing New South Wales*, eds Gretchen Poiner and Sybil Jack, 172-184. Sydney: Sydney University Press, 2016.
- Morse, Richard. "Land Tenure and Indian Society," *Far Eastern Survey* 19, no 22 (December 20, 1950): 233-239.
- Nechtman, Tillman. *Nabobs: Empire and Identity in Eighteenth-Century Britain*. Cambridge: Cambridge University Press, 2010.
- Nelson, E. Charles. "'...and Flowers for Our Amusement': The Early Collecting and Cultivation of Australian Plants in Europe and the Problems Encountered by Today's Taxonomists," in *History of Systematic Botany in Australasia. Proceedings of a Symposium Held at the University of Melbourne*, ed P.S. Short, 285-296. Melbourne, Australia: Australian Systematic Botany Society, 1990.
- Neswald, Elizabeth. "Science, Sociability and the Improvement of Ireland: the Galway Mechanics' Institute, 1826-51," *British Journal for the History of Science* 39, no. 4 (December 2006): 503-534
- Noltie, H.J. *The Cleghorn Collection: South Indian Botanical Drawings, 1845-1860*. Edinburgh: Royal Botanic Garden, Edinburgh, 2016.
- Noltie, H.J. *Indian Forester, Scottish Laird: The Botanical Lives of Hugh Cleghorn of Stravithie*. Edinburgh: Royal Botanic Garden, Edinburgh, 2016.
- Noltie, H.J. *Robert Wight and the Botanical Drawings of Rungiah and Govindoo*, 3 Vols, Edinburgh: Royal Botanic Gardens Edinburgh, 2007.
- Noltie, H.J. "The Hooker Lecture: Robert Wight and the Illustration of Indian Botany," *The Linnean Society*, Special Issue No. 6 (2006).
- Noltie, H.J. *The Dapuri Drawings: Alexander Gibson and the Bombay Botanic Gardens*. Ghent: Snoeck-Ducaju & Zoon, The Antique Collector's Club in Association with the Royal Botanic Garden Edinburgh, 2002.
- O'Hanlon, Rosalind. "Colonialism and Social Identities in Flux: Class, Caste, and Religious Community," in *India and the British Empire*. Edited by Douglas Peers and Nandini Gooptu, 100-133. Oxford: Oxford University Press, 2012.
- Outram, Dorinda. "New Spaces in Natural History," in *Cultures of Natural History*. Edited by N. Jardine, J.A. Secord, and E.C. Spary, 249-265. Cambridge: Cambridge University Press, 1996.



- Parsons, Timothy. *The British Imperial Century, 1815-1914*. Lanham, MD: Rowan & Littlefield Publishers, Inc., 1999.
- Peers, Douglas. *India Under Colonial Rule 1700-1885*. Harlow, UK: Pearson Education Limited, 2006.
- Peers, Douglas, M. *Between Mars and Mammon: Colonial Armies and the Garrison State in India 1819-1835*. London: Tauris Academic Studies I.B. Tauris Publishers, 1995.
- Pemberton, Rita. "The Trinidad Botanic Gardens and Colonial Resource Development, 1818-1899." Paper presented at the 29<sup>th</sup> Annual conference of the Association of Caribbean Historians Institute Universitaire de Formation des Maitres EUFN, Martinique, April 7-12, 1997.
- Porter, Bernard. *The Lion's Share: A Short History of British Imperialism, 1850-2004*. Harlow, UK: Pearson Education Limited, 2004.
- Powell, Dulcie. "The Voyage of the Plant Nursery, H.M.S. *Providence*, 1791-1793." *Economic Botany* 31 (October-December 1977) p. 387-431.
- Powell, Dulcie. *The Botanic Garden, Liguanea (with a revision of Hortus Eastensis)*. Kingston, Jamaica: Institute of Jamaica, 1972.
- Powell, Jocelyn M. "Early Impressions of the Vegetation of the Sydney Region: Exploration and Plant Use by the First Fleet Officers," *History of Systematic Botany in Australasia. Proceedings of a Symposium Held at the University of Melbourne*. Edited by P.S. Short, 87-96. Melbourne, Australia: Australian Systematic Botany Society, 1990.
- Prest, John. *The Garden of Eden: The Botanic Garden and the Re-creation of Paradise*. New Haven, CT: Yale University Press, 1981.
- Price, Richard. *Making Empire: Colonial Encounters and the Creation of Imperial Rule in Nineteenth-Century Africa*. Cambridge: Cambridge University Press, 2008.
- Pyenson, Lewis and Sheets-Pyenson, Susan. *Servants of Nature*. New York: W.W. Norton & Company, 1999.
- Raj, Kapil. "Go-Betweens, Travelers, and Cultural Translators." in *A Companion to the History of Science*. Edited by B. Lightman, 39-57, Chichester, UK: Wiley Blackwell, 2016.
- Raj, Kapil. *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe*. Houndmills, UK: Palgrave Macmillan, 2007.
- Rappaport, Erika. *A Thirst for Empire: How Tea Shaped the Modern World*. Princeton: Princeton University Press, 2017.

- Reidy, Michael S. *Tides of History: Ocean Science and Her Majesty's Navy*. Chicago: The University of Chicago Press, 2008.
- Ritchie, John. *Punishment and Profit: The Reports of Commissioner John Bigge on the Colonies of New South Wales and Van Diemen's Land, 1822-1823; Their Origins, Nature and Significance*. Melbourne: Heinemann Melbourne Australia Pty Ltd, 1970.
- Robinson, Tim. *William Roxburgh: The Founding Father of Indian Botany*. Chichester, UK: Phillimore & Co. Ltd, 2008.
- Rood, Daniel. "Toward a Global Labor History of Science" in *Global Scientific Practice in an Age of Revolutions, 1750-1850*. Edited by Patrick Manning & Daniel Rood, 255-274. Pittsburgh, PA: University of Pittsburgh Press, 2016.
- Royal, Edward. "Mechanics' Institutes and the Working Classes, 1840-1860" *The Historical Journal* 14, no. 2 (June 1971): 305-321.
- Rubenstein, Hymie. "'Bush,' 'Garden' and 'Mountain' on the Leeward Coast of St. Vincent and the Grenadines, 1719-1995" in *Islands, Forests and Gardens in the Caribbean: Conservation and Conflict in Environmental History*. Edited by Robert S. Anderson, Richard Grove, and Karis Hiebert, 196-199. Oxford: McMillan Caribbean, 2006.
- Schiebinger, Londa and Swan, Claudia "Introduction." in *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*. Edited by Londa Schiebinger and Claudia Swan, 1-18, Philadelphia: University of Pennsylvania Press, 2005.
- Schiebinger, Londa. *Plants and Empire: Colonial Bioprospecting in the Atlantic World*. Cambridge: Harvard University Press, 2004.
- Sealy, J.R. "The Roxburgh Flora Indica Drawings at Kew." *Kew Bulletin* 11, no. 2 (January 1, 1956): 297-348.
- Secord, Anne. "Corresponding Interests: artisans and gentlemen in nineteenth-century natural history." *British Journal for the History of Science* 27 (1994): 383-408.
- Secord, Anne. "Science in the Pub: Artisan Botanists in Early Nineteenth-Century Lancashire." *History of Science* 32 (1994): 269-315.
- Shapin, Steven. "The House of Experiment in Seventeenth-Century England" *Isis*, 79, no. 3 (1988): 373-404.
- Shapin, Steven and Barnes, Barry. "Science, Nature and Control: Interpreting Mechanic's Institutes" *Social Studies of Science* 7 (1977): 31-74.

- Sharma, Jayeeta. "British Science, Chinese Skill and Assam Tea: Making Empire's Garden," *Indian Economic Social History Review*, 43, no. 4 (2006): 429-455.
- Sharma, Jyoti P. "The British Treatment of Historic Gardens in the Indian Subcontinent: The Transformation of Delhi's Nawab Safdarjung's Tomb Complex from a Funerary Garden into a Public Park," *Garden History* 35, no. 2 (Winter 2007): 210-228.
- Sheets-Pyenson, Susan. *Cathedrals of Science: The Development of Colonial Natural History Museums During the Late Nineteenth Century*. Kingston and Montreal: McGill-Queen's University Press, 1988.
- Smout, T.C. "A New Look at the Scottish Improvers." *The Scottish Historical Review* 91, no. 231, part 1 (April 2012): 125-149.
- Spary, E.C. "Of Nutmegs and Botanists: The Colonial Cultivation of Botanical Identity." in *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*. Edited by Londa Schiebinger and Claudia Swan, 187-203. Philadelphia: University of Pennsylvania Press, 2005.
- Spary, E.C. *Utopia's Garden: French Natural History from Old Regime to Revolution*. Chicago: University of Chicago Press, 2000.
- Stern, Philip J. *The Company-State: Corporate Sovereignty and the Early Modern Foundations of the British Empire in India*. Oxford: Oxford University Press, 2011.
- Steven, Margaret. *First Impressions: The British Discovery of Australia*. London: British Museum (Natural History), 1988.
- Taylor, Duncan. "Botanical Gardens and their Role in the Political Economy of Empire: Jamaica (1846-86)" *Rural History* 28, no. 1 (2007): 47-68.
- The Royal Botanic Gardens, Sydney: The First 200 Years*. Edited by Jennie Churchill. Sydney: Halstead Press, 2015.
- Thomas, Adrian P. "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science and the East India Company, 1786-1806." *Journal of the Royal Asiatic Society of Great Britain & Ireland* 16, no. 2 (July 2006): 165-177.
- Vijayaragavan, K. *Agricultural Administration in India: A Comparative Study*. New Delhi: Ashok Kumar Mittal Concept Publishing Company, 1994.
- Washbrook, David. "The Indian Economy and the British Empire." in *India and the British Empire*. Edited by Douglas M. Peers and Nandini Gooptu, 44-74, Oxford: Oxford University Press, 2012.

Waterston, C.D. and Shearer, A. Macmillan. *Former Fellows of the Royal Society of Edinburgh, 1783-2002, Biographical Index, Part One and Two*. Edinburgh, UK: The Royal Society of Edinburgh, 2006.

Webb, Joan. *George Caley: Nineteenth Century Naturalist*. Chipping Norton, NSW: Surrey Beatty & Sons, Pty Ltd, 1995.

Whitehead, Judy. "John Locke and the Governance of India's Landscape: The Category of Wasteland in Colonial Revenue and Forest Legislation." *Economic and Political Weekly* 45, no. 50 (December 11-17): 83-93.

Williams, Glyndwr. "The Pacific: Exploration and Exploitation" in *The Oxford History of the British Empire: The Eighteenth Century*. Edited by P.J. Marshall and Alaine Low, 552-575. Oxford: Oxford University Press, 1998.