

## *Prologue* *Milton's Trees*

After the pair eat of the Tree of Knowledge, Milton's Adam, mourning that their newly discovered nakedness leaves them vulnerable to reproach, admonishes Eve and counsels that they should cover their private parts. Adam notes the pair should

devise  
What best may for the present serve to hide  
The parts of each from other, that seem most  
To shame obnoxious and unseemliest seen,  
Some tree whose broad smooth leaves, together sewed  
And girded on our loins, may cover round  
Those middle parts that this newcomer, shame,  
There sit not and reproach us as unclean. (9.1091–1098)<sup>1</sup>

The two cast about their woodland surroundings and settle on a fig tree, “not,” Milton's narrator cautions, “that kind for fruit renowned” (9.1101) but another, one with branches that spread both so wide and so long that they bend down again towards the earth and root there, creating a forest of a single tree. These “bended twigs” (9.1105) create a “pillared shade / High overarched, and echoing walks between” (9.1106–1107), a living architecture like that which gives ease to the herdsman sheltering himself from the sun's oppressive heat and who “tends his pasturing herds / At loopholes cut through thickest shade” (9.1109–1110). This living copse thus offers the very kind of “glade / Obscured” (9.1085–1086) that Adam originally sought in order to hide himself from the dazzling, heavenly shapes of God and angels before he settled on the more solvable problem of the couple's nakedness.<sup>2</sup> Thus, instead of permanently secluding themselves within the fig tree's dark bower,

<sup>1</sup> Quotations from the poem are from John Milton, *Paradise Lost*, ed. David Scott Kastan (Indianapolis, IN: Hackett Publishing, 2005).

<sup>2</sup> On the means by which Eden's vegetation can both illuminate and obscure, see Joanna Picciotto, *Labors of Innocence in Early Modern England* (Cambridge, MA: Harvard University Press, 2010).

Those leaves  
 They gathered, broad as Amazonian targe,  
 And with what skill they had, together sewed  
 To gird their waist, vain covering if to hide  
 Their guilt and dreaded shame. (9.1110–1114)

Now recognized as a banyan tree, or *Ficus benghalensis*, commentators and literary critics have long noted that Milton's fig tree finds its source in the "arched Indian Fig tree" of John Gerard's *Herball or General Historie of Plantes*, which was first published in 1597 and republished twice in the 1630s.<sup>3</sup> In his description, Gerard comments on the way that the tree's branches offer

the Indians . . . coverture against the extreme heate of the sunne, wherewith they are greuously vexed: some likewise vse them for pleasure, cutting downe by a direct line a long walk, or as it were a vault, through the thickest part, from which also they cut certaine loope holes or windows in some places . . . that they may see their cattle that feedeth thereby.<sup>4</sup>

Critics have also located Milton's inspiration in the twelfth book of Pliny's *Naturalis historia* (*Natural History*), where Pliny describes trees;<sup>5</sup> of the Indian fig, Pliny notes that "the broad leaves of the tree have just the shape of an Amazonian buckler."<sup>6</sup> Other critics have searched elsewhere for the source of what Marissa Nicosia calls Milton's "sartorially useful Edenic tree" and found evidence of Milton's borrowings from *Purchas His Pigrimes* and Walter Raleigh's *History of the World*.<sup>7</sup>

Identifying both the tree of forbidden fruit and the tree with which Adam and Eve cover themselves has been seen as crucial for correctly deciphering Milton's allegorical and exegetical goals in *Paradise Lost*.<sup>8</sup> Yet, though the leaves of Milton's fig tree serve their

<sup>3</sup> John Gerard, *The Herball or General Historie of Plantes* (London: Edmund Bollifant for Bonham Norton and John Norton, 1597) (STC 11750). Gerard does not use the term "banyan"; besides the English name of "arched Fig tree," his alternative names for the tree include *Ficus Indica* and *Arbor Goa*.

<sup>4</sup> Gerard, *Herball* (1597), sigs. 4Q8r–4Q8v.

<sup>5</sup> Marissa Nicosia, "Milton's Banana: *Paradise Lost* and Colonial Botany," *Milton Studies* 58 (2017): 49–66.

<sup>6</sup> Pliny the Elder, *The Natural History*, trans. John Bostock and H. T. Riley (London: Taylor and Francis, 1855).

<sup>7</sup> Nicosia, "Milton's Banana," 49. S. Viswanathan, "Milton and Purchas' Linschoten: An Additional Source for Milton's Indian Figtree" *Milton Newsletter* 2 (1968): 43–45. See also Walter Raleigh, *The History of the World* (London: William Stansby for Walter Burre, 1614), 1.4.3.

<sup>8</sup> For a defense of Milton's appreciation of experiential approaches, see Karen L. Edwards, *Milton and the Natural World: Science and Poetry in Paradise Lost* (Cambridge: Cambridge University Press, 1999).

narrative purpose, they have proved a perennial problem for Milton's critics. Pliny's characterization of the banyan's leaves as broad and wide as a buckler, appropriate for the girding of Adam and Eve's loins, is botanically incorrect – the tree's leaves are much smaller, about the size of a hand. Because Gerard had not actually seen the tree himself (he notes in his account of its temperature and virtues that he has nothing “of our owne knowledge” to speak of), he is forced to repeat much of the substance of Pliny's account; however, Gerard differs from Pliny in his characterization of its leaves, suggesting that he is also following a different botanical resource. Gerard notes that the tree's leaves are “hard and wrinkled, in shape like those of the Quince tree, greene aboue, and of a whitish horie colour vnderneath, whereupon the Elephants delight to feed.”<sup>9</sup> In making a simile of the leaves of the well-known English quince, Gerard assumes that his readers have a familiarity with English botany upon which he can base his botanical description of the novel Indian fig, hinting at the way that botanical knowledge in the period was more widespread than the popularity of large-format herbals may otherwise suggest. The descriptive science of natural classification was accretive and comparative, proceeding under the assumption that the reader of a botanical text had an existing knowledge or nomenclature upon which the herbal author could draw. The differing characteristics of Gerard's and Pliny's fig trees thus pose a thorny interpretive problem: while Pliny's leaves are broad as cloth, their size makes sewing somewhat redundant, while Gerard's “hard and wrinkled” leaves better conjure the effort involved in Adam and Eve's “first act of sweated labor . . . Their loincloths are fig leaves transformed by their own manu-facture.”<sup>10</sup> Thus, in querying the precise nature and emblematic significance of the leaves of the “sartorially useful fig tree,” critics also raise questions about the accuracy of Milton's own botanical understanding as well as the botanical knowledge that Milton assumed was held by his readers.

Some commentators upon *Paradise Lost* have resolved these questions by asserting that Pliny, and Milton after him, simply conflated the banyan with another tree with broad leaves, namely the banana. John Bradshaw, in his nineteenth-century edition of *The Poetical Works of John Milton*, cites

<sup>9</sup> Gerard, *Herball* (1597), sig. 4Q8r.

<sup>10</sup> Ann Rosalind Jones and Peter Stallybrass, *Renaissance Clothing and the Materials of Memory* (Cambridge: Cambridge University Press, 2000), 269.

a passage where bananas are called "Indian figs" in Charles Dellon's *Voyage to the East Indies*, which was translated into English in 1698.<sup>11</sup> Bradshaw writes, "if, then, as appears, both the *banyan* and the *banana*, or plantain, were known as the Indian 'figs', we have the explanation of the banyan being described as 'renowned for fruit' and with 'leaves broad as Amazonian targe,' so true of the banana or plantain."<sup>12</sup> Supporting this account, Marissa Nicosia finds Horace Walpole transcribing into a printed copy of Milton's poem a portion of Griffith Hughes's *Natural History of Barbados* (1750) where Hughes too surmises that Milton's fig tree was actually a banana tree. Hughes finds his evidence through a close reading of Milton alongside Pliny, and Nicosia notes that Pliny's account of the banana tree immediately follows that of the banyan.<sup>13</sup>

For Nicosia, Walpole's endorsement of Hughes's banana theory indicates the uses to which Milton's poem, much like seventeenth-century books of natural history more generally, could be put in service of a colonialist enterprise "to authorize imperial knowledge and occupation."<sup>14</sup> I am just as interested, however, in the remarkable and recursive accretion of textual material that Nicosia describes: Walpole transcribing Hughes's account of Pliny's influence on Milton's choice of tree into Walpole's own printed copy of *Paradise Lost*, just as Hughes himself incorporated Milton's *Paradise Lost* into his *Natural History of Barbados* as a means of justifying his extensive attention to the plant.<sup>15</sup> I am also struck by the way that Nicosia herself uses the structure of Pliny's *Natural History* to lend additional support to Hughes's claim: knowing that Milton read (or had read to him) Pliny's account of the fig tree, Nicosia supposes that Milton kept reading to discover in the following chapter a tree whose leaf morphology better suited his sartorial ends. While it remains unclear whether Milton's conflation of the banyan and the banana within *Paradise Lost*'s fig tree was accidental or deliberate, scholarly attempts to elucidate and classify Milton's botanical intentions reveal the way that books of natural history were inherently intertextual, looping

<sup>11</sup> John Bradshaw, ed., *The Poetical Works of John Milton* (London: William Allen, 1878), 614.

<sup>12</sup> Bradshaw, *Poetical Works*, 614. A similar claim is made in the notes of A. W. Verity's Cambridge University Press edition of *Paradise Lost* (1929).

<sup>13</sup> Nicosia, "Milton's Banana," 53.

<sup>14</sup> Nicosia, "Milton's Banana," 54. For an explanation of the ways that books of natural history shaped British views of colonial possessions, see Jefferson Dillman, *Colonizing Paradise: Landscape and Empire in the British West Indies* (Tuscaloosa: University of Alabama Press, 2015).

<sup>15</sup> Nicosia suggests that Walpole may have been writing in a copy of *Paradise Lost* that was owned by someone else ("Milton's Banana," 63n17). The volume containing Walpole's annotations is held in the New York Public Library.

back upon each other to clarify, substantiate, and authorize particular knowledge claims about the natural world. The marginalia left behind in individual copies of all kinds of books, including poetry, reveal the ways that readers of texts of natural history engaged with these works selectively, approaching them with diverse strategies for gathering information and with various degrees of credulity. Alongside the authorial claims in these texts to direct observation or firsthand experience, the individual copies of books like Gerard's *Herball* or Milton's *Paradise Lost* were the property of individual users who, like Walpole, left evidence of their reading behind in idiosyncratic and sometimes reiterating ways.

*Early Modern Herbals and the Book Trade* reveals how printed books of botany functioned as exchangeable material artifacts within an emerging trade of ideas about the natural world. As artifacts, herbals enabled would-be authors to gather the descriptive botanical information of others and to refine it in accordance with their own experience. Once acquired by readers, printed books of botany thus provided opportunities for additional botanical writing by those who could surmise, conflate, correct, and comment upon the texts – and literally, in the form of marginalia, often upon the material books themselves – that preceded them. Booksellers concerned themselves with such issues because it was clear that Renaissance readers responded to the affordances that printed books offered almost as much as they did to the texts that those books contained. Organizational materials such as glossarial notes, indexes, and tables were selling points, and early modern readers deprived of such resources in books of natural history would regularly provide their own. The following pages reveal the ways that booksellers and printers responsible for the manufacture of books variously conceived of the material form of their herbals as they assessed the dynamics of English and continental print marketplaces throughout the sixteenth and early seventeenth centuries. Chief among booksellers' concerns was the salability of a particular title; and as they considered what to publish, booksellers were invested in details such as an author's current fame, professional status, or authority to speak over a particular knowledge domain. Booksellers also were concerned about practical issues like the size or format of a volume, its need for illustrations, and any similar books already in the marketplace with which their proposed new title would compete.

An attention to herbals' material forms enables us to recognize that, in composing the fig tree of *Paradise Lost*, Milton may have been as influenced by the organization of John Gerard's chapters as he was by Pliny's. Immediately below the woodcut of the arched Indian fig (banyan) tree in

Gerard's *Herball* of 1597 is the chapter heading "Of Adams Apple tree," a "herbie" tree "the bignesse of a mans thigh."<sup>16</sup> Gerard's descriptions of the tree's leaves and fruit make clear to modern readers that he is describing a banana tree. It has "diuers great leaues, of the length of three cubits and a halfe, sometimes more, according to the soile where it growth, and of a cubite and more broad, of bignes sufficient to wrape a childe in of two yeeres old."<sup>17</sup> The word "bananas" eventually emerges in Gerard's account as a title that is common "in that part of Africa which we call Ginny [Guinea]."<sup>18</sup> Nonetheless, in English the tree is known as "Adams Apple tree" because "[t]he Lewes also suppose it to be the tree of which Adam did taste; which others thinke to be a ridiculous fable," and so *this* name, despite Gerard's reservation of judgment, becomes the heading of his 130th chapter (see Figure 0.1).<sup>19</sup>

Gerard's description of the tree's leaves as being of sufficient size to use as a swaddling cloth lends credence to Hughes's theory that Milton's "Indian fig" was a banana, yet Gerard's Adam's Apple tree may have stuck in Milton's mind for more emblematic reasons. In his description of the Adam's Apple fruit, Gerard notes that it is "in forme like a small Cucumber, and of the same bignes . . . in taste not greatly perceived at the first, but presently after it pleaseth, and intiseth a man to eate liberally thereof, by a secret intising sweetnes which it yeeldeth."<sup>20</sup> Gerard's repetition of the banana's subtle but "enticing" flavor is echoed in Milton's poem, suggesting Milton's familiarity with this chapter of Gerard when Eve offers Adam "that fair enticing fruit / With liberal hand" (9.996–997). Further testifying to Milton's close botanical reading as he characterized the forbidden fruit's allure, his Eve continues to liberally partake of the fruit "while Adam took no thought, / Eating his fill, nor Eve to iterate / Her former trespass feared" (9.1004–1006). The pair's shared transgression soon inflames their carnal desire, and after casting his "lascivious eyes" (9.1014) upon Eve, Adam seduces her via *comprobatio*. Despite the initial subtlety of the flavor of Adam's Apple, which, as Gerard notes, is "not greatly perceived at the first," such flavors in *Paradise Lost* likewise necessitate a refined appetite. Milton's seductive Adam carefully credits Eve's "judicious" palate, which is responsible for bringing them both to "true relish, tasting" (9.1024). The pair soon disport in "amorous play" as a result of the "force of that fallacious fruit" (9.1046), echoing Gerard's description of the virtues of a fruit that "yeeldeth but little nourishment"

<sup>16</sup> Gerard, *Herball* (1597), sig. 4Q8r.

<sup>17</sup> Gerard, *Herball* (1597), sig. 4Q8v.

<sup>18</sup> Gerard, *Herball* (1597), sig. 4R1r.

<sup>19</sup> Gerard, *Herball* (1597), sig. 4R1r.

<sup>20</sup> Gerard, *Herball* (1597), sig. 4Q8v.



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through the thickest part, from which also they cut certaine loope holes or windowes in some places, to the end to receive thereby the fresh coole aire that entereth therat; as also for light, that they may see their cattle that feedeth thereby, to avoid any danger that might happen vnto them, either by the enimic or wilde beasts: from which vault or close walke, doth rebound such an admirable eccho, or answering voice (if one of them speake vnto another with a lowde voice) that it doth answer, and that so plainly, that it cannot be knowne from the voice it selfe: the first or mother of this wood or desert of trees, is hard to be knowne from the children, but by the greatnes of the bo- and wrinkled, in shapelike those of the Quince tree, greene aboue, and of a whitish horie colour vnderneath, whereupon the Elephants delight to feed: among which leaues come fourth the fruit, of the bignes of a mans thombe, in shape like a small Fig, but of a sanguine or bloudie colour, and of a sweete taste, but not so pleasant as the Figs of Spaine: notwithstanding they are good to be eaten, and withall very holefome.

*Arbor Goa, sive Indica.*  
The arched Indian Fig tree.



\* *The place.*

This wonderous tree groweth in diuers places of the east Indies, especially neere vnto Goa, and also in Malaca, it is a stranger in the most parts of the world.

\* *The time.*

This tree keepeth his leaues greene winter and sommer.

\* *The names.*

This tree is called of those that haue travelled *Ficus Indica*, the Indian Fig, and *Arbor Goa*, of the place where it groweth in greatest plentie: we may call it in English the arched Fig tree.

\* *The temperature and vertues.*

We haue nothing to write of the temperature or vertues of this tree, of our owne knowledge: neither haue we receiued from others, more then that the fruit heereof is generally eaten, and that without any hurt at all, but rather good and also nourishing.

*Of Adams Apple tree. Chap. 130.*

\* *The description.*

**W**Hether this plant may be reckoned for a tree properly, or for an herbie tree, it is disputable, considering the soft and herbie substance whereof it is made, (that is to saie) when it hath attained to the height of sixe or seauen cubits, and of the bignesse of a mans thigh: notwithstanding it may be cut downe at one stroke with a sword; or two or three cuts with

Figure 0.1 John Gerard, *The Herball or General Historie of Plants* (1597), sig. 4Q8r. Image reproduced courtesy of the Ohio State University Libraries' Rare Books & Manuscripts Library (QK 41 .G34).

yet "stirreth to generation."<sup>21</sup> Milton's reading of Adam's Apple tree in Gerard generates both the fruit that leads to man's fall and the leaves that cover his shame. The two woodcuts that accompany the chapter (Figure 0.2) further serve to highlight these two characteristics of the plant.

Milton may have found the evocative characteristics of Gerard's description of the Adam's Apple fruit especially appropriate for a poem built around the theme of *felix culpa*: when cut open the fruit supposedly reveals the imprint of a crucified man.<sup>22</sup> As with his description of the virtues of the arched Indian fig, which he admits is limited by his lack of personal experience of the tree, Gerard is again forced to rely on the written accounts of others in his chapter on the banana: "if it be cut according to the length, saith mine author, oblique, transuers, or any other way whatsoever, may be seene the shape and forme of a crosse, with a man fastened thereto."<sup>23</sup> The identity of this "author" remains obscure, but Gerard's curiosity about the emblematic fruit eventually enabled him to confirm part of his account through firsthand investigation: "my selfe haue seene the fruit, and cut it in peeces, which was brought me from Alepo in pickle; the crosse I might perceiue, as the forme of a Spread Egle in the roote of Ferne, but the man I leaue to be sought for by those that have better eies and iudgement then my selfe."<sup>24</sup> If it is a banana, Gerard's Adam's Apple, which is forbidden and later eaten by Milton's Adam and Eve, Gerard's uncertainty about the fruit's religious connotations leads critics to an ambivalent end: Gerard neither confirms nor denies the presence of a man on a cross.<sup>25</sup>

The organization and *mise-en-page* of Gerard's *Herball* of 1597 seem to argue in favor of Griffith Hughes's (and Horace Walpole's) insistence on Milton's arboreal conflation of the banyan and the banana trees, one that is again supported by assuming Milton's sequential reading practice. However, it is not entirely clear to scholars precisely *which* edition of Gerard's *Herball* it was that Milton was reading, and a later edition resolves the banana's exegetical question. The second edition of the book, which was reprinted thirty-six years later in 1633, updated many of Gerard's entries to offer supplemental information on the basis of its new editor's botanical scholarship and his own personal experience.<sup>26</sup> The editor, the apothecary

<sup>21</sup> Gerard, *Herball* (1597), sig. 4R1r.

<sup>22</sup> Arthur O. Lovejoy, "Milton and the Paradox of the Fortunate Fall," *ELH* 4 (1937): 161–179.

<sup>23</sup> Gerard, *Herball* (1597), sig. 4Q8v. <sup>24</sup> Gerard, *Herball* (1597), sig. 4Q8v.

<sup>25</sup> On Milton's strategies of botanical "naming and not naming," see Edwards, *Milton and the Natural World*, 143–153.

<sup>26</sup> John Gerard, *The Herball or Generall Historie of Plantes*, ed. Thomas Johnson (London: Adam Islip for Joyce Norton and Richard Whitaker, 1633) (*STC* 11751).



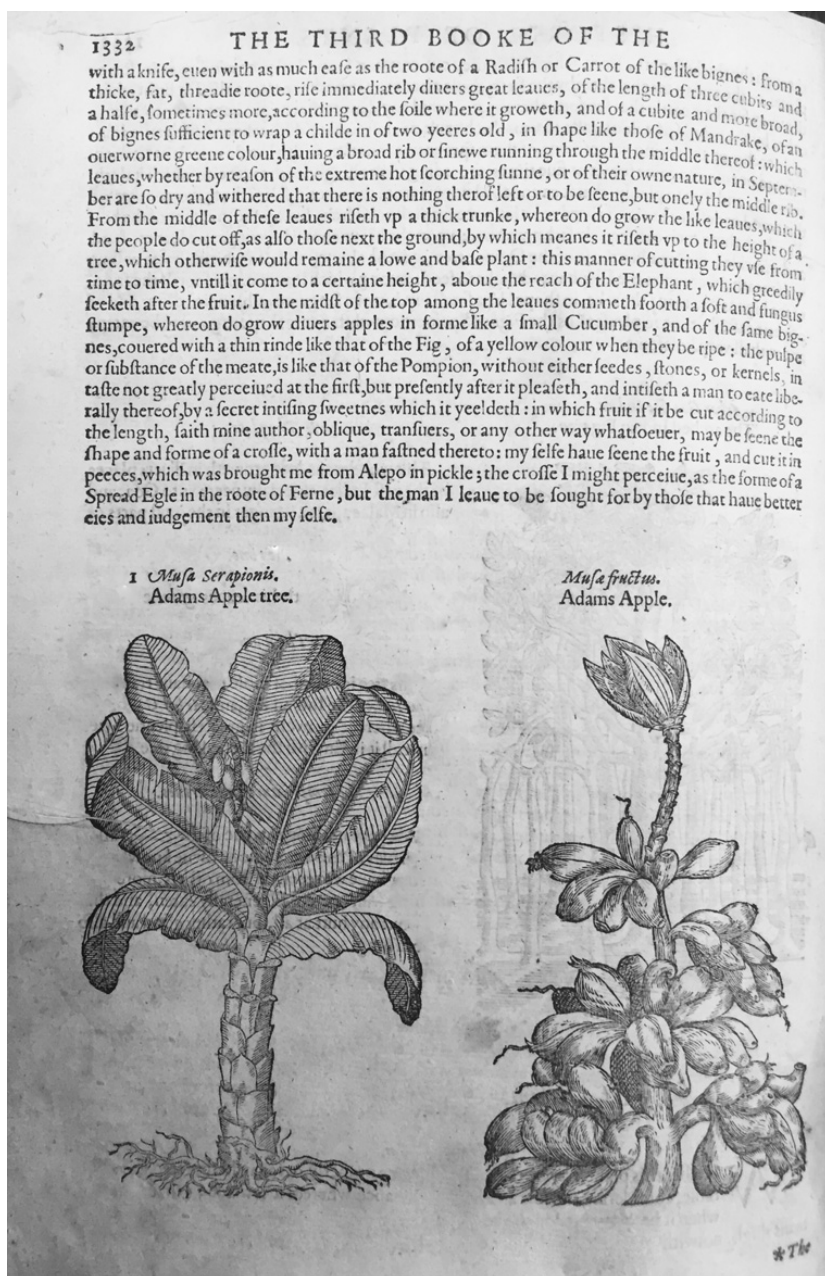


Figure 0.2 John Gerard, *The Herball or General Historie of Plants* (1597), sig. 4Q8v.  
Image reproduced courtesy of the Ohio State University Libraries' Rare Books &  
Manuscripts Library (QK 41 .G34).

Thomas Johnson, was supplied by the publishers with different woodcut illustrations, but he reproduced most of Gerard's verbal text and augmented it with his own writing. What in 1597 was known as "Adam's Apple tree" becomes, by 1633, "Adams Apple tree, or the West-Indian Plantaine."

Johnson's additions to the *Herball* are marked by double crosses, a typographical feature designed to enable readers of the 1633 edition to identify shifts in the identity of the authorial voice speaking of its own firsthand experience with the plants being described. Because he is functioning as the editor of the text of an esteemed, and now deceased, English authority, when Johnson refers to "our author" in one of his marked sections, he inevitably means Gerard, and he uses this designation to refute or to confirm Gerard's previous findings. Johnson quotes Gerard's chapter of the Adam's Apple tree verbatim, including Gerard's account of those who "suppose it to be the tree of which Adam did taste," but in his supplement Johnson notes that "some (as our Author hath said) haue iudged it the forbidden fruit; other-some, the Grapes brought to *Moses* out of the Holyland."<sup>27</sup> In his glib update, Johnson minimizes any religious significance that readers might associate with the name of the tree, preferring instead to emphasize the name that the plant is regularly given in seventeenth-century travel literature: "This Plant is found in many places of Asia, Africke, and America, especially in the hot regions: you may find frequent mention of it amongst the sea voyages to the East and West Indies, by the name of Plantaines, or *Platanus*, *Bannanas*, *Bonnanas*, *Bouanas*, *Dananas*, *Poco*, &c."<sup>28</sup>

Because of others' sea voyages to the West Indies, Johnson was able to offer his readers a better account of the status of the crucified little man inside the banana. Gerard's fruit was pickled, brought to him via Aleppo, but Johnson's connections enabled him to offer his readers a fresher description:

April 10.1633. my much honored friend Dr. Argent (now President of the Colledge of Physitions of London) gaue me a plant he receiued from the Bermuda's: . . . The fruit which I receiued was not ripe, but greene, each of them was about the bignesse of a large Beane; the length of them some fiue inches, and the bredth some inch and halfe: they all hang their heads downewards, haue rough or vneuen ends, and are fiue cornered; and if you turne the vpper side downward, they somewhat resemble a boat, as you

<sup>27</sup> Gerard, *Herball* (1633), sig. 6L6v.

<sup>28</sup> Gerard, *Herball* (1633), sig. 6L6v. For an examination of the way that publisher Thomas Hackett's promotion of travel literature "helped prepare the way for what would be a burgeoning idiom of colonial imagery" (97), see Kirk Melnikoff, *Elizabethan Publishing and the Makings of Literary Culture* (Toronto: University of Toronto Press, 2018).

may see by one of them exprest by it selfe: the huske is as thicke as a Beanes, and will easily shell off it: the pulpe is white and soft: the stalke whereby it is fastned to the knot is verie short, and almost as thicke as ones little finger. The stalke with the fruit thereon I hanged vp in my shop, were it became ripe about the beginning of May, and lasted vntil Iune: the pulp or meat was very soft and tender, and it did eat somewhat like a Muske-Melon.<sup>29</sup>

Johnson's detailed observations and comprehensive description of the bunch of Bermudan bananas that he was given is in keeping with what Brian W. Ogilvie has identified as "a final stage of a long condensation of observation, memory, and experience."<sup>30</sup> As Ogilvie remarks, the ambivalent nature of Renaissance description needed to distinguish between species while not misleading readers with the particular features of individual specimens: "[Renaissance naturalists] walked a tightrope between descriptions that were too vague, and allowed for the confusion of species, and those that were too precise, and took accidental differences to be essential."<sup>31</sup> Though Johnson's ripening bunch is more complete than Gerard's mere pickle, Johnson's singular experience means that he is unable to distinguish fully between the accidental and the essential features of his more impressive sample. To remedy this problem, Johnson adds an invaluable resource: a woodcut illustration commissioned to better share the particular characteristics of his specimen (Figure 0.3).

The earlier part of Johnson's 1633 chapter offers readers copies of the same two woodcuts of banana tree and bunch that were featured in Gerard's 1597 edition, but Johnson's annotated version supplements the verbal text with a four part "*Musa fructus exaction Icon / An exacter figure of the Plantaine fruit,*" which Johnson sketched himself and then had made into a woodcut. He explains that his new image shows "1. The figure 2. Sheweth the shape of one particular fruit, with the lower side vpwards. 3. The same cut through the middle long wayes. 4. The same cut side wayes."<sup>32</sup>

While readers of the 1597 edition of Gerard's *Herball* are invited to accept Gerard's verbal account of the crosses visible in both "oblique" and "transuers" cuts of the banana fruit, readers of the 1633 edition are able to see at a glance that Gerard's "cross" is of minimum religious significance. Visible only in one of Johnson's two cross sections, the dark spokes in the banana's center split the fruit into thirds, leaving readers with little doubt that there is no image of a crucified man to be found.

<sup>29</sup> Gerard, *Herball* (1633), sig. 6L6r.

<sup>30</sup> Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006), 181.

<sup>31</sup> Ogilvie, *Science of Describing*, 181. <sup>32</sup> Gerard, *Herball* (1633), sig. 6L6v.

*Muse fructus exactior Icon.*  
An exacter figure of the Plantaine fruit.

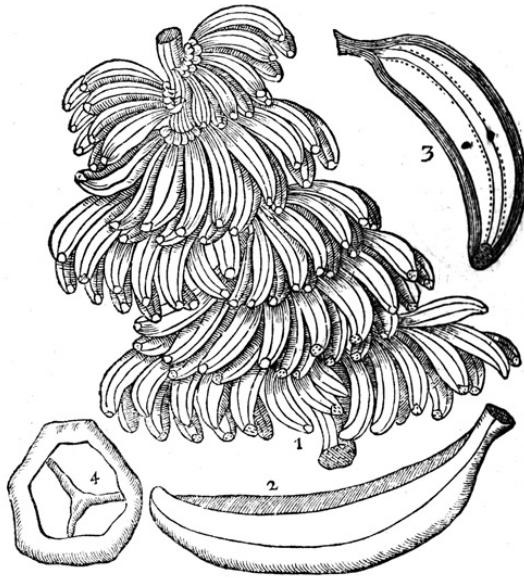


Figure 0.3 John Gerard, *The Herball or General Historie of Plants* (1633), detail of sig. 6L6r. Image reproduced courtesy of the Ohio State University Libraries' Rare Books & Manuscripts Library (QK 4t .G35).

Johnson's ability to speak authoritatively of his experiences with the Adam's Apple fruit mitigates Gerard's ambivalence about the banana's religious symbolism, but Johnson's authority was made possible only through the affordances, and the contingencies, of print. If Milton's Edenic botanizing was inspired by the close conjunction of the Arched Indian fig and Adam's Apple tree in Gerard's original text, Johnson's later efforts to elucidate the plant seem to have provided Milton with the cover he needed to engage in a "representational strategy that seeks to wed experimentalist restraint with imaginative freedom."<sup>33</sup> A botanical specimen identified in 1597 as "Adam's Apple tree" whose fruit supplied New Testament imagery may initially have been too heavy-handed to serve Milton's more subtle hermeneutic, but Johnson's carefully recorded woodcut illustration of 1633 later undermined Gerard's account, thereby making space for Adam's Apple

<sup>33</sup> Edwards, *Milton and the Natural World*, 144.

to be evoked in Milton's Eden. Milton's refusal to identify explicitly his forbidden fruit was enabled by the editorial shift between one edition of a herbal and the next, while Johnson's interpretive and empirical acts as a natural historian and as an editor allowed Milton to take advantage of botanical ambiguity in his epic poem.

Milton's complex botanical strategy in *Paradise Lost* was facilitated not just by Johnson's additions to Gerard's account of the Adam's Apple tree but by the efforts of the publishers Joyce Norton and Richard Whitaker, who owned the rights to print Gerard's *Herball* and hired Johnson to edit Gerard's work in anticipation of bringing out a new edition after more than three decades. Norton and Whitaker took a calculated risk that readers in 1633 would want a second edition of an old yet authoritative herbal, updated to reflect new experiential theories of localized plant-gathering. It was a risk that paid off: the volume quickly sold out, and the publishers soon had cause to reprint a third edition of the massive folio *Herball* only three years later in 1636. Milton's opportunity to be inspired by the first printed English illustration of a banana therefore stemmed less from an apothecary's desire to describe a botanical specimen more precisely than had previously appeared in print than from a Caroline publisher's belief that there continued to be a lucrative market for an expensive Elizabethan tome about plants, updated from a working apothecary's firsthand experience.

By attending to the varied and material text of herbals, *Early Modern Herbals and the Book Trade* shifts critical attention away from authors as the primary generative force of natural history and towards the craftsmen and women whose capital enabled herbal texts to circulate within the marketplace of printed books. My focus upon the economic motivations of Norton and Whitaker as they commissioned Thomas Johnson to update Gerard's *Herball* illustrates how publishers, rather than authors, were the figures whose finances were ultimately at stake if a herbal failed to find its readers. The updated second and third editions of Gerard's *Herball* still elevated Gerard's status as an author despite Johnson's expert corrections because, for early modern English booksellers, the text's accuracy was seen as less important than the commercial impact of a popular figure's existing authority over a knowledge domain. In other words, for the London stationers who published works of natural history, the appearance of an author's name on a title page was less about originality and credit than it was a deliberate choice designed to generate a particular commercial effect. Attending to the choices of Norton and Whitaker enables us to understand



that, in 1633, John Gerard's name was a "vendible commodity," while Thomas Johnson's was not.<sup>34</sup>

In asserting the primacy of book publishers, *Early Modern Herbals and the Book Trade* bridges two notoriously interdisciplinary fields, book history and the history of science, and uses the material form of printed English herbals to place the two subjects in sustained dialogue. Herbals – texts that list, order, and describe plants alongside their benefits – are an ancient genre that even predates the development of the codex, or book form. Long before the Scientific Revolution and the founding of the Royal Society, herbals, in scroll and codex, manuscript and print, illustrated and unillustrated, provided their readers with descriptions of individual plants as well as their medicinal value and applied usage. For book historians eager to chart developments in textual transmission over the *longue durée*, the genre of the herbal can provide an ideal case study. Yet historians of science more familiar with the genre can also benefit from a greater attention to the way herbals and other books of natural history circulated as material artifacts. As Agnes Arber has noted, herbals' dual purpose, both explanatory and utilitarian, has caused these texts to be studied in various and sometimes conflicting ways: as they were produced by classical authorities such as Theophrastus and Dioscorides, herbals were a product of natural history, but they were also foundational for the fields of agriculture and medicine.<sup>35</sup> These fields' emphasis on the varied purposes or categorization of knowledge that individual herbals could serve benefits from an additional examination of the perennially popular genre as a whole as well as the ways that methods of textual transmission influenced how early modern botanical authors approached their methods of study.<sup>36</sup> After the advent of printing in Western Europe led to an increase in the number of books produced for retail speculation, publishers soon realized that the printed herbal had a broad appeal to physicians, natural historians,

<sup>34</sup> I borrow the phrase "vendible commodity" from Adam G. Hooks, who uses the term to explain Shakespeare's dependence on the agents of the London book trade and argues that "[t]o think about Shakespeare and the book trade thus requires that we attend to how the stationers of early modern London employed his texts to further their own economic ends. To understand the relationship between these two corporate entities, we must focus on how the interests of the individuals and institutions of the book trade shaped Shakespeare, rather than on how Shakespeare may have used the technology of the trade to fulfil the literary ambition sometimes attributed to him." See Adam G. Hooks, "Book Trade," in Arthur F. Kinney (ed.), *The Oxford Handbook of Shakespeare* (Oxford: Oxford University Press, 2012), 126–142, esp. 127.

<sup>35</sup> Agnes Arber, *Herbals, Their Origin and Evolution: A Chapter in the History of Botany 1470–1670*, 3rd ed. (Cambridge: Cambridge University Press, 1986).

<sup>36</sup> Sachiko Kusukawa, *Picturing the Book of Nature: Image, Text, and Argument in Sixteenth-Century Human Anatomy and Medical Botany* (Chicago: University of Chicago Press, 2012).



gardeners, farmers, and any literate folks who regularly engaged with plants. Stationers ably responded to these customer demands.

As the genre developed in print throughout the sixteenth and seventeenth centuries, herbals came to offer ever more detailed information about plant morphology and habitat and about raising, harvesting, or treating plants to obtain specific effects. Dioscorides' *De materia medica* (*On Medicinal Material*), authored in the first century CE, catalogued about 500 plants; by 1623, the Swiss botanist Caspar Bauhin had described more than 6,000.<sup>37</sup> Perhaps more than any other Renaissance discipline, botanical science quickly encountered the three circumstances that led to what Ann M. Blair has called "information overload": "the discovery of new worlds, the recovery of ancient texts, and the proliferation of printed books."<sup>38</sup> As opportunities for gathering and synthesizing information about plants increased, the technologies of textual transmission improved to better accommodate this swelling dataset; herbals' material incarnations as books consequently make them particularly suitable for the study of how textual forms both create and affect meaning. Whether of plant identification or of medical exigency, herbals by their very nature assume that their audience of readers comes to them with specific real-world problems to solve. As books explicitly designed to supplement readers' material experience, herbals are a nexus where the fields of the history of science and book history intersect; they are texts deeply attentive to readers' needs and desires as users search for specific information about the natural world.

Herbals are thus books predicated on what William H. Sherman, citing Karl Marx, describes as having "use value," a capacity for satisfying human need.<sup>39</sup> As Sherman (and Marx) also notes, however, objects like books also have an "exchange value" whereby things become negotiable commodities in a larger economic system, a system that (by design) often elides human labor. The labor of bookmaking and bookselling is further elided when scholars suggest that authors somehow "published" or "printed" their own books, disregarding the historical agents who enabled an author's name to appear in print and made their works available for sale. By expressly attending to stationers, those figures who produced, distributed, and sold printed books in early modern England, this project links herbals' use value as texts with their exchange value as commodities to show how these expert

<sup>37</sup> Ogilvie, *Science of Describing*, 139.

<sup>38</sup> Ann M. Blair, *Too Much to Know: Managing Scholarly Information before the Modern Age* (New Haven, CT: Yale University Press, 2010), 11.

<sup>39</sup> William H. Sherman, *Used Books: Marking Readers in Renaissance England* (Philadelphia: University of Pennsylvania Press, 2008), 177.

and professional readers helped to create the conditions in which herbal authorship could itself become a valuable and vendible commodity. Stationers were not simply reproducers of texts but those whose expertise depended upon knowing what sorts of texts the book market demanded – or could be taught to demand. It was publishers who looked to medieval manuscripts and contemporary continental publications for books that would appeal to an English reading public, and it was publishers who sought local authors to revise, translate, edit, or supplement works in order to tailor them to particular niche markets. Book producers, in other words, were the agents that made Renaissance natural history possible.

Because the decision to commission authors to produce herbals often began in the bookshop, this project stresses the importance of stationers rather than authors, and authority rather than originality. One of my goals is to change the way historians of science think about the early history of proto-scientific fields like botany. By reframing the narratives of herbals to focus not on authors but on publishers, I account more fully for how the smaller-format, anonymous herbals of the 1520s through the 1550s later enabled the production of larger works like Gerard's *Herball*. Such scholarship also benefits book and literary historians of the Renaissance who, in focusing their studies on the latter half of the sixteenth century, have largely underappreciated the role of the Tudor book trade in setting up the circumstances for the “golden age” of Elizabethan and Jacobean literature. Once they see how grander, authored volumes like herbals were financially dependent upon the “proof-of-concept” laid out by smaller, anonymous books, scholars are better positioned to understand how early modern booksellers negotiated competing claims to authority through books' title pages, paratexts, and affordances.

Whitaker and Norton's decision to commission Johnson not to write his own herbal but to add material to a preexisting and well-regarded one upends the assumption that herbalists had control over their texts in print. Throughout his edition, Johnson's commission as an editor meant that he was forced to maintain Gerard in the role of “our Author,” even as Johnson struggled to assert his own superior knowledge and experience. The stationers' choices in marketing their updated version suggest that they believed their readers would recognize Gerard's authorship instead of Johnson's, and the terms of Johnson's commission depended on his willingness to subject himself to a subordinate position. This arrangement indicates that the publishers were less interested in either author's relative scientific authority than in the careful deployment of an author's name to serve a specific commercial function. The history of English printed

herbals shows that authorship often functioned in precisely this way, with names of botanical and medical authorities appearing on title pages as advertisements and endorsements. The addition of an author's name to herbals published in the second half of the sixteenth century was a strategic choice made by booksellers as they considered what would appeal to their customers.

*Early Modern Herbals and the Book Trade* illustrates how attention to the choices made by publishers and booksellers as they navigated the material, regulatory, and economic practices of the early English book trade influenced the trade in English herbals from the early decades of printing through to the English Civil War. Those effects also have value for historians of science. The vagaries of the competitive print marketplace led to important differences between one edition of a text and another, and the commercial context in which a book appeared offers a more comprehensive explanation of the cultural impact that books of botany had during the English Renaissance.<sup>40</sup> The case of Milton's banana illustrated in this Prologue shows how early modern English readers engaged not only with the botanical texts of authors but also with the products of publishers who wanted to market (or remarket) particular books at particular historical moments. The engagement of early English readers is in evidence from the early stages of printed herbals, an interest that stationers quickly seized upon and later satisfied by bringing out more capacious and more complicated texts. The first printed English herbals were created by booksellers invested in anonymous works, and it was only after the genre proved extremely popular with early modern readers that later botanical authors sought to assert their authority over this newly lucrative knowledge domain. The construction of botanical, and indeed scientific, authority in Renaissance England, I argue, was thus inextricably tied up in the circumstances that governed print.

My exploration of the publication of herbals as vendible wares exposes the ways that members of the book trade were at the very center of Renaissance natural history. So, too, were Renaissance readers. The reception of herbals accounts for the ways that printed natural history was experienced by those who purchased these books. I consider herbals' value to publishers as well as evidence of how readers engaged with these

<sup>40</sup> Anne Secord has noted similar developments in the popularization of works of illustrated botany in the nineteenth century: "[l]ecturers and writers . . . did not in this period regard popular botany as diffused knowledge for passive consumers" (55). See Anne Secord, "Botany on a Plate: Pleasure and the Power of Pictures in Promoting Early Nineteenth-Century Scientific Knowledge," *Isis* 93 (2002): 28–57.

volumes. This form of bibliographic and materialist analysis elucidates how the field of natural history crossed class, gender, and nationalistic boundaries – Johnson's additions to Gerard's *Herball* were of interest not just to other botanists but also to many types of readers, including poets like Milton. Plants were easily accessed and ubiquitous resources even for urban dwellers, and printed herbals appealed to booksellers who were ever on the lookout for profitable new titles that might interest broad swaths of the English public. While law books and medical tracts were often intended for a specialized, expert clientele, books like herbals attracted a wide range of customers eager to supplement their localized experience. Such readers made anonymous herbals in the first half of the sixteenth century remarkably popular. This popularity led to herbals becoming, in the second half of the century, contested sites for medical professionals wanting to exert political and social influence, transforming herbals into a knowledge domain that could be both authorized and author-ized. As the following pages will show, it was stationers who made it possible for herbalists to become authors.