

BOTANICAL COLLECTING IN EIGHTEENTH-CENTURY LONDON

AUTHOR FINAL VERSION

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Summary. The correspondence exchanged between Captain John Blake, John Bradby Blake, and their associates, offers a valuable insight into the sociable world of Enlightenment botany. By considering these sources alongside the records pertaining to other contemporary scholars of botany, this paper examines the composition of the community of plant collectors and botanical scholars with whom father and son were interacting in the 1760s and 1770s. The documents also reveal the ways in which botanical knowledge circulated among the members of these communities. Amateur botany, it turns out, was deeply linked to gardening and to the emerging trade in horticultural plants, yet the contributions made by gardeners and nurserymen have been largely overlooked. In sum, the Blake collection at Oak Spring helps to answer larger questions about the nature of Enlightenment sociability, about diversity within botanical networks, and about the ways in which that social diversity affected botanical collecting.

I have sent you ... seven Boxes of Seeds & 18 Plants in Pots – from which Collection of Seeds I flatter my self you will be enabled to supply, not only His Majestys garden at Kew, & that of the Apothecaries Company at Chelsea; but also other Botanical Gardens in private hands, and likewise some of the American Colonies.

I shall be happy, if my researches into the Natural History of this Empire, may prove of any benefit to my Native Country.¹

The extract above is from a letter written by John Bradby Blake to his father Captain John Blake in the final months of 1773. Elsewhere in the letter, the younger Blake articulated the lofty aspiration that he would produce a complete natural history of China, and thus eventually ‘discover all Forrest Trees, Shrubs, Plants &c [which] ... are useful in Medicine, Food, Dying, or for Mechanical uses, as well as Articles of Trade, that the Empire produces’.² He described at some length, too, the rhythm of his botanical researches in Canton, and requested that his father might send additional reference books. Bradby Blake’s patriotic and imperial objectives were clear, for greater knowledge

about nature could potentially enhance Britain's control over, and ability to exploit, natural resources around the world.³

In addition to revealing Bradby Blake's grand ambitions, the letter also exposes further details about the history of botanical collecting and the circulation of knowledge, which are the subject of this paper. Bradby Blake's letter and the other documents in the Oak Spring collection offer insights into the roles played by amateur botanists and plant collectors who worked alongside recognised scholarly institutions in the 18th century, but who, because of their lack of institutional status, have been largely forgotten.

Enlightenment botanical research depended ultimately on the successful receipt in Europe of live specimens which, as Bradby Blake explained, were transferred either as plants or as seeds, and which were then cultivated by selected individuals. In the letter quoted above, Bradby Blake indicated that some of his parcels should be sent to the royal gardens at Kew and to Chelsea Physic Garden, both of which were acknowledged centres of botanical research. But he also intended that his precious collections should be distributed among other addressees: the owners of private botanical gardens in Britain and 'some of the American Colonies'. Botanical research in the 18th century depended on the involvement of an array of 'private', amateur practitioners. As we will see, John Bradby Blake and his father relied on these non-institutional associates both for their own education and for the prosecution of their broader botanical ambitions.

The Blake documents at Oak Spring offer a valuable insight into the sociable world of Enlightenment botany. In exposing aspects of the Blake family's engagement with the scientific study of plants, they help to answer larger questions about the nature of Enlightenment sociability, about diversity within botanical networks, and about the ways in which that social diversity affected botanical collecting. The starting points for my paper are two collections of documents in the library of the Oak Spring Garden Foundation, entitled 'List of seeds and plants sent to England from China' and 'Descriptions of plants and autograph letters' (#M-152). These bound manuscript collections contain correspondence about the seeds and plants that John Bradby Blake had gathered, include instructions for how the specimens might be grown, and feature information about the people to whom they were sent. When read alongside the records pertaining to other contemporary scholars of botany, the documents offer a window onto

the communities of plant collectors and botanical scholars with whom father and son were interacting in the 1760s and 1770s. They also expose the ways in which botanical knowledge circulated among the members of these communities. Amateur botany, it turns out, was deeply linked to gardening and to the emerging trade in horticultural plants, yet the contributions made by gardeners and nurserymen have been largely overlooked. Taken together, the documents discussed here underline the centrality of sociability to the practice of science in 18th-century Europe and reveal the important but overlooked roles played by gardeners and plant traders in supporting and driving forward the study of Enlightenment botany.

BOTANY IN ENLIGHTENMENT BRITAIN

John Blake and John Bradby Blake lived during a key period of change in the spread of botany within British culture. Botany was one of the first sciences to be made accessible to a wider, non-elite public, and this transition took place during the second half of the 18th century. The number of introductory books published on botany increased exponentially after 1760; by the 19th century botany had become the most widely sold genre of natural history book in Britain.⁴ The reasons for the greater accessibility and uptake of the science are largely to do with the simplifications introduced by the Swedish botanist Carl Linnaeus' new classification system, which coincided with the simultaneous expansion of a public sphere and 'marketplace' for Enlightenment.⁵ Based on a simple method of counting the stamens and pistils within a flower, the Linnaean Sexual System significantly reduced the level of education or background knowledge needed by practitioners. Linnaean nomenclature also greatly eased discussion about plants, for Linnaean binomials reduced what had been previously lengthy and cumbersome Latin names to simple two-word designations. During the late 18th century, and especially in the 1780s and 1790s, botany became a major part of British public culture. A 'botany industry', consisting of (among other things) introductory books, newspaper articles, public and private lecture courses and 'herborisations', stoked – and profited from – public enthusiasm for collecting, naming and arranging the natural world. A new disease, 'botano-mania', appeared to have afflicted the British public, especially middle- and upper-ranking women.⁶

Historical accounts of botany in Enlightenment Britain have, however, focused largely on the final decades of the 18th century. John Blake and John Bradby Blake were somewhat ahead of the curve, then, as they learned botany in the decades before the science was made easily accessible. Their activities should be considered key antecedents to the later eruption of botany into British public culture. Although Linnaeus had been publishing successive editions of his classificatory system and nomenclature since 1735, his work was not fully translated into English until the 1760s. In Britain, the uptake of his work was initially restricted to a much smaller number of botanical devotees and to people who had a decided interest in knowing botany, such as members of the medical professions. Why and how, then, would people like the Blakes – a mercantile family who lived in the very centre of London – learn to study plants scientifically? Answering this question involves assessing the educational resources and support available for the Blake family’s botanical investigations.

The fact that the Blakes attained an apparently high level of botanical expertise before the science was made easily accessible is worthy of note. Botany was not normally part of school curriculum in early and mid-18th-century Britain, and while some universities occasionally offered courses in the subject, teaching was intermittent and often low quality.⁷ Indeed, as one of Captain John Blake’s correspondents, James Clark, a surgeon on the Caribbean island of Dominica, explained, ‘When at the University I had a turn for Botany, ... but the Necessity of Acquiring a knowledge in the most usefull [sic] parts of Physick & Surgery, for my f[uture] practice, in purpose to get a living, made me lay it aside’.⁸ Learning the science of plants was for most people a vocational activity or pastime, undertaken for pleasure rather than for its potential utilitarian value. Very few of the Blakes’ correspondents could be considered ‘professional’ botanists. Most, instead, were what we would now term ‘serious amateurs’, and most were largely self-taught.

While the details of the actual education that John Blake and his son received remain obscure, we can infer why and how they may have learned botany from the somewhat better-known histories of their contemporaries, such as the maverick botanist, playwright and physician John Hill (*bap.* 1714-1775) and the patron of natural history and eventual President of the Royal Society Joseph Banks (1743-1820). John Hill’s educational history, for example, underlines the importance of theology as an inspiration

for studying the natural world. Hill was educated at home by his father, Theophilus, who, in accordance with contemporary pedagogical theory, devised a curriculum for his son that was largely classical and religious. Works of natural theology encouraged readers to gain a detailed knowledge of the natural world in order to appreciate God's work, and botany thus featured in Hill's curriculum as an extension of theology.⁹ Hill then learned the practicalities of plant identification on nature walks with his father. By the 1750s and 1760s, the adult John Hill had become *the* most widely published writer on botany in mid-century Britain.¹⁰

Born only two years before John Bradby Blake (to a much wealthier family), Joseph Banks initially learned botany from his mother, who apparently kept a copy of John Gerard's *Herball or Historie of Plants* (1598) in her dressing room. As botany was not part of the curriculum at Banks's school, Eton, he sought further instruction from the women who gathered simples for apothecaries. Apparently he paid 'sixpence for every material piece of information'.¹¹ The Banks family also lived for several years in a house adjacent to Chelsea Physic Garden which, Joseph Banks later explained, had been one of his earliest inspirations.¹² Chelsea had been founded as a medicinal garden in 1673, and had quickly built up an outstanding collection of rare and exotic plants – though, in contrast to the present day, the garden was open only to a restricted public of the professionally interested and the well-to-do.¹³ From the 1770s onwards, the adult Joseph Banks rose to prominence as Britain's foremost patron of natural history; his own home in Soho Square, London, evolved into a central point for the receipt and redistribution of natural specimens collected by a huge network of associates.¹⁴ For Banks, as probably also for the Blakes, an initial personal interest in studying the natural world was fostered through access to mentors and to exceptional collections of plants. That access was partly serendipitous, and partly facilitated through his social status.

Captain John Blake and his son each received a classical education at school, which would have equipped them with Latin strong enough to work with the available published botanical literature. The latter may have included Linnaeus' work in its original Latin, and would have certainly comprised the work of 17th-century British botanist John Ray, and his French counterpart Joseph Pitton de Tournefort. John Bradby Blake presumably learned from his parents and – remembering that his father was frequently

away at sea – it is important to emphasise the possible involvement of his mother.¹⁵ Like Joseph Banks, however, it is probable that young Bradby Blake would have also learned botany from mentors outside his immediate family. London’s plant nurseries, whose shops and gardens surrounded the Blake family homes in Covent Garden and then in Westminster, played a key role in offering an unofficial botanical education to the residents of Enlightenment London.

BOTANY FOR SALE

Over the second half of the 18th century, a strong link emerged between the culture of collecting exotic garden plants and botanical study. That connection, moreover, was forged within and promoted by, certain commercial plant nurseries known to the Blakes. In 1760 the Blake family were living on Bedford Street, Covent Garden, and by 1762 they had moved to Westminster. These densely populated areas were about as far from the countryside as one could get in London, and the lack of space meant that the few gardens that existed were smaller and more subject to urban pollution. Many nursery companies, however, maintained a garden on the outskirts of the city as well as a shop in the centre of town, and this allowed them to circumvent the problems posed by the lack of space and insalubrity of central London. Covent Garden was home to four or five shops, and Westminster to two shops; it was also only a short walk away from nursery gardens located in the fields around Lambeth.

From among the nurseries that were most local to the Blake family, there were two who may have been of particular significance: that of William Malcolm, which I will discuss in this section,¹⁶ and that of Warren Luker and Samuel Smith, to which I will return in the final part of the paper.¹⁷ Both of these nurseries were what we might term ‘upper-end’ businesses. Rather than selling only indigenous or naturalised plants such as gooseberries, tulips or hyacinths, for example, or traditional agricultural stock, the nurseries diversified into selling ornamental plants that were often recently introduced exotics, such as *Hibiscus* or *Hedysarum* “*gyrens*” [*Codariocalyx motorius*].¹⁸ Their sales catalogues further underlined the difference between these nurseries and the majority of others in London. While nurseries conventionally listed plants using the vernacular names familiar to their customers, these upper-end businesses started to print plants’ scientific

names. William Malcolm's 1778 *Catalogue* was even arranged according to the Linnaean System. Malcolm included a brief explanation of why he had decided to make such a radical shift in format:

To preface a work of so little importance to the Public as the following Catalogue may be by some deemed unnecessary, were it not to ... recommend one regular and universal System of Botany

The Figures in Geometry, the Scale in Music, are the same in all Countries, and in reality so are the generic Characters of Plants ... hence the Sexual System of Linnæus has the preference to any other ... I therefore make use of his generic and specific Names, to which I have annexed the most intelligent and best known English ones, so far as they have any.¹⁹

In other words, William Malcolm considered that using the Linnaean System was necessary because it would permit the sharing of data among different countries. The implication, then, was that his own catalogue might be used by international customers.

As I have shown elsewhere, certain nurserymen like Malcolm used their engagement with science to advance their own positions. They presented themselves to the public as kinds of enlightened scholars of botany, in spite of the fact that they were not members of the social elite and although they mostly lacked affiliations with scholarly institutions such as the Royal Society.²⁰ These plant traders fostered their scholarly reputations within the public sphere, promoting any activities that contributed to the growth of scientific knowledge. Malcolm, for example, was listed publicly as one of the donors who gave plants to William Curtis to help him establish his London Botanic Garden in 1779, the contents of which were later published in Curtis's *Botanical Magazine*.²¹ The nurserymen's public promotion of their learning, bolstered by acts of botanical munificence and the inclusion of scientific terms within their catalogues, helped to advance the study of botany (and especially via the Linnaean System) among gardeners and plant collectors more generally.

Plant traders, who generally hailed from the lower middling ranks, may seem strange associates for men of the Blakes' social standing. However, there is considerable evidence to show that these traders were recognised and valued by their social superiors as sources of extensive botanical knowledge. In 1748, for example, the politician and amateur of the arts Horace Walpole (1717-97) wittily described how he had 'made great

progress, and talk very learnedly with the nurserymen, except that now and then a lettuce run to seed overturns all my botany'.²² The nurseries formed by well-educated – and well-connected – gardeners became mini-institutions that could themselves become destinations for scholars of botany. There is evidence to show that their gardens became key stopping-off points for 'botanical tourists' visiting London. One example of this is that of a short outing taken by the amateur of botany Richard Twiss (1747-1821) and friends one March day in 1791. Twiss described in a letter how he 'went with Sir John, Plant-hunting, to Hammersmith, Kensington &c',²³ and he described in detail the series of nurseries that he and his friend visited, recalling the rare plants that they saw and noting what they had purchased. First, at William Malcolm's nursery garden near Kennington, they saw a banana tree 'in flower & fruit' and were told about 'several plants of the *Dionœa muscipula* ... [which] are not above ground yet.' They then visited 'North's nursery ... on the Vauxhall road', where they 'saw a capital Melon-Thistle, almost a yard high ... & half a dozen plants of the moving *Hedysarum*'. From here, they went to Hammersmith, where nurseryman James Lee helped Twiss to identify a nondescript 'air-plant' and told him about the *Strelitzia* that was in flower at Chelsea Physic Gardens.²⁴ Nurseries such as those visited by Twiss were significant because they were repositories of rare, live plants. Their proprietors, in turn, were perceived as learned experts who possessed a substantial knowledge of botany as well as of horticulture.

Nursery gardens, including several that were very local to the Blakes, thus constituted intellectual resources. The unique collections in these urban commercial gardens contributed to public education in botany. The gardens functioned as sites of sociability, where amateurs of botany could meet and converse with each other and with professional gardeners about topics of interest. They were locations in which the exchange of objects and of information, which was so fundamental to the development of knowledge, could take place.

DISTRIBUTING THE BLAKE COLLECTIONS

The letter quoted at the start of this paper explained that Bradby Blake's Chinese plants and seeds were to be sent to Kew and Chelsea, and also would be distributed among 'Botanical Gardens in private hands', which meant amateur botanical collectors who

were not formally trained in the scientific study of plants. Bradby Blake made no mention of plant traders as recipients, yet it is clear from his correspondence and memoranda that he and his father were working closely with several nurseries. The latter helped Captain John Blake distribute the Chinese seeds and plants he had received, ensuring that they were forwarded on to the most appropriate recipients. They may have also contributed to training John Bradby Blake prior to his departure for Canton.

With regards to the distribution of specimens, the Blake documents include several tables drawn up by John Blake that itemise the plants he had received from his son, and which then list the people to whom the specimens were sent, indicated by crosses placed against the names of recipients. At the head of the largest table (Fig. 1), for example, Blake noted that the Chinese specimens had been ‘divided by [my]Self, Gordon, Foresyght [sic] and Eddie’.²⁵ Of these associates, ‘Foresyght’ referred to William Forsyth, who had recently succeeded to the position of Head Gardener at Chelsea.²⁶ The other two, however, were nurserymen: James Gordon possessed an exceptionally diverse nursery at Mile End, and Alexander Eddie’s shop on The Strand was supplied by an extensive garden at Richmond. Blake, Forsyth, Gordon and Eddie, united by their interest in collecting and studying rare specimens, worked together to determine how those specimens would be redistributed.

The table, drawn up on 26 February 1774, also reveals a rather involved process of prioritisation. This gives further insight into the extent to which social diversity mattered within botanical collecting networks. All twenty-six recipients are listed once, but additional numbers have been annotated next to sixteen people, which might suggest a kind of ranking. It is perhaps no surprise that the royal gardens at Kew were accorded number ‘1’, followed by the Physic Garden at Chelsea. Two noted amateur patrons of botany and gardening, John Fothergill (1712-1780) and William Pitcairn (1712-1791) were #4 and #5, and another amateur collector, the ‘Bp Cheller’ [Bishop Richard Challoner (1691-1781)²⁷], was #9. The botanic garden at the University of Cambridge was #10²⁸, and most of the subsequent numbered recipients were amateur botanists located in the colonies – South Carolina, Florida, Saint Vincent.²⁹ But numbers 3, 7 and 8 were commercial nurseries: James Gordon (#3); Alexander Eddie (#7), and William Malcolm (#8).

These annotated numbers do not, however, bear any relation to the number of plants distributed to each recipient. Indeed, the four people who received the greatest quantity of plants were nurseryman Alexander Eddie (#7, who received thirty-seven plants), Chelsea Physic Garden (#2; thirty-five plants), and nurserymen James Gordon (#3) and William Malcolm (#8), who received twenty-four plants each. In other words, three commercial nurseries bagged the prime positions, alongside Chelsea, as the major recipients of rare Chinese plants. The other tables and lists within the Blake collection indicate a similar set of priorities: selected commercial nurseries were repeatedly involved in the redistribution of exotic plants, and were themselves often the prime recipients of these rare, tender specimens.

HYBRID EXPERTISE

We have seen that the rare collections in nursery gardens made them key sites for study, and that local plant traders may have assisted the young John Bradby Blake in learning the rudiments of botany. Indeed, Bradby Blake distinguished himself from the majority of overseas collectors because he clearly understood not only the theoretical dimensions of botany – which he could have gleaned from the reference books he had carried with him to China, and which his father later supplemented – but also because he demonstrated an extensive practical understanding of plant growth and preservation. This hybrid expertise was essential in allowing Bradby Blake to achieve his aims.

John Bradby Blake was not, of course, the first person to send plants back to British collectors from overseas. He was part of a network of colonial plant collectors that was as old as the British Empire itself. Catching the growing inclination towards learning and collecting data that characterised Enlightenment culture, ships' officers and colonial officials would not infrequently volunteer their services as potential contributors to the project of botanical collecting, offering to gather seeds or even live plants from the exotic worlds through which they travelled.³⁰ To support the broader effort to collect exotic seeds and plants, amateurs of botany, including John Blake's friend the naturalist and linen merchant John Ellis (c. 1710-1776), published books of instructions 'for Captains of Ships, Sea Surgeons, and other curious Persons', which explained to the would-be collectors precisely how to gather and package up their specimens.³¹

In spite of the circulation of such instructions, the incidence of loss on transoceanic journeys was nevertheless very high, for seeds as well as for plants. As Ellis explained, 'scarce one in fifty' of 'the great quantity and variety of seeds' sent annually from China to Europe survived the long voyage, for the rigours of overseas travel meant that many lost their germinative properties during transit.³² Live specimens fared even worse. At heart, the problems were twofold, for collectors lacked a proper understanding of how to preserve their collections, and recipients were rarely fully informed about how best to cultivate the plants they eventually received.

John Bradby Blake solved both these problems through his evident understanding both of botanical classification, which helped him to know what plants to look for and what kind of associated information to collect, and through his command of horticulture, which enabled him to keep the specimens alive. He cultivated plants in his gardens in Canton and Macao, and he was careful to communicate his observations in his correspondence. Blake's consignments were accompanied with extensive written guidance about whether and how the specimens might best be cultivated in Britain and her colonies. Writing about the 'Flatt Peach' (Fig. 2), for example, Blake explained that 'I am informed by a Chinese that the stones ought not to be planted above 1 ½ Inch, or Two inches (at most) deep in the Earth, that the spring is the properest time to plant them & that they are twelve months, sometimes more, before they begin to appear'.³³ Of equal importance, Bradby Blake also described his experiments in the practicalities of plant preservation and transfer. In the same letter about the peach, for example, Bradby Blake described how he had 'gathered this fruit full ripe from the tree' and then stored the stones for six weeks in a place protected 'from Sun and Wind, or too much air', and that he used camphire 'to prevent little insects, or Ants getting at them'. Discussing these precautions, Bradby Blake also noted that the majority of 'seeds sent home, by Gentlemen who have not taken some pains themselves to preserve them' failed to germinate.³⁴ For Bradby Blake, as for his associates working in British gardens and plant nurseries, the science of botany was as much concerned with the practicalities of growing and moving specimens as it was with the application of new classificatory theories. Bradby Blake's expertise in both regards meant that he was a major boon to the broader community of botanical and horticultural amateurs.

Evidence for the influence that the nurseries may have had on Blake is also apparent in the kinds of plants that he collected from China. In the letter quoted at the start of this paper Blake had asserted that he sought ‘useful’ plants, which might serve medicine, agriculture or industry. Some of the seeds he selected for transfer certainly had an obvious utilitarian function, such as tea, buckwheat, rice and the tallow tree. These were then forwarded on to Britain’s North American and Caribbean colonies. The practical value of the rest of Bradby Blake’s consignments, however, was not so clear. Specimens of Juniper, Convolvulus or Hollyhock, for example, were surely selected for their aesthetic appeal rather than any specific utilitarian value. In short, and in spite of Bradby Blake’s professed commitment to utility, his collections were orientated as much towards the ornamental as towards the useful.

The Blake collections reflected the content of contemporary nursery catalogues. The assertion made by the Blakes’ near neighbours, nurserymen Warren Luker and Samuel Smith, that ‘those Plants [that] are chiefly collected, ... are remarkable for the elegance of their foliage, or the beauty and fragrance of their flowers’³⁵ was typical of the content of the catalogues published by the upper-end nurseries in the late 18th century. The shared emphasis on the ornamental as well as the useful gives a further indication of the character of the community for which Blake was collecting: amateur botanists sought out beautiful blooms as much as (or more than) useful specimens, and the traders who supplied them necessarily shared the same emphasis.³⁶

CONCLUSION

John Bradby Blake and his father Captain John Blake hailed from a part of Britain that, in spite of its urban location, was becoming a hotbed for botanical and horticultural learning. Given the proximity of the Blake family homes to several very special places for metropolitan botanical and horticultural study, and given the elder Blake’s clear interest in studying botany, it is probable that nurseries inspired John Bradby Blake’s Chinese collecting activities and encouraged him to learn horticulture as well as botany. As Luker and Smith observed in 1783, ‘GARDENING [had come to be] ... cultivated by persons in every rank of life’, and the public demand for rare plants seemed to be ever expanding. Oriental specimens were particularly in demand, thanks to the growing fashion for

Chinese gardens. Luker and Smith underscored their reliance on overseas collectors such as Bradby Blake, explaining that ‘the ... Plants [available] in England is now increased to so great a number, from the acquisitions procured from every distant part of the globe.’³⁷ The most competitive nurseries were those that received the greatest number of beautiful exotics from overseas.

Why, then, have people like the plant traders been ignored in the history of botany, in spite of the roles they played in encouraging botanical study, in training potential overseas collectors and, ultimately, in determining the kinds of plants that collectors sent back to Europe? Their contributions are certainly acknowledged in footnotes by published writers on botany, but their low social status means that little archival material about them has been preserved. Indeed, John Bradby Blake’s letter cited above offers an example of how the contributions made by such individuals were papered over, in accordance with contemporary notions of hierarchy and status.

Bradby Blake’s letter ignores the presence of a community that was evidently greatly helpful to him and his father. The bound manuscript collection at Oak Spring, however, contains multiple copies of the same letter, with manifold crossings-out and superscript additions. Rather than being Bradby Blake’s original missive, this document is titled ‘*Extract of Letters from John Bradby Blake Esq*’ (my emphasis). This ‘letter’ that described Bradby Blake’s botanical labours in Canton, and that so perfectly expressed his ambitions, was in fact an amalgamation of his writings, edited (presumably by his father) for wider circulation. The exchange of manuscript correspondence was a common practice among 18th-century scholars, for whom publishing was a slow and cumbersome process. So, Bradby Blake’s ‘letter’ was produced with posterity in mind and with the intention of helping Blake achieve his aspirations for scientific recognition. Acknowledging the roles played by nurserymen was not relevant to these broader aims. Nevertheless, the nurseries and plant hunters such as John Bradby Blake were mutually dependent figures, enlaced within the same global network.

NOTES

¹ Oak Spring Garden Foundation #M-152, Descriptions of Plants and Autograph Letters [Hereafter: OSGF-JBB, Descriptions], p. 37, ‘Extract of Letters from John Bradby Blake Esq., Supracargo residing at Canton China dated in Nov^r & Dec^r 1773.’

² OSGF-JBB, Descriptions, pp. 37-38, ‘Extract of Letters from John Bradby Blake Esq., Supracargo residing at Canton China dated in Nov^r & Dec^r 1773.’

³ For more on the relationship between botanical collecting and 18th-century imperialism, start with: Londa Schiebinger and Claudia Swan (eds.), *Colonial Botany. Science, Commerce and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005) and Yota Batsaki, Sarah Burke Cahalan and Anatole Tchikine (eds.), *The Botany of Empire in the Long Eighteenth Century* (Boston: Harvard University Press, 2016).

⁴ Ann B. Shteir, ‘Botanical dialogues: Maria Jacson and women’s popular science writing in England’, *Journal for Eighteenth-Century Studies* 23 (1990), pp. 301-303.

⁵ On the emerging ‘marketplace’ for Enlightenment science, especially botany, see: Sarah Easterby-Smith, *Cultivating Commerce: Cultures of Botany in Britain and France, 1760-1815* (Cambridge: Cambridge University Press, 2018).

⁶ Sam George, *Botany, Sexuality and Women’s Writing, 1760-1830. From Modest Shoot to Forward Plant* (Manchester: Manchester University Press, 2007).

⁷ For example, Thomas Martyn (1735-1825), professor of botany at Cambridge from 1762-1825, ceased lecturing on botany entirely after 1796, due to the lack of student interest in the subject. G. S. Boulger, ‘Martyn, Thomas (1735–1825)’, rev. Arthur Sherbo, *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [<http://www.oxforddnb.com/view/article/18239>, accessed 30 Aug 2017].

⁸ OSGF-JBB, Descriptions, p. 41, ‘Extracts of a Letter from Mr James Clark, Surgeon at Melvill Hall in Dominica, dated 24th July 1774.’

⁹ On natural theology and nature study, see: Mary Terrall, *Catching Nature in the Act. Réaumur and the Practice of Natural History in the Eighteenth Century* (Chicago: University of Chicago Press, 2013), pp. 7-11; Lorraine Daston, ‘Attention and the Values of Nature in the Enlightenment’, in Lorraine Daston and Gianna Pomata (eds.), *The Moral Authority of Nature* (Chicago: University of Chicago Press, 2004), pp. 100-126.

¹⁰ G. S. Rousseau, *The Notorious Sir John Hill: The Man Destroyed by Ambition in the Era of Celebrity* (Lehigh: Lehigh University Press, 2012), pp. 8-9. Hill dropped references to the divine from his own publications, presenting botany as a science worth studying for its own aesthetic and utilitarian virtues rather than for religious reasons.

¹¹ Sir Everard Home, quoted in John Gascoigne, *Joseph Banks and the English Enlightenment. Useful Knowledge and Polite Culture* (Cambridge: Cambridge University Press, 1994), p. 83.

¹² H. B. Carter, *Sir Joseph Banks, 1743-1820* (London: British Museum (Natural History), 1988), pp. 25, 32.

¹³ Sue Minter, *The Apothecaries’ Garden. A History of the Chelsea Physic Garden* (Stroud: The History Press, 2008).

¹⁴ David Philip Miller, 'Joseph Banks, empire, and 'centres of calculation' in late Hanoverian London', in David Philip Miller and Peter Hans Reill (eds.), *Visions of Empire. Voyages, Botany and Representations of Nature* (Cambridge and New York: Cambridge University Press, 1996), pp. 21-37.

¹⁵ On botanical learning within families and households, see: Alix Cooper, 'Homes and Households', in Katharine and Lorraine Daston (eds.), *The Cambridge History of Science, vol. 3: Early Modern Science* (Cambridge: Cambridge University Press, 2008) and Easterby-Smith, *Cultivating Commerce*, Chapter 4.

¹⁶ William Malcolm's nursery garden was located between Kennington and Lambeth, and was about half an hour's walk from the Blake family home on Parliament Street, Westminster. Easterby-Smith, *Cultivating Commerce*, p. 27.

¹⁷ Warren Luker and Samuel Smith's shop was on City Road, Covent Garden, and their garden was in Dalston.

¹⁸ The *Hedysarum "gyrens"* attracted a great deal of interest in the late 18th century because its leaves appeared to be self-propelling. The plant, which did not yet have a fixed botanical designation, was also known as *H. vacillante* or *H. vacillo* in nursery catalogues and contemporary manuscript correspondence. It has now been identified as *Codariocalyx motorius*. For more, see: Henry Noltie, 'The Hooker Lecture: Robert Wight and the Illustration of Indian Botany', *The Linnaean*, Special Issue No. 6 (2006), p. 22; John Abercrombie, *The Propagation and Botanical Arrangements of Plants and Trees, Useful and Ornamental, Proper for Cultivation in Every Department of Gardening* (London: J. Debrett, 1784), Vol. II, p. 757; Bodleian Library, Oxford, Ms Douce d. 39, Letters to Francis Douce from Richard Twiss [Hereafter: Douce d. 39], f. 31r, Richard Twiss (Bush Hill, Edmonton) to Francis Douce (Holborn), 11 January 1791.

¹⁹ William Malcolm, *A Catalogue of Hot-House and Green-House Plants* (London, 1778), p. ii.

²⁰ Easterby-Smith, *Cultivating Commerce*, Chapter 2.

²¹ William Curtis, *Proposals for Opening by Subscription, A Botanic Garden* (London, 1778), p. 10.

²² Horace Walpole to Henry Seymour Conway, 29 August 1748, quoted in Paget Toynbee (ed.), *Strawberry Hill Accounts. A Record of Expenditure in Building, Furnishing &c., Kept by Horace Walpole from 1747 to 1795* (Oxford: Clarendon Press, 1927), p. 36, note 5.

²³ Douce d. 39, ff. 35-36, Richard Twiss (Bush Hill, Edmonton) to Francis Douce (Holborn), 26 March 1791.

²⁴ Douce d. 39, ff. 35-36, Richard Twiss (Bush Hill, Edmonton) to Francis Douce (Holborn), 26 March 1791.

²⁵ Oak Spring Garden Library, #M-152, List of seeds and plants sent to England from China [Hereafter: OSGL, List], pp. 17-18 and 84, 'Account of China Seeds by the Boy & Henry Cap. Bons, Distributed as follows, Saturday February the 26 1774. Divided by Self-Gordon-Foresyght & Eddie'.

²⁶ For William Forsyth, see: Minter, *Apothecaries' Garden*, Chapter 3.

²⁷ Richard Challoner (1691-1781) succeeded Benjamin Petre (1672-1758) as vicar apostolic of London in 1758. His links with the Petre family are important because the Petres were major early patrons of botany and horticulture. The estates of Robert James, eighth Baron Petre (1713-1742), at Thorndon, had been a highly important centre for innovation prior to his untimely death in 1742; Thorndon's Head Gardener had been none other than James Gordon, later nurseryman at Mile End. For Challoner, see: Sheridan Gilley, 'Challoner, Richard (1691-1781)', *Oxford Dictionary of National Biography*, Oxford University Press,

2004 [<http://www.oxforddnb.com/view/article/5025>, accessed 28 April 2017], and for Petre, Thorndon, Gordon and botany, see: Rousseau, *Notorious John Hill*.

²⁸ The plants were sent to Thomas Martyn (1735-1825), who was appointed professor of botany at Cambridge in 1762. See: G. S. Boulger, 'Martyn, Thomas (1735–1825)', rev. Arthur Sherbo, *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [<http://www.oxforddnb.com/view/article/18239>, accessed 29 April 2017].

²⁹ There are two who I have not been able to identify: Mrs Norman (#6) and Turner & Smith (#16).

³⁰ On this, see the references in note 3, and also Anna Winterbottom, *Hybrid Knowledge in the Early East India Company World* (Basingstoke: Palgrave MacMillan, 2016).

³¹ John Ellis, *Directions for Bringing over Seeds and Plants, from the East-Indies and other Distant Countries, in a State of Vegetation: Together with A Catalogue of such Foreign Plants as are worthy of being encouraged in our American Colonies, for the Purposes of Medicine, Agriculture, and Commerce* (London: L. Davis, 1770).

³² Ellis, *Directions for Bringing over Seeds and Plants*, p. 1. See also: Christopher Parsons and Kathleen S. Murphy, 'Ecosystems under Sail: Specimen Transport in the Eighteenth-Century French and British Atlantics', *Early American Studies* 10(3) (2012): 503-529.

³³ OSL-JBB, List, p. 19, John Bradby Blake, 'Flatt Peach called by the Chinese Peen Toe' (1772).

³⁴ OSL-JBB, List, p. 19, John Bradby Blake, 'Flatt Peach called by the Chinese Peen Toe' (1772).

³⁵ Warren Luker and Samuel Smith, *A Catalogue of Trees, Shrubs, Greenhouse Plants, Seeds, and Bulbous Roots* (1783), pp. v-vi.

³⁶ For more on this, see: Sarah Easterby-Smith, 'Selling Beautiful Knowledge: Amateurship, Botany and the Market-Place in late eighteenth-century France', *Journal for Eighteenth-Century Studies* 36(4) (2013): 531-543.

³⁷ Luker and Smith, *Catalogue* (1783), p. v.