

Introduction

Botany has become fashionable; in time it may become useful, if it be not so already.¹

The stereotype of the forward, sexually precocious, female botanist made its first appearance in literature in the turbulent revolutionary climate of the 1790s, though women had, in fact, been avidly botanising earlier in the century. The emergence of this figure illustrates both the contemporary appeal, particularly to women, of the Linnaean Sexual System of botanical classification, and the anxieties surrounding female modesty it provoked. Thus, in the reactionary poem, *The Unsex'd Females* (1798), the Reverend Richard Polwhele warned that botanising girls, in scrutinising the sexual parts of the flower, were indulging in acts of wanton titillation. In the same year James Plumptre conceived a comic opera entitled *The Lakers* in which the heroine is a female botanist, 'Miss Beccabunga Veronica of Diandria Hall'.² Veronica's precocious search for botanical specimens parallels her immodest search for a husband. With only Erasmus Darwin's provocative account of *The Loves of the Plants* (1789) to guide her, 'she has been studying the system of plants, till she now wishes to know the system of man' (I.1. 2). Botany, we are reminded in the preface, 'is by no means a proper amusement for the more polished sex' (xii). The botanising activities of Veronica's maid, Anna, suggest that the fashion for women's botany has, deplorably, even reached the servant classes. Anna has been learning something of Linnaean classification and she later confides to the aptly named Billy Sample that 'all ladies who know anything study botamy [sic] now' (III. 1.

43). The punning malapropism alerts the reader to the supposed sauciness of the activity. And this is not all: Anna goes on to enumerate the many varieties of sexual union in the plant kingdom and how they are analogous to human sexuality. The father of modern botany, Carl von Linné, or Linnaeus (1707-78), founded a classification system based on the male and female parts of the flower, it focused attention on the organs of generation and was termed the ‘sexual system’ or *systema sexuale*. Linnaeus famously made use of human-plant analogies; his nomenclature was inspired by traditional wedding imagery and marriage metaphors permeate his botanical taxonomy in *Systema Naturae* (1735) in which he explained the concept of *nuptiae plantarum* (or ‘The Marriage of Plants’). However, Linnaeus disclosed that in general such propriety was inapplicable to plants, whose sexual union was uncontrolled. Plumptre’s Anna is clearly drawing on Linnaean ideas in her dialogue with Billy:

Anna. Oh such an enlightened study! such hard names! [. . .] Such curious truths too contained in it—why, plants are all men and women.

Sample. Aye, there are sweet-williams; I’m a sweet-william. And coxcombs, and painted ladies, and lords and ladies, and naked ladies, and—

Anna. No, no, I mean that they drink and sleep, and are like man and wife.

Sample. What, sleep in the same bed?

Anna. Yes, and in different beds, and live sometimes in different houses.

Sample. Have a separate *maintenance*! They must be your fashionable plants then. What and some have their misses, I reckon, as well as their wives?

Anna. O yes! A great many: and some ladies have their gallants too.

Sample. Upon my word, Miss, a very pretty study this seems to be that you've learnt: I can't say I should much like my wife to know anything about it.

Anna. That you'll find a difficult matter to get one who's ignorant of it; for all ladies that know any thing study botamy [sic] now. (III. 1. 43-44)

The Lakers and *The Unsex'd Females* show how fashionable women's botany had become. They demonstrate the spread of Linnaean ideas in England and the anxieties surrounding the figure of the female botanist in the last decade of the eighteenth century. Plumptre differs from Polwhele in that his discouragement of Linnaean botany for women is humorous, yet still his preface locates such botanising within 'the false taste of a licentious age, which is gaining ground, and corrupting the soft and elegant manners of the otherwise loveliest part of creation' (xii). This debate around taste and propriety is central to my exploration of women's literary interaction with botany.

As we have seen, Plumptre informs us that his heroine's botanical knowledge is gleaned from her reading of Darwin's *The Loves of the Plants*, a poem inspired by the Linnaean system. Darwin was certainly instrumental in popularising Linnaean botany for women as I will show below. His 'Key of the Sexual System' (appendix 1) was appended to the Lichfield Botanical Society's *The Families of Plants* in 1787 and it makes explicit the language used to describe the marriage of plants in Linnaean texts in English in the

eighteenth century.³ Here, the male and female parts of the flower, the stamens and pistils, are ‘husbands’ and ‘wives’. Plants whose flowers contain different numbers of male stamens and female pistils are described in terms of ‘houses’ or ‘marriages’. The Linnaean nomenclature rests on contemporary marriage practices, with marriages divided into two groups, either ‘public’ (those whose flowers are visible) or ‘clandestine’ (flowers scarce visible to the naked eye). Darwin informs us that in clandestine marriages flowers may be ‘concealed within the fruit’ and that ‘Nuptials are celebrated privately’ (lxxix). It is this imagery of nuptials, spouses and marriages which captured the public imagination in the mid to late eighteenth century and caused botany to be caught up in debates around sexuality and propriety.

Flowers are traditionally emblematic of the female sex in literary texts; however, a particular, complex refinement of this is taking place here. I will thus explore how botany becomes a discourse of female sexuality in eighteenth-century literature. I then investigate the moral backlash against female botanists and the problems of representation facing literary women who practised the modern, sexual system of botany. This will involve interrogating a small group of interrelated texts and teasing out connections, influences, revisions and resistances. I examine a number of authors who have been overlooked, setting my readings within the context of broader debates on botany and gender. Botany would never again be quite so topical or fashionable and these texts serve to remind us of this, whilst allowing us to consider the reasons why women’s botany in particular became so prominent and so controversial at this time.

There was an enormous growth in the number of botanical and horticultural books—literary, scientific and artistic—published in Britain in the eighteenth century.

They covered an increasingly wide field of interest: herbals; books on medical botany, plant physiology and anatomy; floras, including local and foreign floras; gardening books, covering botanic, private and nursery gardens, and including garden design; works on planting; letters on botany; botanical dialogues; long poems on botanical and horticultural themes, and botanical drawing books.

There had been an extraordinary influx of new plants into Britain at this time. Sir Joseph Banks, the botanist, and Linnaeus's pupil, Daniel Solander, discovered and collected new species of plant on various voyages of discovery. On Banks's return from the South Seas on board Cook's *Endeavour* voyage, he was employed by George III at the Royal Botanic Gardens at Kew. Kew boasted some 5500 species of plant as listed by William Aiton in *Hortus Kewensis* in 1789. The number of species had doubled by the second edition of this work in 1814. Banks gained fame (and some notoriety) when John Hawkesworth's *Account of the Voyages* was published in 1773 and his celebrity in aristocratic circles added to the fashion for plant collecting and botanising.

The public's interest in flower painting was boosted by the appointment in 1790 of one of the most famous botanical artists of the day, Francis Bauer, at Kew. Bauer instructed Queen Charlotte and Princess Elizabeth in botanical drawing, making the drawing and collecting of plants socially desirable. At this time, women embarked on a new kind of floriculture; daughters were instructed in botanical drawing in the manner of the royal princesses, and floral pursuits such as flower gardening, pressing, moulding or embroidering flowers were promoted in manuals and in periodicals such as *The Lady's Monthly Museum* and *The Lady's Magazine*.

The new interest in botany and floriculture was even reflected in women's fashion.

David Allen remarks that:

a marked rise in interest in botany and horticulture can be shown to have coincided with an outbreak of highly naturalistic floral designs on silks, a trend which began in the late 1720s and which originally came from Lyons. Kitty, Duchess of Queensbury is said to have become famous around this time for a dress so perfectly representative of nature's beauties that it gave her the appearance of a walking botanic garden.⁴

Floral fashions continued well into the century and there were elaborate hairstyles and headdresses featuring flowers, leaves, feathers, fruits and even artificial birds. Such extravagance of taste was the subject of a number of satirical prints by Daryl featuring preposterous coiffures. *The Flower Garden* of 1777 (cover illustration) is one such caricature, a lady of fashion sporting a towering wig adorned with floral boughs, silk flowers, giant shells and fashioned into a miniature flower garden at the top complete with husbandman, formal beds, hedgerows, trees and a summerhouse. Such satires show the associations that had developed concerning women and flowers in fashionable society in the 1770s.

Mary Delany (1700-88), a close friend of Queen Charlotte, pioneered the art of crafting paper flowers after nature and classifying them according to the system of Linnaeus.⁵ Delany's paper mosaics began as a genteel female pursuit, developing from the new interest in floriculture, but what is new about Delany's paper cut-outs is how botanically accurate they are. They brought her public recognition and allowed her access

to exclusive botanical circles. After the death of her second husband she spent an increasing amount of time with Margaret Cavendish Bentinck, the Duchess of Portland at her estate, Bulstrode, in Buckinghamshire. The Duchess herself was a great collector and her natural history collection was the largest in Britain. As Delany gained prominence she received gifts of plants from Kew, from the Chelsea Physic garden, and from the most famous British botanist of the day, Joseph Banks. Her unique skill in floral imitation led to her being celebrated by Darwin in *The Loves of the Plants* (itself a favourite with enlightened British women). Delany kept careful records of her elegant representations of flowers listing the Latin name and classification of each. Thus, what had begun as an aesthetic exercise or feminine accomplishment had developed into a scientific project. The decorative paper cut-outs served to mask this genteel woman's interest in Enlightenment science and in the Linnaean sexual system of classification. The scientific and aesthetic are inextricably linked here through a minute exploration of flowers. Such progressions from floriculture to Linnaean botany, from the particular to the universal, changed the way many women thought about flowers and helped generate new genres of women's writing such as the botanical dialogue or conversation and the botanical poem with scientific notes. Many of these works are as generically unstable as Delany's *hortus siccus* or paper garden, and blur the distinctions between aesthetic representation and scientific classification. I focus on the cross-fertilisation of these ideas in eighteenth-century women's writing with the escalation of women's involvement in scientific botany being a central concern of my study.

This book shares some parallels with work by Barbara T. Gates, Ann Shteir, and Londa Schiebinger. Barbara Gates has surveyed Victorian and Edwardian women and

their relationship to nature and anthologised women's nature illustration and writing.⁶ Schiebinger first posed the question, 'was botany feminine?', in 1989 in her exploration of women in the origins of modern science. In 1996, Shteir produced a history of women and botany in England from the mid-eighteenth century through to the late Victorian period.⁷ Whilst I acknowledge these pioneering studies, I depart from their approach in that, as a literary critic, I am primarily concerned not with academies, salons, botanical societies and plant collectors, but with texts—texts which illustrate the literary representation of botanical science in the eighteenth century. Shteir and Gates's studies of women and natural history are broad and sweeping; as a scholar of the eighteenth century, I focus on the Linnaean years in England during the Enlightenment which, I argue, is when the most progressive texts by and for women were produced. I suggest, for example, that Jean-Jacques Rousseau's botanical letters addressed to a young woman (translated into English in 1785) are vital to our understanding of women as both the producers and consumers of botanical texts. This crucial work has been given little consideration in studies such as Shteir's.⁸ I depart from Shteir in that I argue that the feminisation of botany first occurred in texts written by men. These botanical texts were often reinterpreted in significant ways by women, but there had already been a distinctive female orientation of the texts by the male writers themselves. Hence I am concerned with a wider understanding of the discourse and practice of 'female botany' than Shteir.

This study will explore the cultivation of the female mind and its implications for the theories of the feminised discourse of botanical literature. I offer detailed readings of epistolary, dialogic and poetical introductions to botany by eighteenth-century British women. I situate these unique texts within the literature of the eighteenth century where

they can be seen to be in dialogue with the writings of the key figures, Jean-Jacques Rousseau, Erasmus Darwin, and Mary Wollstonecraft, people who straddle the complicated boundary between Enlightenment and Romanticism, and all of whom were closely involved in discussions of the cultivation of women and the culture of botany.

As I have said, Rousseau is one such male figure who takes on a particularly important role. I have selected him rather than other *philosophes* for a number of reasons. Rousseau was a keen botanist and he was instrumental in shaping the feminisation of botany in the eighteenth-century. He turned to botany with renewed enthusiasm during his persecution and exile, seeking solace in the flowers and plants that inhabited his immediate surroundings. He began notes towards a botanical dictionary in 1764 and he botanised so avidly on the Island of St. Pierre during his confinement there in 1765 that he fantasised about compiling a complete flora of the Island that would occupy his entire life.⁹ He is rumoured to have botanised in Derbyshire with the Duchess of Portland¹⁰ and it is here that he was introduced to the British botanist Sir Brooke Boothby, the cousin of the botanist and author Maria Jacson. Boothby was a member of the Botanical Society at Lichfield, whose founding member was Erasmus Darwin. The scholars who made up the Botanical Society at Lichfield, who I give much attention to, were all fervid Rousseauvians.

Most crucially, one of the most popular eighteenth-century texts on botany in England was a translation of Rousseau's *Lettres elementaires sur la botanique* (1771-74). Rousseau wrote the botanical letters for Madame Madelaine Catherine Delessert (born Madelaine-Catherine de la Tour in Neuchâtal in 1747) who was the owner of a famous herbarium and botanical library. Madelaine married Etienne Delessert of Lyon, a member

of the Huguenot family, in 1776. She had written to Rousseau in his exile and in 1771 she asked for his help in introducing her daughter, Marguerite-Madelaine (known as Madelon), to botany. The letters offer guidance to Madelaine, a young mother, over the instruction in botany of her daughter, Madelon. The received image of Rousseau as a botanist is usually that of the solitary herborizer; however, the *Letters* show a new kind of sociability in relation to Rousseau and botany through a dialogue or exchange of knowledge between a tutor, mother and daughter. The *Letters* were published in the *Collection complète des Œuvres de J.J. Rousseau* in 1782 and translated (using this edition) into English by Thomas Martyn, Professor of botany at Cambridge, in 1785. Martyn's book, entitled *Letters on the Elements of Botany Addressed To A Lady*, became a surprise bestseller in England and went through many editions. It was addressed to, and widely read by, British women. As an example of this profound influence, Priscilla Wakefield—another key figure in my narrative—recognisably modelled her own botanical letters of 1796 on Rousseau's.¹¹

British women were familiar with Rousseau the botanist. Charlotte Smith, whose work I look at closely, strongly identified with the solitary botanising figure of the *Rêveries du promeneur solitaire* (composed 1776-8, published posthumously in 1782). The lone walker and herborizer of *Rêveries* is reincarnated as a botanising mother and aunt engaged in a familial dialogue in her *Rural Walks in Dialogues* (1795) and *Rambles Farther* (1796), echoing Rousseau's own more sociable botanising in the *Letters*.

Finally, Rousseau's sentimental novel, *Julie ou la Nouvelle Héloïse* (1761)¹², was also enormously popular amongst British women and offered positive images for women that belied his often misogynist—but ambivalent—attitudes towards women.¹³ A central

trope in this novel is the image of Julie tending her garden; this is an obvious botanical image in itself, but the peculiarly uncultivated nature of Julie's garden found a receptive audience among certain women—notably, Eleanor Butler and Sarah Ponsonby, 'The Ladies of Llangollen'.¹⁴ These women were famous for their garden at Plas Newydd in Llangollen where they entertained a number of distinguished guests. Among the visitors to Llangollen was the poet Anna Seward. Botany was the main topic of conversation at Plas Newydd and Rousseau too was much debated at the soirees the women held in their library.¹⁵ Seward was to publish a volume of verse dedicated to these women in 1796 (*Llangollen Vale with Other Poems*).

More contentiously, there was the engagement by many British women with Rousseau's educational text, *Emile* (1762), and its rather passive heroine, Sophy. Mary Wollstonecraft, for instance, was both inspired by his general theories and exasperated by the separate treatment accorded to Sophy, reacting against this in her *Vindication of the Rights of Woman* (1792).

Wollstonecraft is another figure who is crucial to debates around women and botany, a writer who straddles the complicated boundary between Enlightenment and Romanticism alongside Darwin and Rousseau. Wollstonecraft took lessons in flower drawing from James Sowerby (1757-1822), the illustrator of the influential *English Botany* (1790-1814). She defended botany against prudery in *A Vindication*, attacking those who would limit women's access to Linnaean knowledge. I argue that she approved of botany as a female pursuit but she deplored sentimental analogies between women and flowers. She uses hackneyed sounding floral epithets ironically in *A Vindication*, launching an attack on flowery diction in works for female education. I trace her

involvement in debates around sexuality and botany in the 1790s and explore how she came to inspire a number of botanical satires, appearing as an adulterous female plant in a dialogue between Polwhele and Thomas Mathias, author of *The Pursuits of Literature* (1794-97).

Wollstonecraft's *A Vindication* raises questions about women's access to Linnaean botany. Previous Linnaean studies by scholars such as Wilfrid Blunt, William Stearn, Frans Stefaleu, Tore Frängsmyr and Lisbet Koerner have neglected to mention female Linnaeans in England in the eighteenth century.¹⁶ Elsewhere, debates have focused on the public role of Linnaean botany in the voyages of discovery.¹⁷ I have redressed the balance by examining 'indigenous botany'—the botany of native plants—by women in the private domestic sphere of the home, garden and hedgerow. I show how this public/private divide is broken down in a complex and interesting way by women whose texts register these conflicts and tensions. Many women, for example, paraded their botanical knowledge in published texts whilst simultaneously apologising for obtruding their work upon the public in the prefatory material of their works.

Studies of women and science in the eighteenth century, with the exception of Shteir's, have tended to overlook botany and have focused instead on astronomy and chemistry, telescoping, and microscopy.¹⁸ Patricia Phillips's study of *The Scientific Lady*, mistakenly states that in the mid- to late eighteenth century

natural history and Buffon in particular, had a wide popularity among women [. . .] Botany, on the other hand, was a field not yet appropriated by the ladies, although the Queen, her mother-in-law, the Dowager Princess of Wales and George III were keen botanists.¹⁹

Botany has been neglected in these accounts of the ‘scientific lady’ and, whilst texts such as Elizabeth Carter’s translation of Algarotti, *Sir Isaac Newton’s Philosophy Explain’d for the Use of the Ladies* (1739), Aphra Behn’s translation from Fontenelle, *A Discovery of New Worlds* (1688), and Jane Marcet’s *Conversations on Chemistry* (1806) have rightly been explored, the pioneering botanical works of Priscilla Wakefield (1751-1832), Maria Elizabetha Jacson (1755–1829), and Frances Arabella Rowden (1770-1840[?]) have all but been forgotten.

The microscope offered women access to other worlds as much as did narratives of voyaging and exploring the globe. Marjorie Hope Nicholson has discussed the influence of Newton’s *Optics* on the poetry of the eighteenth century, but the influence of Linnaeus on women’s poetry and the use of microscopy in the woman’s botanical poem have never been addressed in any detail.²⁰ I have covered new ground here and rescued from obscurity texts by authors who have rarely been considered in the field of literature such as Arabella Rowden and Sarah Hoare. Since I began this study, however, there has been a resurgence of interest in Charlotte Smith, and Loraine Fletcher has written on the importance of botany to our understanding of Smith in her recent biography.²¹ Judith Pascoe was the first to examine Smith as a botanist and one or two articles have since appeared on the natural history in Smith’s *Beachy Head* (1807).²² I have been able to place Smith within a tradition of eighteenth-century literary women who cultivated an interest in botany and examine her botanical poetry alongside that of Sarah Hoare and Arabella Rowden, together with poetry from Robert Thornton’s *Temple of Flora* (1807) which includes work by relatively unknown poets such as Cordelia Skeeles, all of who are important to this study.

Janet Browne, Alan Bewell, Londa Schiebinger, and Tim Fulford have all explored botany's role in the sexual politics of the 1790s.²³ However, these works have centred upon Erasmus Darwin, Carl Linnaeus, and Joseph Banks. I explore important new territory in investigating how female Linnaeans dealt with the delicate issue of plant sexuality. I address the problems of representation facing literary women who practised the sexual system of botany and demonstrate how women struggled to give voice to a subject which was judged 'not strictly proper for a female pen'.²⁴ Vivien Jones has brought botany into her discussion of Mary Wollstonecraft and sex education.²⁵ I have been able to illuminate the late eighteenth-century debate between Wollstonecraft, Darwin, Polwhele, and Barbauld with some new material from Anna Seward and lesser known authors such as Elizabeth Moody and Arabella Rowden. Important work emerges out of my attention to genre here and the networks of sociability from which these authors emerge.

There has been much textual criticism covering the related area of women and gardens. Sue Bennett and Stephen Bending's books are recent examples of scholarship in this area.²⁶ I focus on a group of published texts by women in the culture of botany rather than on actual gardens and plant collections. I am primarily concerned with middle-class women: those who wrote for profit, and women educators who entered professional writing through botany. Lady Charlotte Murray is perhaps an exception, due to her elevated position, but she did publish in the field of botany. Her *British Garden* (1799) was a flora rather than the book on gardening that the title suggests. It was written for the use of ladies on trips to botanical gardens and was published commercially in an expensive two volume edition in 1799. Botany and gardening do converge in one or two

of the published texts by women that I study. Maria Jacson's *Florist's Manual* (1816), for example, combines systematic botany with instructions on flower gardening for women. This text in particular raises an interesting debate around the tensions between the aesthetic and the scientific and the privileging of botany over floristry. Female botanists often dissociated themselves from the practices of florists and horticulturalists, following Rousseau and Linnaeus, and this opposition of botany to floristry is the subject of my final chapter. I uncover this opposition in the writings of Charlotte Smith, a Rousseauvian, and Maria Jacson, a Linnaean. However, Rousseau's Julie (from *La Nouvelle Héloïse*) and her wild flower garden form an integral part of my discussion on cultivation in Chapter 1 and I draw on the published work of the gardener Jane Loudon in my concluding section to illustrate anti-Linnaean texts by women in the Victorian era. Contemporary debates on horticulture and gardening form the subject matter for many of the long poems of the eighteenth century: I cover new ground here examining the Linnaean poem by women.

The Linnaean system of botany was promoted as a form of rational amusement for women in the latter part of the eighteenth century. The vogue for botanical texts for women had been anticipated by William Withering's *Botanical Arrangement of All Vegetables Naturally Growing in Great Britain* in 1776, but was developed largely by later writers. Women's texts emerged in the late 1790s, adding to the feminisation of botany that male authors had cultivated. The Reverend Charles Abbot closely observed the development of women's botany; his *Flora bedfordiensis* (1798) celebrated Britain's botanical 'daughters' who:

have evinced a zeal and ardour in Botanical researches which have not only done the highest honor [*sic*] to themselves, but have eminently contributed to rescue these pursuits from unmerited reproach, to elevate them into reputation, and to impart to them, if not a superior value, at least a superior currency and fashion.—That such excellence should have been attained in this branch of science by so many of the female sex, notwithstanding the disadvantages they labour under from the want of scholastic and technical instruction, is a convincing proof of the liberality with which Nature has endowed the female mind: and how little reason there is to suppose that their intellectual [?] are from any other cause than want of cultivation, in any degree inferior to their personal accomplishments.²⁷

Thus Abbot records the rise of the woman botanist in England in the eighteenth century.

There were, of course, women plant collectors too; as I have mentioned, Lady Margaret Cavendish Bentinck, the Duchess of Portland, kept a botanical garden in the grounds of her house at Bulstrode. She employed naturalists such as James Bolton and the Reverend John Lightfoot, author of *Flora scotica* (1777), who was engaged in arranging and documenting her collection. The Duchess and Mrs Delany frequented London and Bath society and regularly held soirées in which literary and botanical conversations took place. Guests at such gatherings included the botanist, Daniel Solander, who had also assisted with the collections at Bulstrode, and the Linnaean, Benjamin Stillingfleet, a favourite with these women. His habit of wearing blue stockings at these meetings, where literary and scientific dialogue took the place of card playing,

led to the term 'Bluestocking' being coined, referring to the circle of learned women. Women who were instructed in botany by Linnaeans such as Stillingfleet or Solander speak of a flirtatious initiation into botanical knowledge. Mary Berry (1763-1852), the author and friend of Horace Walpole who claimed to have learnt botany from Solander, was already familiar with botanical sexual innuendo, though she only employed this herself in private correspondence:

I must at last own with blushes [. . .] I was early initiated into all the amours and loose manners of the plants by that very guilty character, Dr Solander, and passed too much time in the society and observance of some of the most abandoned vegetable coquettes.²⁸

The botanical dialogue or conversation, in its printed form, which came to exemplify the role of women in the culture of eighteenth-century botany, originated in such meetings. Women were soon conversing in a new Linnaean language.

The genre of the familial dialogue was important among published texts on botany. Fontenelle's *Entretiens sur la pluralité des mondes* (1686) spurred the growth of a market for scientific dialogues addressed to women, and botany, too, proved popular in a dialogic format. Priscilla Wakefield, one of the pioneers of the botanical dialogue in England, saw dialogue as fulfilling an educational ideal:

The form of dialogue has been adopted as best suited to convey instruction blended with amusement; being desirous that it should be read rather from choice than from compulsion, and be sought by my young readers as an entertainment not shunned as a mere dry preceptive lesson.²⁹

In Wakefield's *Mental Improvement* (1794) botany is taught through a series of instructive conversations. The transformative influence of good conversation is demonstrated by the figure of Augusta, the twelve-year-old motherless child who, prior to her stay with the Harcourt family, has only received formal lessons from a governess. After her access to informal conversation in the Harcourt household, Augusta is cured of her wayward habits. She is ultimately transformed by an informal introduction to natural history and announces that she wishes to become a botanist like her interlocutor, Sophia:

Augusta. I have walked a great deal, and in some of my rambles have availed myself of your directions, to become acquainted with the nature of plants and flowers. I have learned the names of the different parts that compose them; and, if Sophia will give me her kind assistance, I hope, in time, to become a botanist.

Sophia. You cannot propose any thing more agreeable to me, than that we should pursue this delightful study together. Our walks will become more interesting, by having a particular object in view; every step we advance will supply new entertainment; from the humble moss, that creeps upon the thatch, to the stately oak, that adorns the forest.³⁰

Charlotte Smith's *Rural Walks* (1795) and *Rambles Farther* (1796) are largely comprised of botanical dialogues and *Conversations Introducing Poetry Chiefly on the Subject of Natural History* (1804) elaborated on this theme. Maria Jacson's *Botanical Dialogues Between Hortensia and Her Four Children* appeared in 1797. Other examples of this genre are Elizabeth and Sarah Mary Fitton's *Conversations on Botany* (1818), Harriet

Beaufort's *Dialogues on Botany* (1829) and Jane Marcet's *Conversations on Vegetable Physiology* (1829).

The familiar letter played an important role in the feminisation of botany. Jean-Jacques Rousseau's botanical letters were as I have stated translated and published as *Letters on the Elements of Botany Addressed to a Lady* in 1785. The epistolary format was adopted by Priscilla Wakefield in *An Introduction to Botany in a Series of Familiar Letters* (1796). Examples of the botanical letter as a genre of women's writing can also be found in the nineteenth century in texts such as Sarah Waring's *A Sketch of the Life of Linnaeus in a Series of Letters Designed for Young Persons* (1827).

Poetical studies came into vogue after the publication of Erasmus Darwin's *The Loves of Plants* (1789) which was to form the second part of the epic poem, *The Botanic Garden*, in 1791. This text was to have a profound effect on women and a new genre of women's writing, the botanical poem with scientific notes, emerged after Darwin. Charlotte Smith's 'Flora' from *Conversations Introducing Poetry* (1804) and Sarah Hoare's 'The Pleasures of Botanical Pursuits, A Poem', appended to the eighth edition of Wakefield's *An Introduction to Botany* in 1818 and later appearing as *A Poem on the Pleasures and Advantages of Botanical Pursuits* (1826), are examples of this new genre as is Frances Arabella Rowden's *A Poetical Introduction to the Study of Botany* (1801).

The figure of the Swedish naturalist Carl Linnaeus haunts this study. Linnaeus influenced British women's engagement with botany in dramatic and contradictory ways. Conventional morality dictated that women should not become too familiar with the terminology of the sexual system and by the early nineteenth century there was a movement to ensure that no botanical textbook would bring 'the blush of injured modesty

to the innocent fair'; simultaneously, the Linnaean sexual system was becoming unacceptable in England.³¹ I introduced sexuality debates in relation to botany earlier in my discussion of literary texts written in the last decade of the eighteenth century. Eighteenth-century botany remained associated with sexuality due to Darwin's libidinous account of *The Loves of the Plants* (1789, 1791) and the Linnaean Joseph Banks's reputation as a libertine.³² Darwin caused controversy by addressing his colourful descriptions of Linnaeus's floral harems to women, and Banks's reputation for sexual promiscuity arose from Hawkesworth's unreliable account of the visit to Tahiti on Cook's *Endeavour* voyage.³³

To understand the impact of the sexual system on the botanical culture of the 1790s it is necessary to look at the development of such a system and to explore Linnaeus's contribution to British botany in the eighteenth-century. Linnaeus was the founder of the Sexual System but he was not the first to teach the theory of plant sexuality; his contribution was to popularise this and give it a solid empirical foundation. The ancients were not ignorant of the existence of sex in plants, nor were seventeenth-century naturalists such as Sir Thomas Millington and John Ray. The English gardener Philip Miller had written about plant fertilisation by bees in 1721 and addressed the sexuality of plants in his *Catalogus Plantarum* of 1730. However, it was the Frenchman, Sébastien Vaillant (1669-1722), who had first brought plant sexuality to Linnaeus's attention. Vaillant had studied under botanist and explorer Joseph Fitton de Tournefort (1656-1708) and held an appointment as botanist at the *Jardin du Roi* in Paris.³⁴ At the opening of the garden in 1717, he gave an address entitled *Discours sur la structure des fleurs*, an exposition of the sexual function of flowers, which was rendered shocking by his use of

vernacular terminology. Vaillant had spoken of flowers as the sexual organs of plants, comparing the stamens to the penis, yet he had never demonstrated his theory by experiment.³⁵ Vaillant's ideas were communicated to Linnaeus in an academic oration by the Dutch botanist and physician Hermann Boerhaave (1668-1738) in 1717.³⁶ From this time onwards, Linnaeus laboured to develop his understanding of plant sexuality. He confirmed that plants reproduce sexually in a prize-winning essay to the St Petersburg Academy in 1759. This dissertation on the sexes of plants was published in 1760 and James Edward Smith translated the pioneering work from Latin into English in 1786.³⁷

Linnaeus demonstrated that the generation of plants was sexual in an experiment on hemp. When male plants from one lot of seedlings are removed, and a pot is kept which contains only female plants, the female plants are only fertilised by pollen carried by the wind. Linnaeus thus identified pollen as the 'impregnating powder'. He employed his humanised imagery in the description of the experiment itself where female plants are 'widows' or 'virgins'.³⁸ The idea of pollen being carried 'promiscuously' aloft by the wind shocked William Smellie, compiler of the first edition of the *Encyclopaedia Britannica* (1771) and author of *Philosophy of Natural History* (1790), who refused to believe that the Creator would leave something as important as reproduction to mere chance.³⁹ Smellie asserted that, contrary to the theory of pollination expressed by Linnaeus, 'all the laws of nature are fixed, steady and uniform, in their operations'.⁴⁰ The idea that the laws of nature governing reproduction in plants could be abandoned to apparent uncertainties proved controversial at a time when social order and natural order were considered interdependent.

I have already mentioned that Linnaeus made use of human-plant analogies; his nomenclature was inspired by traditional wedding imagery and marriage metaphors permeate his botanical taxonomy. However, despite this emphasis on marriage, Linnaeus disclosed that there is only one monogamous class of plants. This scarcity of monogamy outraged Johann Siegesbeck of St Petersburg who could not comprehend how anyone could teach so ‘licentious’ a method. Siegesbeck had much in common with the best-known British critic of Linnaeus, Charles Alston.⁴¹ Alston had studied under Boerhaave at the University of Leyden and favoured Tournefort’s system of classification (Tournefort did not admit the existence of sex in plants and divided plants into twenty-two classes according to the general form of the flower). Both men found the sexual system inadequate but also morally repulsive. Siegesbeck, for example, argued in 1737 that the Creator of the vegetable kingdom would never have permitted such ‘loathsome harlotry’ as several males fertilising one female.⁴²

Religious debates in relation to botany resurface in the late eighteenth century: the country clergy, many of whom were amateur naturalists following in the footsteps of John Ray, did not like the direction botany had taken since Linnaeus. Such a one was the Reverend Richard Polwhele, author of *The Unsex’d Females* (1798), which as I declared earlier, contained an attack on women botanists. Polwhele exemplified the country clergy’s claims on botany as a virtuous pastime associated with the local knowledge of the amateur naturalist. He produced topographical works including *The History of Devonshire* (1793-97) and the *History of Cornwall* (1803-1808). In poems such as ‘The Influence of Local Attachment with Respect to Home’, Polwhele demonstrates how ‘the mind is acted upon by localities’ and for him this particularised knowledge could be

extended to an observation of plants in a particular geographical area. Polwhele's emphasis on geographical location and the centrality of local habitat to botanical study is at odds with Linnaeus, who sought principles that would hold universally. An uncritical advocate of 'local knowledge', Polwhele expressed that hostility to universalism which is often connected to reactionary and nationalistic ideologies.⁴³

Satirical and parodic attacks on Linnaeus appeared in the mid-eighteenth century, differing in content from those that would be inspired by the later upsurge in popularity of botany for women, but prefiguring them by providing their general form. Unconcerned with morality, they mocked instead the ancient idea of a plant as an inverted animal which Linnaeus had adopted: 'the stomach of plants is the earth, the lacteal vessels the root, the bones the trunk, the lungs are the leaves, and the heart is heat'.⁴⁴ These comparisons inspired La Mettrie's *L'Homme plante* (1748).⁴⁵ The 'human plant' of this satire is described according to the rules of Linnaean botany and belongs to the class *Dioecia* (derived from the Greek for 'two homes or houses') and order *Monandria* ('one husband'), with only one stamen or pistil. The pistil and stilus (penis and vagina) are classified, and given measurements and definitions in the manner of flora.⁴⁶

The Man Plant: Or, Scheme for Increasing and Improving the British Breed (1752) is a British satire of botanical treatises clearly inspired by La Mettrie. The author, Vincent Miller, adopting the persona of a professor of philosophy, describes a scheme of 'maturing the Man-foetus by artificial heat'.⁴⁷ His instructions for the propagation of a human ovum in a hothouse specifically satirise Linnaean analogies between the animal and vegetable kingdoms. 'In the following Formulary', states Miller, 'the Female of the human species is described, as a Flower Plant, in the Method of *Linnaeus*'.⁴⁸ The

gardener's daughter, Sally, a woman of easy virtue selected for the purposes of the experiment, is described in suitably clichéd floral epithets:

She was in that critical Season, when the integrity of a Girl hangs upon
a single Hair, and her Virgin flower sits so loose, that it drops with the
least shake, or warm Breath, as one sees a Peach-blossom blown away
with the lightest puff of a Western Breeze.⁴⁹

Sally is seduced, prescribed 'a proper regimen, of light, digestible, and analeptic food',⁵⁰ and produces an egg after thirty-nine days. The human egg, planted in a basket of earth and hatched after a period of eight months, is described as belonging to the class *Dioecia*, order *Monandria* and is of the genus *Homo*.

The sexual imagery in Linnaeus invited such parodies; similarly, for the translators of Linnaeus, the persuasiveness of the sexual system was often due more to its rhetoric rather than its empirical validity. In Chapter 1 below I demonstrate how Linnaeus offered what appeared to be a boudoir version of botany where 'male' stamens and 'female' pistils were likened to brides and bridegrooms on their nuptial bed. Hugh Rose's translation of Linnaeus's *Philosophia botanica* (1775) elaborates on Linnaeus's theme of consummation within marriage:

The *calyx* then is the marriage bed, the *corolla* the curtains, the
filaments the spermatic vessels, the *antherae* the testicles, the dust the
male sperm, the *stigma* the extremity of the female organ, the *style* the
vagina, the *germen* the ovary.⁵¹

Such analogies between the anatomy of flowers and the human reproductive organs offended Charles Alston, the King's botanist, who complained that 'no imagined analogy

between plants and animals can warrant or excuse the fulsome and obscene names, imposed by the sexualists on the different parts of the fructification of vegetables'.⁵²

The sexual system both inspired and provided the formal methodology for a diverse range of texts in English from Withering's *Botanical Arrangement* to Darwin's *Botanic Garden* and Robert Thornton's *Temple of Flora* (1807) These texts were female centred and it was this approach that popularised Linnaean botany as a female pursuit in the eighteenth century. The Linnaean society did not open its doors to women until as late as 1919, but British women were practising the modern system of botany in the late eighteenth century, despite fears that the sexual system of classification threatened feminine modesty.⁵³ The idea that sexuality was the key to classification proved controversial at a time when the laws of nature were conventionally appealed to as the justification for social mores.

British women writers' engagement with Linnaean methodology and Linnaean ideas is the main subject of this book. Before I introduce the Linnaean texts that are the focus of this study, I want undertake a wider investigation into the culture of botany and the cultivation of female minds in the Enlightenment in order to establish the background. Chapter 1 thus explores women's problematic relationship to Enlightenment culture through an investigation of contemporary literary analogies between women and flowers. Rousseau features prominently but other writers appear. Floral metaphors contrasting cultivation and decadence with naturalness and simplicity flourish. Conversely, botanical imagery that binds culture, social progress and education proliferates, opposing these themes to nature and underdevelopment; all this rhetoric is invariably gendered. Centrally, I emphasise Mary Wollstonecraft's strategy of appropriating the language of

botany to expose the contradictions underlying Enlightenment universalism with regard to women.

In Chapter 2, I investigate the initiation of a process of feminisation of botany in Rousseau's and Priscilla Wakefield's letters on botany; these were literary and educational texts addressed specifically to women. This feminisation is examined in relation to the gendered dichotomy of the public and private spheres. During the course of this study, contradictory tendencies emerge: women's botany could have a repressive, domesticating, ideological function but was simultaneously liberating, allowing women to participate to some extent in the public community of Enlightenment scientific discovery.

Linnaean classification exemplified order, making botany an ideal discipline for young British women in the eighteenth century. Chapter 3 pursues these themes of order and nationality. The ordered nature of botanical taxonomic systems conveniently lent itself to ideological constructions of social hierarchy. Rivalries with France drove this botany in 'an English dress', introducing nationalistic strands which contrasted with the disinterested global nature of Linnaeus's system. For instance, the work of William Withering—whose botany was localised and desexualised—proliferated with military imagery. Lady Charlotte Murray and others followed Withering in this undermining of Linnaean principles by similarly concentrating on the local and down-playing problematic sexual reproduction. Maria Jacson would restore the original universalising impulse to botanical study, though ambiguously. Erasmus Darwin, in *The Botanic Garden*, controversially emphasised the sexual dimension in a way that had obvious and

disturbing implications for human society; various women's texts of the period responded in a complex way to this subversive text.

Chapter 4 expands upon these responses: Darwin's explicit discussion of sexuality related to the aura of illicit sexuality that had surrounded Sir Joseph Banks. Botany, from being a reputable and chaste enterprise for women, had suddenly become dangerous. Popular botanical texts rigorously suppressed the sexual aspect, so crucial to the scientific advance made by Linnaeus. Reactionary opponents of Darwin and other radicals—often religiously inspired—denounced women botanists and the Linnaean system. The outcome was an unfortunate regression to a sanitised, unscientific and politically conservative feminine botany that, in the early nineteenth century, came to replace the enlightened women's botany that—despite some ambivalence—had had a genuinely emancipatory character. I argue that the most progressive botanical texts by and for women were produced during the Linnaean years in England.

Chapter 5 focuses on early nineteenth century debates and demonstrates how scientific botany came into conflict with the craft of floristry. The preference for indigenous botany and favouring of British flora over cultivated exotics and hybrids took on nationalistic overtones; there was a class dimension, too. Caught up in this opposition was the parallel dichotomy of the universal and the particular that appeared in the aesthetics of Reynolds, Johnson and others. Inevitably, this debate had a gendered aspect: botanical texts by Maria Jacson and Robert Thornton and the poetry of Charlotte Smith, Arabella Rowden and others (which employed botanical discourse) reveal these themes in a context of anxiety about women and social order.

I conclude by returning to botany's role in the rational education of young women. Native flowers were invested with virtue and used for moral teaching in periodical literature for women and in pedagogical texts featuring young female protagonists. Charlotte Smith's *Rural Walks* (1797) and Wollstonecraft's *Original Stories* (1788) are examples of this. Despite some didacticism, these are enlightened and progressive works and, whilst they anticipate the language of flowers in nineteenth-century texts 'for ladies', they remain generically and scientifically distinct from the Victorian flower books that succeed them.

¹ Maria Edgeworth, *Letters for Literary Ladies*, ed. Claire Connolly (2nd edn. 1798; London: J. M. Dent, 1993), p. 21.

² James Plumptre, *The Lakers*, intr. Jonathan Wordsworth (London: printed for W. Clarke, 1798; facs. repr. Woodstock Books: Oxford and New York, 1990), l.1. 2)). All further references are to this edition and are given in parenthesis in the text as act and scene numbers followed by page. 'Lakers' was the name locals gave to the first tourists who visited Cumberland, as it was then known, in search of the picturesque. In Plumptre's text these visitors include the poet, the painter, and the botanist. Veronica, the heroine, is described as 'a great botanist and picturesque traveller'; she frequently cites Gilpin and is well versed in Erasmus Darwin's *The Loves of the Plants*. Plumptre is satirising these fashionable pursuits, and recommends that readers familiarise themselves with *West's Guide to the Lakes* (1795) and Darwin's *The Botanic Garden* (1791) (*The Loves of the Plants* formed the second part of this and was first published in 1789).

³ Erasmus Darwin, 'Key of the Sexual System', in *The Families of Plants*, 2 vols (London: printed by John Jackson; sold by J. Johnson, 1787), I, pp. lxxvii-lxxx. Further references are given in parenthesis in the text.

⁴ David Elliston Allen, *The Naturalist in Britain: A Social History* (London: Allen Lane, 1976), pp.30-31.

⁵ See Ruth Hayden, *Mrs Delany and Her Floral Collages* (London: British Museum Press, 1980).

⁶ See Barbara T. Gates, *Kindred Nature: Victorian and Edwardian Women Embrace the Living World* (Chicago and London: University of Chicago Press, 1998) and Barbara T. Gates (ed.), *In Nature's Name: An Anthology of Women's Writing and Illustration 1780-1930* (Chicago and London: University of Chicago Press, 2002).

⁷ Ann B. Shteir, *Cultivating Women, Cultivating Science: Flora's Daughters and Botany in England 1760-1860* (Baltimore, USA and London: Johns Hopkins University Press, 1996); Londa Schiebinger, *The Mind Has No Sex? Women In the Origins of Modern Science* (Cambridge, Mass. and London: Harvard University Press, 1989).

⁸ Shteir's study only contains two brief references to Rousseau's botanical letters (*Cultivating Women*, pp. 19, 82).

⁹ Rousseau, *The Confessions* in *The Collected Writings of Rousseau*, V, ed. Christopher Kelly, Roger D. Masters and Peter G. Stillman, trans. Christopher Kelly (Hanover, NH and London: University Press of New England, 1995), p. 537.

¹⁰ See Dave Edmunds and John Eidinow, *Rousseau's Dog: Two Great Thinkers at War in the Age of Enlightenment* (London: Faber and Faber, 2006), p. 287

¹¹ There are obvious similarities between these two texts. Both explain the Linnaean system in a series of letters, one for each class, and centre on an intimate exchange of knowledge between two women. Rousseau's text is written for a young woman and her daughter and Wakefield's is comprised of a correspondence between two sisters. They also each feature a botanising teacher or governess who superintends the letters.

¹² The first edition was published under the title *Julie ou la Nouvelle Héloïse: Lettres de deux amants, habitants d'une petite ville au pied des Alps*, 6 vols. (Amsterdam: Marc Michel Rey, 1761). The first English edition was published as *Eloisa: Or, a Series of Original Letters Collected and Published by J. J. Rousseau. Translated from the French. In four volumes*, 4 vols (London: R. Griffiths, T. Becket, P. A. De Hondt, 1761).

¹³ See Jane Rendall's remarks about this in *The Origins of Modern Feminism: Women in Britain, France and the United States, 1780-1860* (London: Macmillan, 1985), pp. 15-18.

¹⁴ These Irish women ran away from their aristocratic homes and took a cottage together in Wales. Their favourite book was *La Nouvelle Héloïse* and they are believed to have modelled their unusually aristocratic cottage garden at Plas Newydd on Julie's Elysium. For a discussion of this garden, see Anne Scott-James, *The Cottage Garden* (London: Allen Lane, 1981), pp. 29-33. For an account of their friendship see Elizabeth Mavor, *The Ladies of Llangollen: A Study in Romantic Friendship* (London: Michael Joseph, 1971).

¹⁵ Seward's visit to Llangollen is recounted by John Brewer in *Pleasures of the Imagination: English Culture in the Eighteenth Century* (London: Harper Collins, 1997), p. 606. The volume of verse she dedicated to them was published in 1796 (*Llangollen Vale with other Poems* (London: G. Sael, 1796)).

¹⁶ Wilfrid Blunt, *The Compleat Naturalist: A Life of Linnaeus* (London: Collins, 1971); Wilfrid Blunt and William T. Stearn, *The Art of Botanical Illustration* (first pub. London: Collins, 1950; rev. edn Woodbridge, Suffolk: Antique Collector's Club, 1994); William T. Stearn, 'Linnaeus's "Species Plantarum" and the Language of Botany', *Proceedings of the Linnaean Society of London*, 165, part 2 (1955), 158-64; William T. Stearn, 'Carl Linnaeus: Classifier and Namer of Living Things', *New Scientist*, 4 (1958), 401-3; William T. Stearn, 'The Origin of the Male and Female Symbols of Biology', *Taxon*, 11:4 (1962), 109-113; Frans Stafleu, *Linnaeus and the Linnaeans: The Spreading of their Ideas in Systematic Botany 1735-1789* (Utrecht: Oosthoek's Uitgeversmaatschappij N.V. for the International Society of Plant Taxonomy, 1971); Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge, Mass. and London: Harvard University Press, 1999); Tore Frängsmyr (ed.), *Linnaeus: The Man and the Work* (Berkeley and London: University of California Press, 1983).

¹⁷ See Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (London: Routledge, 1992); Barbara Stafford, *Voyage Into Substance: Art, Science, Nature and the Illustrated Travel Account, 1760-1840* (Cambridge, Mass.: MIT Press, 1984); Beth Fowkes Tobin, 'Imperial Designs, Botanical Illustration and the British Empire', *Studies in Eighteenth-Century Culture*, 25 (1996), 265-92; David Phillip Miller and Peter Hanns Reill (eds), *Visions of Empire: Voyages, Botany and Representations of Nature* (Cambridge: Cambridge University Press, 1996).

¹⁸ See Gerald Dennis Meyer, *The Scientific Lady in England 1650-1760: An Account of Her Rise With Emphasis on the Major Roles of the Telescope and Microscope* (Berkeley and Los Angeles: University of California Press, 1955); Patricia Phillips, *The Scientific*

Lady: A Social History of Women's Scientific Interests 1520-1918 (London: Weidenfeld and Nicholson, 1990); Myra Reynolds, *The Learned Lady in England 1650-1760* (Gloucester, Mass.: Peter Smith, 1964).

¹⁹ Patricia Phillips, *The Scientific Lady*, p. 97.

²⁰ Marjorie Hope Nicolson, *Newton Demands the Muse: Newton's Opticks and the Eighteenth-Century Poets* (Princeton: Princeton University Press, 1966).

²¹ Loraine Fletcher, *Charlotte Smith: A Critical Biography* (London: Macmillan, 1998).

²² See Judith Pascoe, 'Female Botanists and the Poetry of Charlotte Smith', in Carol Shiner Wilson and Joel Haefner (eds), *Re-Visioning Romanticism: British Women Writers, 1776-1837* (Philadelphia: University of Pennsylvania Press, 1994), pp. 193-209; Donelle R. Ruwe, 'Charlotte Smith's Sublime: Feminine Poetics, Botany and Beachy Head', *Prisms: Essays in Romanticism*, 7 (1999), 117-32; Anne D. Wallace, 'Picturesque Fossils, Sublime Geology? The crisis of Authority in Charlotte Smith's Beachy Head', *European Romantic Review*, 13 (2002) 77-93; Donna Landry, 'Green Languages? Women Poets As Naturalists in 1653 and 1807', *Huntington Library Quarterly*, 63:4 (2000), 467-89.

²³ Janet Browne, 'Botany for Gentleman: Erasmus Darwin and the Loves of the Plants', *ISIS: Journal of the History of Science Society*, 80:304 (December 1989), 593-621; 'Botany in the Boudoir and Garden: The Banksian Context', in *Visions of Empire*, 153-72; Alan Bewell, 'Jacobin Plants: Botany As Social Theory in the 1790s', *Wordsworth Circle*, 20 (1989), 132-39; Alan Bewell, '"On the Banks of the South Sea": Botany and Sexual Controversy in the Late Eighteenth Century', *Visions of Empire*, pp. 173-71; Londa Schiebinger, 'The Private Life of Plants: Sexual Politics in Carl Linnaeus and

Erasmus Darwin', in Marina Benjamin (ed.), *Science and Sensibility: Gender and Scientific Enquiry 1780-1945* (Oxford: Oxford University Press, 1991), pp. 121-43; Londa Schiebinger, *Nature's Body: Sexual Politics and the Making of Modern Science* (London: Pandora, 1993); Tim Fulford, 'Coleridge, Darwin, Linnaeus: The Sexual Politics of Botany', *Wordsworth Circle*, 28:3 (1997), 124-30.

²⁴ Anna Seward, *Memoirs of the Life of Dr Darwin* (London: J. Johnson, 1804), p. 131.

²⁵ Vivien Jones, 'Advice and Enlightenment: Mary Wollstonecraft and Sex Education', in Sarah Knott and Barbara Taylor (eds), *Women, Gender and Enlightenment* (Basingstoke: Palgrave Macmillan, 2005), pp. 140-55.

²⁶ Sue Bennett's book *Women and Gardens* (London: National Portrait Gallery, 2000) was accompanied by a special exhibition. Stephen Bending is currently completing a book on women and gardens in the long eighteenth century (*Retirement and Disgrace: Women and Gardens in the Eighteenth Century*).

²⁷ Charles Abbot, 'Preface', *Flora bedfordiensis* (Bedford: Printed and sold by W. Smith, and G. G. & J. Robinson, 1798), p. vi.

²⁸ Mary Berry to Horace Walpole, 29th April, 1789, in *The Yale Edition of Horace Walpole's Correspondence*, ed. W. S. Lewis and A. Dayle Wallace, 31 vols (London: Oxford University Press; New Haven: Yale University Press, 1937-61), XI, p. 12.

²⁹ Priscilla Wakefield, 'Preface', *Mental Improvement*, 2 vols (London: Darton and Harvey, 1794), I, p. ii.

³⁰ Wakefield, *Mental Improvement*, II, pp. 39-40.

³¹ See W. T. Stearn, 'Preface', Carl Linnaeus, *Species Plantarum* (Uppsala: [n. pub], 1753; repr. Ray Society: London, 1957), p. 25.

³² A number of critics, notably Philip Ritterbush, François Delaporte, Londa Schiebinger, Janet Browne, Tim Fulford and Alan Bewell, have explored botany and sexual politics in the late eighteenth century. For a general discussion, see Philip Ritterbush, *Overtures to Biology: The Speculations of Eighteenth-Century Naturalists* (New Haven: Yale University Press, 1964) and François Delaporte, *Nature's Second Kingdom: Explorations of Vegetality in the Eighteenth Century*, trans. Arthur Goldhammer (Cambridge, Mass.: MIT Press, 1982). For Erasmus Darwin and Linnaeus, see Londa Schiebinger, 'The Private Life of Plants: Sexual Politics in Carl Linnaeus and Erasmus Darwin', in Benjamin (ed.), *Science and Sensibility*, pp. 121-43; Janet Browne, 'Botany For Gentleman: Erasmus Darwin and the *Loves of the Plants*', *ISIS*, 80:304 (December 1989), 593-621; Fredrika J. Teute, 'The Loves of the Plants; or, the Cross Fertilization of Science and Desire at the End of the Eighteenth-Century', *Huntington Library Quarterly*, 63:3 (2000), 319-45; Tim Fulford, 'Coleridge, Darwin, Linnaeus: The Sexual Politics of Botany', *Wordsworth Circle*, 28:3 (1997), 124-130. Luisa Calé has covered some of the texts that I will be exploring here such as those by Darwin, William Smellie, and Richard Polwhele; however, she does not include any of the women's texts and she has adopted a poststructuralist approach which I have avoided ('"A Female Band Despising Nature's Law": Botany Gender and Revolution in the 1790s', *Romanticism on the Net*, 17 (February 2000). For Banks, botany and sexuality, see Alan Bewell, '"On the Banks of the South Seas', Botany and Sexual Controversy in the Late Eighteenth Century', in Miller and Reill, pp. 173-91, and Janet Browne, 'Botany in the Boudoir and Garden: the Banksian Context', in Miller and Reill, pp. 153-72.

³³ John Hawkesworth, *An Account of the Voyages Undertaken by the Order of His Present Majesty For Making Discoveries in the Southern Hemisphere*, 3 vols (London: W. Strahan & T. Cadell, 1773). Commenting on Hawkesworth's account, Jonathan Lamb writes: 'in short, it was whatever approximated to the novelistic without seeming too improbable' (Jonathan Lamb, *Preserving the Self in the South Seas 1680-1840* (Chicago and London: University of Chicago Press, 2001), p. 100).

³⁴ Joseph Pitton de Tournefort (1656-1708) was Professor of Botany at the *Jardin des plantes* from 1688, and was in charge of a scientific expedition to Asia and parts of Europe. In *Institutiones Rei Herbariae*, 3 vols (Paris: [n. pub.], 1700) he defined 698 genera principally on the basis of characters of the corolla and fructification. Many of his genera continued to be recognised though re-defined and re-named by Linnaeus. In *Elémens de botanique, ou methode pour connoître les plantes*, 3 vols (Paris: [n. pub.], 1694) he criticised Ray for using more characters than were essential in defining genera and species. Ray's *De variis plantarum methodis dissertatio brevis* (London: [n. pub.], 1696) was a defence of the principles of natural classification against such artificial 'essentialist' classifications as Tournefort and others. See A. G. Morton, *History of Botanical Science* (London: Academic Press, 1981), p. 228. See also my account of Linnaeus's rejection of Tournefort in Chapter 1 above, p. 20.

³⁵ For Sebastien Vaillant, see Morton, pp. 241-42.

³⁶ The 1717 oration by Boerhaave was entitled *Sermo de Structura Florum*.

³⁷ [Carl Linnaeus,] *A Dissertation on the Sexes of Plants Translated From the Latin of Linnaeus By James Edward Smith, F. R. S.* (London: George Nicol, 1786). James Edward Smith's 1786 translation of Linnaeus's 'Dissertation on the Sexes of Plants' (1760)

celebrated the triumph of the Sexual System over the work of Linnaeus's opponents such as Adanson (Smith, 'Preface', *A Dissertation*, pp. xiii-xiv). Smith became the most prominent English Linnaean after Joseph Banks, purchasing Linnaeus's herbarium collections and manuscripts and founding the Linnaean Society of London in 1788. For a comprehensive list of Smith's (1759-1828) botanical works and collaborations, see Blanche Henrey, *British Botanical and Horticultural Literature before 1800*, 3 vols (Oxford: Oxford University Press, 1975), III, pp. 115-7. For the Linnaean Society, see Andrew Thomas Gage, *A History of the Linnaean Society in London* (London: Taylor & Francis for the Linnaean Society, 1938). For biographical details, see *Memoir and Correspondence of Sir James Edward Smith*, ed. Lady Pleasance Smith, 2 vols (London, Longman, Rees, Orme, Brown, Green, 1832).

³⁸ Linnaeus, *Dissertation*, pp. 33-34.

³⁹ William Smellie, *The Philosophy of Natural History* (Edinburgh: Printed for the Heirs of Charles Elliot and T. Kay; London: T. Cadell and G. G. & J. Robinson, 1790), p. 251.

⁴⁰ Smellie, *Philosophy*, p. 251.

⁴¹ Charles Alston (1685-1760) was appointed King's Botanist in 1716; he succeeded George Preston as Professor of Botany at the University of Edinburgh in 1738. When Linnaeus introduced his Sexual System of classification, Alston argued against it in a paper entitled 'A Dissertation on the Sexes of Plants' which was read before the Edinburgh Medical Society and published in 1754.

⁴² Siegesbeck on Linnaeus as cited in W. T. Stearn, 'Preface', Carl Linnaeus, *Species Plantarum* (Uppsala: 1753; facs. repr., 2 vols, London: Printed For Ray Society, Sold by B. Quaritch, 1957-59)

⁴³ After the anthropologist, Clifford Geertz. See David Simpson, 'Being There?: Literary Criticism, localism and local knowledge', *Critical Quarterly*, 35:3 (Autumn 1993), 3-17 (p. 3).

⁴⁴ Hugh Rose, *Elements of Botany* (London: T. Cadell & M. Hingeston, 1775), p. 151.

⁴⁵ La Mettrie, *L'Homme plante* (Potsdam: [n. pub.], 1748). There is a modern edition by F. L. Rougier (New York: The Institute of French Studies, 1936). For a discussion of La Mettrie in connection to Linnaeus, see Gunnar Broberg, 'Linnaeus's Classification of Man', in Tore Frangsmyr (ed.), *Linnaeus: The Man and His Work* (Berkeley: University of California Press, 1983), p. 174. La Mettrie's better-known *L'Homme machine*, an extremely mechanistic explanation of human behaviour, was published in the same year. La Mettrie listed Linnaeus in his *Ouvrage de Pénélope; ou Machiavel en Médecine* (Geneva: Heirs of Cramer & P. Philibert, 1748), a scathing compendium of eminent men of science.

The Natural History of the Arbor Vitae, or Tree of Life and *The Natural History of the Frutex Vulvaria, or Flowering Shrub* were both published in 1732, the latter by an evocatively named Philogynes Clitorides. Both pamphlets are botanical skits and are often attributed to Thomas Stretser. The tree of life and the flowering shrub represent male and female genitalia (the *vulvaria* is defined as the female *Arbor Vitae*). There are a range of puns, double entendre, sexual allusions and innuendos at work in these texts.

⁴⁶ Botanical allegory has been largely overlooked in studies on eighteenth-century erotica. Peter Wagner makes this point and comments briefly on botanical-biological allegory in his chapter on extended metaphor in *Eros Revived: Erotica of the Enlightenment in England and America* (London: Paladin Books, 1990), pp. 192-4. Much

has been written on the geographical or topographical allegory in eighteenth-century erotica, notably by David Foxon, *Libertine Literature in England 1660-1745* (London: Book Collector: 1955); Peter Fryer, *Mrs Grundy: Studies in English Prudery* (London: Dennis Dobson, 1963) and Roger Thompson, *Unfit For Modest Ears* (London: Macmillan, 1979). More recently, Paul-Gabriel Boucé has analysed sexual puns in a selection of scientific/philosophic satires in his essay 'Chthonic and Pelagic Metaphorization in Eighteenth-Century English Erotica', in Robert Purks MacCubbin (ed.), *'Tis Nature's Fault: Unauthorised Sexuality During the Enlightenment* (New York: Press Syndicate of the University of Cambridge, 1987), pp. 202-17. A number of examples of British erotica from this period have been reprinted in Alexander Pettit and Patrick Spedding (eds), *Eighteenth-Century British Erotica*, 5 vols (London: Pickering and Chatto, 2001).

⁴⁷ Vincent Miller, *The Man Plant: Or, Scheme for Increasing and Improving the British Breed* (London: M. Cooper, 1752), p. 19.

⁴⁸ *Ibid.*, p. 9.

⁴⁹ *Ibid.*, p. 25.

⁵⁰ *Ibid.*, p. 29.

⁵¹ Rose, *Elements*, p. 151.

⁵² Charles Alston, 'A Dissertation on the Sexes of Plants', in *Essays and Observations*, 5 vols, 2nd edn (Edinburgh: Printed for J. Balfour, 1771), I, pp. 308-09.

⁵³ For women in scientific societies, see Colin A. Russell, *Science and Social Change 1700-1900* (London: Macmillan, 1983), p. 195.