# Introduction
## Cultivating Commerce

In October 1776, the London nurseryman James Lee (1715–1795) (see Figure 1.1) wrote with excitement to the great Swedish botanist Carl Linnaeus (1707–1778):

> I have this summer raised many new species of Mesembryanthemum, those that have flowered my daughter has delineated, if it would give you any pleasure I would willingly lend you the Drawings if you will describe them & send them back to me.[1]

Lee's enthusiasm about the *Mesembryanthemum* was almost tangible: these South African succulents were a relatively new discovery, and he was one of the first plant collectors in Britain to receive the specimens from the Cape of Good Hope. Lee was a nurseryman who gained his income by trading rare and unusual plants, and he undoubtedly hoped to make a profit from the sale of these small tender flowers.

James Lee did not, however, mention his pecuniary interests to Linnaeus. Instead, his letter mostly contained news about common acquaintances. 'I am charged by my Friend Francis Masson,' he explained, 'to send you the inclosed [sic] specimen & description of a plant that he has found in the Island of Madeira. He is desirous you would give it the name of Aitonia in honour to his Friend & patron Mr Aiton[,] Botanick Gardiner at Kew.' Lee then described the work of the British naturalist and patron of science Joseph Banks (1743–1820) and his assistant, the Swedish Linnaean Daniel Solander (1733–1782). The pair were busy describing and classifying specimens that they had received via a global network of collectors: 'Mr Banks' Herbarium is certainly the greatest & I believe the best that ever was collected. it [sic] is the daily labour of many servants to paste them [dried plants] on paper, And Banks & Solander spend 4 or 5 hours every day in describing and arranging them.'[2] In

[1] LS, L5238, James Lee (Hammersmith) to Carl Linnaeus (Uppsala), 4 October 1776.
[2] LS, L5238, James Lee (Hammersmith) to Carl Linnaeus (Uppsala), 4 October 1776. A herbarium is a collection of plants that have been pressed, dried and arranged according to a botanical system.

conveying news about other scholars of botany to Linnaeus, Lee sought to show that he was thoroughly integrated within a community devoted to the collection and study of the natural world. His associates ranged in status from gardeners to baronets, and they lived all over the world.

By the late eighteenth century, a number of commercial nursery gardeners like Lee had become differentiated from other plant traders, seed-sellers and florists. These 'elite' merchants focused on the collection and cultivation of outlandish ornamental plants newly imported to Europe. James Lee and his business partner Lewis Kennedy were reputedly leading men in London, and Lee especially acted as a liaison for traders, botanists and gardeners who wished to communicate with high-ranking men of science such as Linnaeus.[3] A small number of other plant merchants also rose to commercial and intellectual prominence in Britain and elsewhere in Europe. In Paris, for example, a nursery known by the names of its proprietors, Adélaïde d'Andrieux and Philippe-Victoire Lévêque de Vilmorin, had come to occupy an equally elevated position.

What distinguished these companies from other plant traders and gardeners was that they developed a sophisticated intellectual understanding of the science of plants and combined this with a green-fingered practical knowledge about their cultivation. This combination enhanced their ability to cultivate new plants and, by extension, offered them entry into scholarly networks like the one just sketched out. Linnaeus, Kennedy and Lee, and Andrieux and Vilmorin, differed in nationality, social status and occupation. Linnaeus had a university education and had been ennobled in 1762; the others were all gardeners who ran commercial plant nurseries. They spoke different mother tongues – Swedish, English, French – and adhered to different Christian denominations. Nevertheless, they exchanged letters, plant specimens, botanical paintings and books for over a decade. The plant traders specialised not only in raising rare plants but also in cultivating connections within the highly refined Enlightenment intellectual community.

*Cultivating Commerce* exposes and explores the roles that upper-end plant traders and gardeners played within transnational Enlightenment networks. Focusing on Britain and France, it reveals the wide range of connections that they forged and maintained. By linking scholars to a wider public of amateur botanists, certain traders and gardeners acted as conduits for knowledge that was variously practical, scientific or social.

[3] On Lee as a 'leading man', see: NHM, Department of Botany, Banks Correspondence, ff. 144–145, Joseph Banks (London) to Marmaduke Tunstall (Wycliffe, Yorkshire), 19 February 1786.

Equally, by promoting the scientific study of ornamental plants to a public apparently eager to purchase (and possibly to learn) botany, they contributed to framing the science as a cultural pursuit. The relatively humble status of most of these individuals, however, means that their contributions to science and to British and French culture have received little sustained attention to date.[4]

James Lee, Lewis Kennedy, Adélaïde d'Andrieux and Philippe-Victoire Lévêque de Vilmorin lived and worked between 1760 and 1815, a period characterised by immensely exciting developments in the history of botany, but also by extreme political turbulence. Prior to 1760, the study of botany in Britain had been in a state that might at best be described as moribund.[5] The decades that followed saw a seismic shift in the value placed upon botany, both by scholars and by the wider public. The multiple reasons for this rise in public estimation are explored in this book, but one of the most remarkable is the impact that voyages of exploration had on public interest in science. Between 1768 and 1771, for example, Captain James Cook's *Endeavour* expedition circumnavigated the world, mapping (and laying claim to) numerous new territories, including what became known as Australia. Over a thousand new species of plant arrived in Britain from the *Endeavour* voyage alone, and the presence of a huge diversity of exotic plants significantly rejuvenated public interest in botany.[6]

The end of the Seven Years' War in 1763 had decisively realigned the balance of French and British colonial power, redefining the areas from which plant hunters could obtain specimens and the routes that they could use to transport their precious charges. Large numbers of exotic, ornamental plants continued to arrive in both Britain and France. The tender specimens required careful cultivation by expert gardeners, and in France in 1764 André Thouin (1747–1824) was appointed to the post of

[4] The best existing work that situates British eighteenth-century plant nurseries within their cultural and scientific contexts is Coulton, 'Curiosity, commerce, and conversation'. Garden historian John H. Harvey undertook comprehensive research into the history of British (mostly English) plant nurseries in the 1970s and 1980s. Harvey's work offered an essential starting point for my own research, although he did not explore the plant trade from a cultural and scientific perspective. See especially: Harvey, *Early Gardening Catalogues*, *Early Horticultural Catalogues* and *Early Nurserymen* and Galpine, *The Georgian Garden*. Research into the French eighteenth-century plant trade is less well developed. For Paris, start with: Traversat, 'Les pépinières'.

[5] Thomas Martyn to James E. Smith, 16 November 1821, quoted in Shteir, *Cultivating Women*, p. 18. See also: Smith, 'A review of the modern state of botany' (1824), p. 386.

[6] In addition to the plants, naturalists on the *Endeavour* brought back more than 500 fishes, 500 bird skins, 1300 drawings and paintings, thousands of insects and several hundred ethnographic objects. Drayton, *Nature's Government*, p. 67. On the *Endeavour* voyage and its natural history dividends, see also: Banks *et al.*, *Sir Joseph Banks*; Beaglehole, *Life of Captain James Cook*; Carter, *Sir Joseph Banks*; Lincoln, *Science and Exploration*.

head gardener at the Jardin du Roi (the royal botanical garden) in Paris. Working with the Jardin's intendant, Georges-Louis Leclerc, comte de Buffon (1707–1788), and with the professors affiliated with the Jardin, Thouin helped to expand and transform the existing garden, bolstering its position as a primary destination for newly discovered plants.[7] As E. C. Spary has underlined, Thouin's personal participation in the international botanical network was essential to the garden's transformation.[8] *Cultivating Commerce* pieces together the histories of some of the other people who, although not employed at such prestigious institutions, were important associates of individuals such as Thouin.

The year 1789 is often used as a cut-off point in French history, but this would be an artificial end for the story told here. Within the botanical and horticultural world, the early years of the French Revolution were actually marked more by continuities than by decisive rupture. Many amateurs of botany continued to care for their gardens and specimen collections as best they could. 'My cultivations have not been interrupted by the revolution thanks to the good way of thinking of the majority of the habitants of the Boulonnais . . . I have nothing to complain about the new order of things', wrote the baron Georges-Louis-Marie Dumont de Courset from Normandy to Joseph Banks in December 1790.[9] British plant collectors likewise reported little change during the early 1790s, and continued to correspond with, and visit, their French counterparts, upholding a commitment to share precious scientific information regardless of the political context.[10]

Further revolutionary turmoil in 1793–94, however, swamped all but the most resilient horticulturalists.[11] Government by 'Terror' in France was accompanied by the outbreak of war, a development that ultimately obstructed botanical collecting networks and constricted the circulation of knowledge. Several notable savants were executed, including Chrétien-Guillaume de Lamoignon de Malesherbes (1721–1794), Louis XVI's loyal minister and a longstanding patron of French botany and gardening. More positively, the revolutionary government also refashioned the Jardin du Roi into the first French national museum, the Muséum

[7] Laissus, 'Le Jardin du Roi'; Letouzey, *Le Jardin des Plantes*; Spary, *Utopia's Garden*.
[8] Spary, *Utopia's Garden*, ch. 2.
[9] BL, Add. Ms. 8097, f. 400v, Dumont de Courset (Château de Courset, par Boulogne) to Joseph Banks (London), 20 December 1790.
[10] The amateur of botany Richard Twiss, for example, travelled to Paris in 1792 to see its gardens, and subsequently published an account of his travels. Twiss, *Trip to Paris*, pp. 1–2.
[11] Gardener Thomas Blaikie described the impact of the Revolution upon Parisian gardens (and gardeners) between 1789 and 1792 in his journal, later published in: Blaikie, *Diary*, pp. 221–239.

National d'Histoire Naturelle, a move that confirmed the prominent status of natural history within French revolutionary culture and that preserved the lives and livelihoods of several key botanists and plant traders.[12]

The transnational relationships forged by the surviving botanists and traders continued to evolve in significant ways in the early years of the nineteenth century. The Napoleonic Wars were characterised by strengthening nationalism on both sides of the Channel, and this further jeopardised the cosmopolitan ethos that had structured Enlightenment botany. 1815 marks a 'soft' ending for the book, signifying the removal of a political regime that had profoundly altered both the circumstances through which plants could be transferred and how collectors might obtain them.

This study of the plant trade and botany is inspired by a growing body of research that seeks to situate the history of science within its wider cultural and social context.[13] While 'science' may refer generically to a systematic, investigative approach to understanding the world, the purpose and content of such investigations have changed significantly over time. Early modern science differs strikingly from its present-day successor in terms of practice, participation and content. The boundaries between the strands of enquiry that we now think of as discrete disciplines were established gradually between the seventeenth and twentieth centuries. Eighteenth- and early nineteenth-century natural history is best conceived as a collection of practices and understandings that varied between – and were thus profoundly influenced by – the social and cultural contexts in which they emerged.[14]

Studying the activities and relationships formed by plant traders and gardeners offers a fruitful entry into understanding how botany was embedded within eighteenth- and early nineteenth-century society and culture. Both Britain and France saw a significant upturn in consumption in the eighteenth century: the middling ranks expanded, and more

[12] Spary, *Utopia's Garden*, ch. 5.
[13] For examples within this expanding field, start with: Bleichmar, *Visible Empire*; Clark *et al.*, *The Sciences in Enlightened Europe*; Daston and Lunbeck, *Histories of Scientific Observation*; Daston and Pomata, *Faces of Nature*; George, *Botany*; Goldgar, *Tulipmania*; Jardine *et al.*, *Cultures of Natural History*; Lynn, *Popular Science*; Miller and Reill, *Visions of Empire*; Parrish, *American Curiosity*; Safier, *Measuring the New World*; Shapin, *Social History of Truth*; Smith and Schmidt, *Making Knowledge*; Spary, *Utopia's Garden*; Terrall, *Catching Nature*.
[14] Easterby-Smith and Senior, 'Cultural production of natural knowledge'; Terrall, *Catching Nature*, p. 2.

people enjoyed a greater disposable income.[15] Certain individuals chose to invest their money and leisure time in collecting and arranging natural specimens. By the late eighteenth century, the study of natural history had become a fashionable pursuit for men and women in the middling and upper ranks, and it gained in social value.[16] Those amateur collectors who then communicated what they knew to others contributed to developing natural knowledge more generally.

*Cultivating Commerce* argues that public interest in the scientific study of plants stimulated new forms of social and economic commerce. It investigates how those commercial frameworks equally contributed to the evolution of scientific culture in the decades around 1800. The emerging trade in plants and other natural history specimens was closely linked to expanding public participation in botany, and botany, in turn, became ever more integrated within cultural and social life in France and Britain. The reciprocal relationships formed between traders, their clientele and their patrons impinged upon public participation in botanical science, influencing in particular ideas about the social status and gender of the botanical scholar. Those relationships also affected the selection of new exotic ornamental plants and the global networks through which those specimens travelled. Further, they substantially influenced the development of a new, associated science: horticulture.

## Cultures of Botany

What exactly *was* botany in the later eighteenth and early nineteenth centuries? The scientific investigation of plants had been for centuries considered a branch of medicine, facilitating the study of *materia medica*, or drug specimens. Botany gained status as an independent area of enquiry in the seventeenth and eighteenth centuries: the words 'botanique' and 'botany' emerged in around 1611 in French and 1696 in English.[17] The science's move towards autonomy was connected more broadly to the

[15] On the shifting cultures of consumption between the seventeenth and nineteenth centuries, start with: Berg, *Luxury and Pleasure*; Berg and Clifford, *Consumers and Luxury*; Brewer and Porter, *Consumption*; Finn, *Character of Credit*; Glaisyer, *Culture of Commerce*; Roche, *History of Everyday Things* and *France in the Enlightenment*, ch. 5.

[16] The 'middling ranks' is a notoriously vague category that, in eighteenth-century Britain and France, could comprise anyone from an artisan to a gentleman. On the middling ranks, start with: French, 'Search for the "middle sort"'; Jones, 'Great chain of buying'; Maza, *Myth of the French Bourgeoisie*. On the eighteenth-century vogue for natural history, start with: Daston and Park, *Wonders*; Dietz and Nutz, 'Collections curieuses'; Drouin, 'L'histoire naturelle'; Jardine *et al.*, *Cultures of Natural History*; Laissus, 'Les cabinets d'histoire naturelle'; Pomian, *Collectionneurs*; Schnapper, *Le Géant*.

[17] 'Botanique' in *Le Trésor de la langue française informatisé*, http://atilf.atilf.fr/; 'Botany' in OED Online, http://dictionary.oed.com [accessed 3 May 2016].

development of an interest in taxonomy, or classification. All sorts of cultural and natural phenomena (ranging from the study of languages through to collections of books and naturalia) were labelled and then marshalled into hierarchies of increasing sophistication.[18]

One of the best-known Enlightenment taxonomic systems was that devised by Carl Linnaeus – described by James Lee in 1772 as the 'Father of Natural History'.[19] This regard was apposite: Linnaeus was widely acknowledged to be one of the eighteenth century's greatest authorities on botany. His method for classifying plants was taken up by scholars across Europe (and most especially in Britain) from mid-century onwards.[20] James Lee, in fact, was one of the first to publish an English explanation of Linnaeus' system, in his *Introduction to Botany* (1760).[21] Linnaeus' celebrated classificatory system was significant for its ease of use, as plants were ranked simply according to the number of sexual organs within the flower.

Linnaeus' other major contribution was to devise a binomial, or two-word, nomenclatural system. The cumbersome complexity of existing botanical names had previously restricted botanical study to well-educated aficionados, but Linnaean binomials offered for the first time an efficient, shorthand method of precisely describing specimens. The simplified names considerably eased communication among botanists and greatly facilitated public participation in botany. 'The passion for plants in this Country', Lee told Linnaeus in 1776, 'encreases [sic] every Day & I have the pleasure to tell you that your sexual system is more & more admired, & by none more than your affectionate Friend . . . James Lee'.[22]

Linnaeus' innovations were not without their critics, however: the most frequent charge levelled at his system was that it was awkwardly artificial, shoehorning specimens into a taxonomic arrangement that bore little relation to their actual state of being. The majority of Parisian botanists upheld the work of other systematisers, particularly those developing 'natural' methods of classification. The latter aimed to include all of a plant's characteristics within the classificatory schema,

[18] Cook, *Matters of Exchange*, pp. 25–28; Darnton, *Great Cat Massacre*, pp. 191–214; Gladstone, 'New world of English words', pp. 115–153.
[19] LS, L4741, James Lee (Hammersmith) to Carl Linnaeus (Uppsala), 23 October 1772.
[20] On Linnaeus, start with: Blunt, *Compleat Naturalist*; Delaporte, *Nature's Second Kingdom*; Duris, *Linné et la France*; Farber, *Finding Order in Nature*; Hoquet, *Fondaments de la Botanique*; Koerner, *Linnaeus*; Stafleu, *Linnaeus*.
[21] Lee's *Introduction to Botany* was a loose translation of Linnaeus' *Philosophia Botanica*. Henrey, *Botanical and Horticultural Literature*, vol. 2, p. 653; Shteir, *Cultivating Women*, p. 18.
[22] LS, L5238, James Lee (Hammersmith) to Carl Linnaeus (Uppsala), 4 October 1776.

seeking to arrange vegetables in ways more sympathetic to the complexity of the natural world. The French botanist Bernard de Jussieu developed what is now recognised as the first 'complete' natural system, laying out the Trianon garden at Versailles according to this new system in 1759 (details of which were later published by his nephew Antoine-Laurent in 1789).[23]

Rivalries certainly existed between the adherents of different systems, but the competing classifications did not prevent communication and exchange between botanists and plant traders. Carl Linnaeus and Bernard de Jussieu corresponded regularly while working on their contrasting systems, for example. Indeed, most botanists were adept at 'translating' taxonomic arrangements, and most, furthermore, were committed to ensuring that as few restrictions were placed on communication as possible. Enlightenment scholars ostensibly adhered to a 'cosmopolitan' philosophy that demanded cooperation in the interests of enhancing knowledge about nature.[24] James Lee's letters to Linnaeus were typical of most botanical correspondence, in that Lee relayed pieces of news that had originated from numerous continents. Defined by the worldwide movement of plants, people and new knowledge, eighteenth-century botany was a science that was global in content and transnational in structure.

Most historians have related botanists' global purviews to the specific national contexts from which they operated, and have emphasised the importance not only of taxonomy but also of agricultural improvement to eighteenth-century botanists. Joseph Banks' patronage of natural history has been framed within the 'English Enlightenment', and plant-collecting expeditions have been allied with the imperial aspirations of the British State.[25] Others have shown that the same was equally true for French botany, before and during the Revolution.[26] This book, which reconsiders the history of botany from the perspectives of plant traders, shifts the existing emphasis in two respects. Firstly,

[23] Delaporte, *Nature's Second Kingdom*; Duris, *Linné et la France*; Lawrence, *Adanson*; Stafleu, *Linnaeus*, ch. 9.

[24] This cosmopolitan commitment to free communication will be examined in Chapters 5 and 6. For further reading, start with: Crosland, *Scientific Institutions* and 'Anglo-Continental scientific relations'; Daston, 'Nationalism'.

[25] Gascoigne, *Joseph Banks* and *Science in the Service of Empire*. See also: Brockway, *Science and Colonial Expansion*; Damodaran *et al.*, *East India Company*; Drayton, *Nature's Government*; Grove, *Green Imperialism*; Harrison, 'Science and the British Empire'; Mackay, *In the Wake of Cook*; Schiebinger, *Plants and Empire*; Schiebinger and Swan, *Colonial Botany*.

[26] Bourguet and Bonneuil, *De l'inventaire du monde*; Bourguet *et al.*, *L'invention scientifique de la Méditerranée*; Lacour, *La République Naturaliste*; McClellan and Regourd, *Colonial Machine*; Spary, 'Peaches which the patriarchs lacked' and *Utopia's Garden*.

it shows that the cultivation of ornamental plants held a significant place within Enlightenment cultures of botany, as a means of drawing in public interest, and because gardens were ideal locations for experimenting on plants. Eighteenth-century botany was about much more than taxonomy and agricultural improvement. Secondly, it expands on the national perspectives offered by existing historical accounts, exploring the extent and nature of the connections forged between individuals in Britain and France. It places their experiences in the broader settings of transnational social relationships, comparative history and wider political developments.[27]

France and Britain share a long and somewhat uncomfortable history of mutual rivalry and admiration, which is as evident in commerce and science as it is in other areas of interaction.[28] Each country was a major player in the European Enlightenment in general, and in European botany more specifically. By the later eighteenth century, British scholars, especially those in London, had gained a distinguished place alongside counterparts in countries such as Sweden and the United Provinces (The Netherlands) as European leaders in both botany and horticulture.[29] On the other hand, French scholars, particularly those in Paris, were celebrated for their position at the 'centre' of the European Enlightenment, and likewise made significant contributions to botany. Institutions such as the Jardin du Roi and the Académie Royale des Sciences, as well as a host of private individuals (who people the subsequent chapters), conducted and shared extensive research into the workings of the natural world.[30]

Botanists and plant traders profited tremendously from cross-national exchanges during the eighteenth and early nineteenth centuries. Botanical study in Britain and France largely took place within a cultural context that was inherently cosmopolitan and characterised by close connections between commerce and science. While this book explores the characteristics of this cosmopolitan commercial context, it also

[27] I use the term 'transnational' to refer to the circulation of people, specimens and information across Europe, especially at a sub-national or non-state level. On approaches to transnational history and related methodologies such as *histoire croisée* and comparative history, start with: Cohen and O'Connor, *Comparison and History*; Saunier, *Transnational History*; Werner and Zimmermann, *De la Comparaison*.

[28] On Anglo-French relations in the eighteenth century, start with: Black, *Natural and Necessary Enemies*; Dziembowski, *Un Nouveau Patriotisme*; Morieux, *Une Mer Pour Deux Royaumes*; Tombs and Tombs, *That Sweet Enemy*. On cultural transfers and the circulation of knowledge, start with: Hilaire-Pérez, *L'Invention Technique*; Ogée, *Better in France?*; Rabier, *Fields of Expertise*; Thomson *et al.*, *Cultural Transfers*.

[29] Drayton, *Nature's Government*; Gascoigne, *Science in the Service of Empire*.

[30] On the perceived centrality of Paris to the Enlightenment start with: Belhoste, *Paris Savant*; Romano and Van Damme, 'Sciences et villes-mondes'; Van Damme, *Paris*.

problematises it by considering the extent to which national and local cultures influenced the scientific study of plants. Differences emerged, for example, between the constitution and reach of domestic plant exchange networks, among attitudes towards women's participation in both commerce and amateur botany, and with regards to how individual actors negotiated competing political loyalties. This book explores the extent – and the limits – of the cosmopolitan scholarly commerce in plants.

### Science and its Publics

European Enlightenment culture was characterised by a notable upturn in inquisitiveness into the world. By the latter half of the eighteenth century, curiosity, instruction and educated conversation carried substantive social credit.[31] In particular, collecting was considered central to Enlightenment scholarship and was intimately linked to the expanding consumer culture. The *Wunderkammern*, or curiosity cabinets, of the sixteenth and seventeenth centuries formed core resources for early modern scholars, as did the gardens that surrounded them. Forming a collection inscribed an individual within a range of social practices that could in turn result in access to more specimens and more information. Participation, however, was until the mid-eighteenth century largely restricted to the social elite.[32]

Like their predecessors in earlier centuries, eighteenth-century scholars were still expected to possess a collection; they visited and wrote about one another's cabinets and gardens, and judged their counterparts according to the quality and value of the specimens they had collected and the tastefulness of their display.[33] Increasing disposable income and leisure time among the middling and upper ranks meant that the number of private, domestic collections increased and that the 'public' interested in learning about science broadened out socially – including, for the first time, significant numbers of women.[34]

[31] On Enlightenment culture, see references elsewhere in this Introduction and also: Goodman, *Republic of Letters*; Knott and Taylor, *Women, Gender and Enlightenment*; Roche, *France in the Enlightenment*.

[32] Brockliss, *Calvet's Web*; Daston and Park, *Wonders*; Findlen, *Possessing Nature*; Goldgar, *Tulipmania*; Guichard, *Les amateurs*, esp. chs 3 and 6; MacGregor, *Curiosity and Enlightenment*; Miller, 'Joseph Banks'; Pomian, *Collectionneurs*.

[33] Bleichmar, 'Learning to look'; Guichard, *Les amateurs*, ch. 4; Spary, 'Scientific symmetries'; van de Roemer, 'Neat nature'.

[34] By 'public', I mean especially the members of the middling and upper ranks who engaged in some way with the new opportunities to learn about science. For more on the emergence of public science during the Enlightenment, start with: Broman, 'Habermasian public sphere'; Sutton, *Science for a Polite Society*. See also the references in the next footnote.