1
The world of the Renaissance herbal

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A herbal is a treatise on medicinal plants, traditionally intended for an audience of doctors and apothecaries; the purpose was to enable them to know which plants to use for medical purposes, and how to identify them in the field. As a genre, the herbal extends back into classical times, though there is only one title that has survived in complete form from that period: the *Materia medica* of Dioscorides, dating from the first century AD.[1] There was a mediaeval tradition, passed initially through Arab hands, which was in large part based on Dioscorides, but added to over the centuries by local herb lore and legend; the first printed herbals of the late fifteenth century fell into this tradition.[2]

What we may define as the Renaissance herbal arose in reaction against this tradition. During a period of a little over a century, between 1530 and the 1640s, the Renaissance herbal developed and reached its prime. This paper is far too short to give a very detailed account of its subject, but I will attempt to convey the most salient points about a genre that has received too little attention from scholars of Renaissance literature, however much attention it has received from botanists.[3]

HERBALS AND THE DEVELOPMENT OF BOTANY

What we may term the Renaissance herbal arose specifically from the demand that the traditions of plant lore be re-examined, and that the works of Pliny and Dioscorides be separated from the accumulated encrustation of centuries of myth and folklore.

[1] For a recent consideration of Dioscorides, see John M. Riddle, *Dioscorides on Pharmacy and Medicine* (Austin, TX: University of Texas Press, 1985).

[2] The mediaeval herbal tradition has been inadequately studied, primarily because most writers on the history of herbals have been botanists, who like to tune into the story in 1530. The best treatment so far is Minta Collins, *Medieval Herbals: the Illustrative Traditions* (London/ Toronto and Buffalo: British Library/ University of Toronto Press, 2000), but see also Wilfrid Blunt and Sandra Raphael, *The Illustrated Herbal* (London: Frances Lincoln, 1979), 10–119, and Frank J. Anderson, *An Illustrated History of the Herbals* (New York: Columbia University Press, 1977), 30–120.

[3] The standard history of herbals is Agnes Arber, *Herbals: Their Origin and Evolution: a Chapter in the History of Botany, 1470–1670*, first published in 1912; see the 3rd edn., edited with an excellent bibliography by William T. Stearn (Cambridge: Cambridge University Press, 1986). Other general surveys of importance are: Eleanour Sinclair Rohde, *The Old English Herbals* (London: Longmans, Green & Co., 1922); Claus Nissen, *Kräuterbücher aus fünf Jahrhunderten: medizinhistorischer und bibliographischer Beitrag* (Munich: Robert Wölfle Antiquariat, 1956); Blanche Henrey, *British Botanical and Horticultural Literature before 1800* (London: Oxford University Press, 1975), Vol. 1, 5–54, 79–92; and Frank J. Anderson, *Illustrated History*.

Locus Amoenus, First Edition. Edited by Alexander Samson.

The attack on the mediaeval herbal began with Niccolo Leoniceno, whose tract *De Plinii aliorumque erroribus in medicina* [On the errors of Pliny and others in medicine] was published in 1492. His arguments that Pliny had misidentified plants because of confusions over etymology were immediately and fiercely debated,[4] but left a growing uncertainty in the academic world about the validity of traditional identifications. The first systematic attempt to resolve the uncertainty came in 1530, when Otto Brunfels, a physician of Basel, published *Herbarum vivae eicones*, a work which has long had the reputation of being a mediocre compilation, notable for its illustrations but not for its text.[5] But this is to judge Brunfels by the standards of a later generation; his purpose was not to publish new descriptions of plants but to collate the information about them provided by Dioscorides, Pliny, and other sources, drawing attention to disparities. In 1531 Brunfels supplemented his work with *Novi herbarii tomus II*, 216 pages of which (Appendix, 'De vera herbarum cognitione') consisted of an anthology of extracts from Leoniceno and other writers about the identification of plants in classical sources. So, regardless of the quality of plant identifications and descriptions in Brunfels's own text, he helped to stimulate further the interest in re-examining the accepted traditions, and thus prepared the way for Fuchs (one of whose earliest publications was a contribution to Brunfels's appendix).[6]

Despite the attack on Pliny, the major effort of the early Renaissance herbal was not so much an attempt to break free from the classical authors, as to recover the authentic texts of the classical authors and free them from subsequent interpolations. The first printed texts of Dioscorides were published simultaneously in Basel and Cologne in 1529; the 1598 edition, published by Andreas Wechel in Frankfurt, remained the standard edition until the nineteenth century. In the meantime, Pietro Andrea Mattioli's commentary on Dioscorides, first published in 1544, had passed through at least thirty-six editions in different languages.[7] Mattioli attempted to identify conclusively the plants described by Dioscorides, but he would not be the last to do so.[8] There

[4] For Leoniceno, and the interpretation of his criticism of Pliny in terms of the local politics of Poliziano's circle, see Peter Godman, *From Poliziano to Machiavelli: Florentine Humanism in the High Renaissance* (Princeton: Princeton University Press, 1998), 96–106; Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago, IL: University of Chicago Press, 2006), 126–33.

[5] Thomas Archibald Sprague, 'The Herbal of Otto Brunfels', *Journal of the Linnean Society: Botany*, Vol. 48 (1928), 79–124; Arber, *Herbals*, 52–5; Anderson, *Illustrated History*, 121–9.

[6] Further editions of *Tomus II* appeared in 1536, 1537, and 1539; by the 1536 edition the entire work had been retitled *Herbarium*, and had grown to three volumes. The 'Appendix de vera herbarum cognitione' appears in the 1536 edition on pp. 97–313, Leoniceno's extract being on 180–205, and Fuchs's 'Annotationes aliquot herbarum & simplicium' on 245–271.

[7] See Sara Ferri (ed.), *Pietro Andrea Mattioli, Siena 1501 – Trento 1578: la vita, le opere con l'identificazione delle piante* (Perugia: Quattroemme, 1997), 391–6, for a list of editions in the Biblioteca Comunale di Siena, but this does not include foreign translations, the 1586 *Epitome* and its successors, etc.

[8] While Mattioli was supremely confident in his identifications of Dioscorides' plants, not all were equally impressed, and two centuries later John Sibthorp would make an expedition to Greece, resulting in his famous *Flora Graeca* (1806–1830), for exactly the same purpose.

had been no significant concept of geographical distribution in the early sixteenth century, until previously unknown plants began to be introduced from the Americas. Brunfels, in 1530, showed no real awareness that the flora of Germany might differ from that of Greece and the Near East. His coeval Euricius Cordus, whose *Botanologicon* was published in 1534, deliberately omitted what we would now regard as significant details from plant descriptions on the grounds that they exhibited regional variations; he at least recognized that some plants had been discovered since the time of Dioscorides.

Leonhart Fuchs was the first herbalist to describe American introductions like maize; his *De historia stirpium* (1542) has traditionally been regarded as the first botanical work in which both the text and the illustrations were based on personal observation rather than copying. It was given an abridged translation into German the following year, as the *New Kreüterbuch*, and several octavo editions followed.[9]

Fuchs set the initial standards for plant description which most subsequent herbalists attempted to meet or surpass. From the point of view of the development of descriptive botany, his most important successors were a trio of Flemish authors all published by the firm of Christopher Plantin of Antwerp: Rembert Dodoens, Mathieu de L'Obel (more usually called Lobel or Lobelius), and Charles de l'Ecluse (more usually called Clusius). These authors between them, in addition to writing herbals as traditionally understood, laid the foundations of the modern regional flora. The *Stirpium adversaria nova* of Lobel and his colleague Pierre Pena (1571) described the plants of the Montpellier area (while including a miscellany of rare and recently introduced plants); Clusius' *Rariorum aliquot stirpium per Hispanias observatarum historia* (1576) described the plants observed in a tour of Spain and Portugal. In his *Exoticorum* (1605), he reproduced a number of texts describing plants of the Americas.[10]

From Brunfels to Clusius, the standards of descriptive botany improved steadily: clearer and more detailed descriptions, an increasing consistency of vocabulary used to describe plant anatomy, an awareness of the need to record locations. (No herbal, in this respect, surpassed John Gerard's *Herball* of 1597; Gerard relied on a network of correspondents around England to send him

[9] Arber, *Herbals*, 64–70; Anderson, *Illustrated History*, 137–147. A facsimile and translation of the *De historia stirpium*, unfortunately in monochrome, has been published under the title *The Great Herbal of Leonhart Fuchs*, edited by Frederick G. Meyer *et al.* (Stanford, CA: Stanford University Press, 1999).

[10] Arber, *Herbals*, 82–91; Anderson, *Illustrated History*, 173–180. For Lobel, see Armand Louis, *Mathieu de l'Obel 1538–1616: episode de l'histoire de la botanique* (Ghent-Louvain: Story-Scientia, 1980). For Clusius, see Friedrich Wilhelm Tobias Hunger, *Charles de l'Escluse (Carolus Clusius): Nederlandsch kruidkundige 1526–1609* ('S-Gravenhage: Martinus Nijhoff, 1927); Florike Egmond *et al.* (eds.), *Carolus Clusius: Towards a Cultural History of a Renaissance Naturalist* (Amsterdam: Koninklijke Nederlandse Akademie van Wetenschappen, 2007); and see the chapter 'Americana in the *Exoticorum libri decem* of Charles de l'Ecluse' in Peter Mason, *Before Disenchantment* (London: Reaktion Books, 2009), 124–48.

notices of localities where plants had been found.)[11] In other matters there was, from the modern point of view, little progress. There were no recognized standards for nomenclature. So long as there were few species to distinguish, everyone was happy with a two-word name, but the more related plants there were to distinguish, the longer and more descriptive the names became; and there was no accepted rule for the order in which the terms appeared in the name. As early as 1620, Caspar Bauhin felt it necessary to publish a dictionary of synonyms for plant names (*Pinax theatri botanici*). But there could be no generally acceptable resolution of the problem of naming when there was no agreement on how plants were to be classified. There were no distinct concepts of genus, species, or variety, let alone higher-order classifications like family. From Lobel onwards, a variety of classification schemes was tried, but until the mid-seventeenth century most herbalists were content to group plants by a mixture of criteria; medical, morphological, utilitarian, and sometimes etymological.[12] (There is no space here to enter into the debate about Renaissance encyclopaedism and its criteria for inclusion and organization of information, beyond saying that a more detailed consideration of herbals would prove a useful test case.)[13]

BOTANICAL ART IN THE HERBALS

The earliest printed herbals were the heirs to a long mediaeval tradition of plant illustration, one that has attracted an insufficient degree of scholarly attention in modern times, but for perfectly understandable reasons. For the botanist, plant illustration before the 1530s is a matter of antiquarian interest only, as manuscript and early printed illustrations alike are virtually useless for botanical purposes. We know from Pliny that classical botanists attempted to produce illustrated works on plants, but abandoned the attempt; when hand-copying was the only means of reproducing images, it did not take many generations of copying before the resulting images had ceased to resemble the originals exactly enough to be useful for purposes of identification. Botanists therefore relied on written descriptions, and anyone who has attempted

[11] For Gerard's regional network, see Robert H. Jeffers, *The Friends of John Gerard* (Falls Village, CT: Herb Grower Press, 1967–1969).

[12] The most detailed analysis of descriptive standards and taxonomic ideas in the herbals is to be found in Edward Lee Greene's *Landmarks of Botanical History*, the first part of which was published in 1909, and the remainder not until Frank Egerton's edition (Stanford, CA: Stanford University Press, 1983). Despite Greene's cantankerous and pugnacious approach, it remains unfailingly interesting, instructive, and as yet unsurpassed. For the most recent discussion of the species concept as it existed in the Renaissance, see John S. Wilkins, *Species: a History of the Idea* (Berkeley, CA: University of California Press, 2009), 84–7.

[13] For some contributions to the debate about the nature of Renaissance encyclopaedism which specifically deal with the question of herbals, see Giuseppe Olmi, *L'inventario del mondo: catalogazione della natura e luoghi del sapere nella prima età moderna* (Bologna: Società Editrice il Mulino, 1992); Brian W. Ogilvie, 'The Many Books of Nature: How Renaissance Naturalists Created and Responded to Information Overload', *Journal of the History of Ideas*, Vol. 64 (2003), 29–40; Ogilvie, *Science of Describing*, esp. 139–208.

to identify a plant from a description alone will understand why descriptive botany made few strides until the invention of printing.[14]

Manuscript and early printed herbals suffered from the recycling of a limited number of stylized images, which could be usefully employed only by those who already knew the plants in question, and did not need to use the images as field guides. Take the illustrations in *The Grete Herball* (printed by Peter Treveris, 1526): they are all printed from blocks of a standard size, with no indications of scale; they offer outlines only; flower and leaf shapes are highly schematized; and in some cases, mythological or emblematic considerations take precedence over description (mandrakes have human bodies, iris flowers are reduced to fleur-de-lis shapes). The anonymous artist need never have seen the plants he was depicting: they are based on the illustrations seen in earlier publications (Figs. 1 and 2).

In 1530, the first printed plant illustrations drawn from actual plants were published in Strasbourg by Johann Schott, in the first volume of Brunfels's *Herbarum vivae eicones*, whose title means 'Images of living plants' (Fig. 3). The artist was Hans Weiditz, some of whose original drawings survive in the Felix Platter Herbarium in Geneva.[15] While Brunfels's text was meagre as a work of descriptive botany, its polemical message about the importance of subjecting the inherited body of writing on plants to modern criticism served as a justification for the use of actual plants rather than existing illustrations as models. Weiditz's illustrations were carved at life size, and depict actual specimens rather than idealized versions. Little more than a decade later came Fuchs's *De historia stirpium*, where for the first time illustrations drawn from actual plants were accompanied by descriptions based on personal observation (Fig. 4). The work contained portraits both of Fuchs and of his artists: Heinrich Füllmaurer, who drew the plants on paper; Albrecht Meyer, who copied the drawings onto woodblocks, and Veit Rudolph Speckle, who carved the blocks (Fig. 5). (Two centuries would pass before the next time an artist had his portrait in a botanical work – G. D. Ehret, in C. J. Trew's *Plantae selectae* (1750–73).) The Füllmaurer illustrations are, like those of Weiditz, largely drawn and printed at life size (though this advantage was lost when they were recarved for octavo editions). As in the work of their immediate predecessors, the woodcuts are largely simple outlines, but for reasons acknowledged in the preface: an awareness

[14] Pliny's account will be found in Book 25, Chap. 4 of his *Historia naturalis*. For a sprightly consideration of the implications of Pliny's account, see William M. Ivins Jr., *Prints and Visual Communication* (London: Routledge & Kegan Paul), 1–20. There are now many histories of botanical art which include discussions of the illustrations in Renaissance herbals, but still the standard work is Wilfrid Blunt and William T. Stearn, *The Art of Botanical Illustration*, 3rd edn. (Woodbridge: Antique Collectors' Club, 1994), 61–87. See also Brent Elliott, 'The Birth of Botanical Illustration', *The Garden*, Vol. 120 (1995), 81–3.

[15] The Weiditz watercolours were discovered by Walther Rytz; see his works, *Das Herbarium Felix Platters: ein Beitrag zur Geschichte der Botanik des XVI. Jahrhunderts* (Basel: Buchdruckerei Emil Birkhäuser & Cie, 1933.), and *Pflanzen Aquarelle des Hans Weiditz aus dem Jahre 1529: die Originale zu den Holzschnitten im Brunfels'schen Kräuterbuch* (Berne: Verlag Paul Haupt, 1936.) See also Blunt and Stearn, *Botanical Illustration*, 61–3.

Fig. 1 Woodcut, allegedly of a black hellebore but actually of an iris, from the fifth Venice edition of the Herbarius Latinus, printed by Alessandro de Bindoni in 1520. Even if the picture had been properly identified, how useful would it have been as a guide to identification? (Royal Horticultural Society, Lindley Library)

that purchasers of the book would probably want to have the pictures coloured, so there was little point in cluttering the images with lines and shading that would be effaced.[16]

The history of the illustration of printed herbals is not a story of simple progress toward the goal of exact representation. As many herbals were published in octavo or small quarto formats, illustration at life size was not always possible; in some herbals a compromise was reached, which remained influential well into the eighteenth century: if the plant was too large to be accurately rendered on the page, some important detail would be rendered at life size, in addition to the reduced depiction of its general habit. The best and most detailed plant illustrations printed from woodblocks are to be found in the editions of Mattioli's commentary on Dioscorides, beginning with the 1565 Venice edition published by Valgrisi, in which large woodcuts by Giorgio Liberale and Wolfgang Meyerpack were first printed. It would be difficult to

[16] Blunt and Stearn, *Botanical Illustration*, 64–71.

Fig. 2 Figures of male and female mandrake, from *The Grete Herball* (1526) (Royal Horticultural Society, Lindley Library)

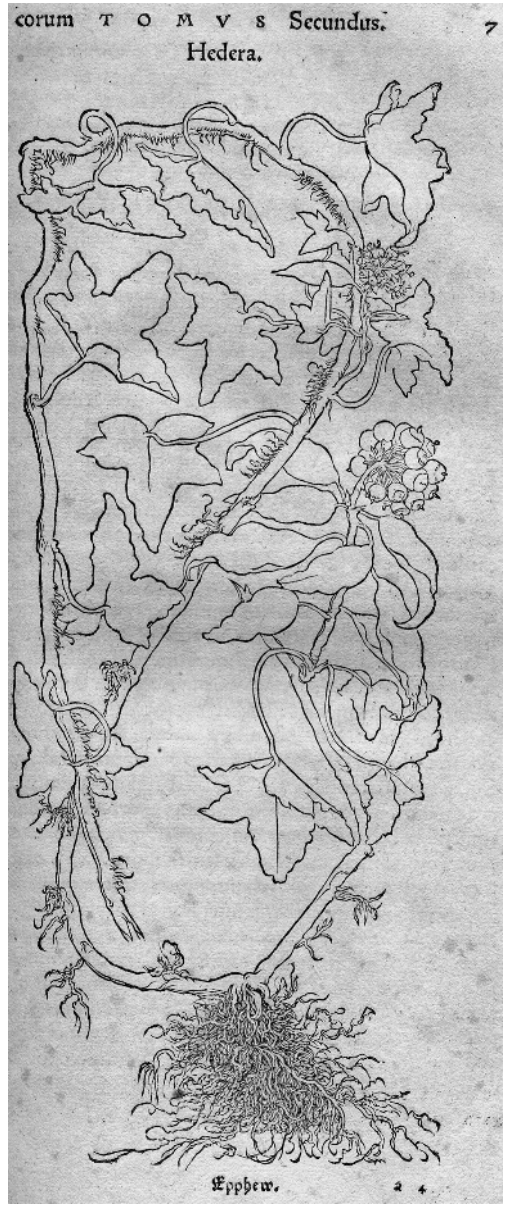

Fig. 3 Ivy, from Otto Brunfels, *Herbarium*, tom. II (1536) (Royal Horticultural Society, Lindley Library)

Fig. 4 Malva, from Leonhart Fuchs, *De historia stirpium* (1542) (Royal Horticultural Society, Lindley Library)

Fig. 5 The artists of Fuchs's *De historia stirpium*: top right, Albrecht Meyer, who drew the plants; top left, Heinrich Füllmaurer, who copied the drawings onto the woodblocks; below, Veit Rudolph Speckle, who carved the blocks (Royal Horticultural Society, Lindley Library)

produce finer definition of lines by whittling a woodblock, and indeed German editions of Mattioli tended to copy the smaller illustrations used in Valgrisi's 1554 edition.[17]

[17] Arber, *Herbals*, 92–7; Anderson, *Illustrated History*, 163–72; Blunt and Stearn, *Botanical Illustration*, 73–6; Ferri, *Pietro Andrea Mattioli, Siena 1501 – Trento 1578*; William Patrick Watson *et al.*, *The Mattioli Woodblocks* (London: Hazlitt, Gooden & Fox, 1989).

PUBLISHING HISTORY OF THE HERBALS

Herbals became a genre with a strong market, and all the publishing traditions of plagiarism and competition can be traced during the course of the sixteenth and seventeenth centuries. What is often regarded as the first court case brought over infringement of copyright involved a herbal. In 1532 Johannes Schott of Basel, Brunfels' publisher, issued a German translation of his *Herbarum vivae eicones* under the title of *Contrafayt Kreüterbuch* (the title was varied in later editions).[18] In 1533 he brought a suit in the Imperial Chamber Court against Christian Egenolph, a printer in Frankfurt, for violating the terms of the Imperial privilege accorded to him by reprinting his translation without authorization. The Reichskammergerichtsakten do not record a verdict in the case of Schott v. Egenolph, but it has been generally assumed that judgment was made for the plaintiff.[19] Egenolph was a notorious pirate, helping himself freely to other publishers' work, and recycling the same illustrations under various titles; as early as 1542 Fuchs criticized him for his continual republication of flagrant errors.[20] His firm's greatest success was the herbal compiled by his son-in-law Adam Lonitzer, a work for which the phrase 'scissors and paste' could have been invented, but which stayed in print longer than any other herbal, being reissued more or less continuously until 1783.[21] Lonitzer was commemorated by Linnaeus by giving the honeysuckles the Latin name *Lonicera*, but this honour must be attributed to affection for a work remembered from his youth rather than recognition of superior qualities.

The copying of illustrations was a standard publishing practice in the sixteenth century; original, standard-setting achievements in depiction were regularly cribbed, especially by provincial publishers, and the results easily identified by the right-to-left reversal of the image. So we find that the first important English herbal, William Turner's *Herbal*, the first botanically important English herbal (published in three parts in 1551 and 1568, the first in London and the remainder in Cologne), copied illustrations from Fuchs (Figs. 6 and 7).[22]

The two editions of John Gerard's *Herball* present a much more complicated problem. The *Herball* was very much a publisher-led book. The printer,

[18] The Lindley Library's edition of this work is a 1546 reissue by Hermann Gulfferich of Frankfurt under the title *Kreuterbuch contrafeyt*.

[19] Friedemann Kawohl (2008) 'Commentary on Schott v. Egenolph (1533)', in *Primary Sources on Copyright (1450–1900)*, ed. Lionel Bently & Martin Kretschmer, http://www.copyrighthistory.org/cgi-bin/kleioc/0010/exec/ausgabeCom/%22d_1533%22 (accessed November 2010).

[20] Carsten Jäcker (ed.), *Christian Egenolff* (Limburg: Glaukos, 2002).

[21] It first appeared in 1557 as the *Kreütterbuch*, though in fact it was merely a revision of Theodoric Dorsten's *Botanicon* (1540), itself a revision of Eucharius Rösslin's *Kreutterbüch* (1533), itself a cobbling-together of two previous works, Peter Schoeffer's *Gart der Gesundheit* (first edition 1485) and Hieronymus Brunschwig's *Buch zu Distillieren* (first edition 1500). For some discussion, see Anderson, *Illustrated History*, 156–62; see also Arber, *Herbals*, 70–72.

[22] For Turner, see Henrey, *British Botanical and Horticultural Literature*, Vol. 1, 21–6; Anderson, *Illustrated History*, 148–57. Turner's *Herbal* has been republished in facsimile by Cambridge University Press (1995).

John Norton, wanted to publish a good English-language herbal, and planned to commission a new translation of Dodoens's herbal (already translated in 1578), and accompany it with the best of recent plant portraiture. Having seen the *Eicones plantarum* of Tabernaemontanus (1590) at the Frankfurt Book Fair, he arranged to rent the woodblocks from Nicolaus Bassaeus, the publisher, and a comparison between Gerard and Tabernaemontanus reveals that the illustrations were printed from the same blocks: not only is there no right-to-left reversal, but when photocopied onto transparent acetate and overlaid, the two images correspond exactly. The first author that Norton engaged left the work unfinished on his death, so Gerard was hired instead, with Lobel correcting the text, and it was Lobel himself who first launched accusations of plagiarism against Gerard. The fact that the text was fitted to a series of illustrations made on the continent helps to explain why Gerard included some plants he acknowledged were not to be found in England.

In the early 1630s, a new edition of Gerard's *Herball* was commissioned – again a publisher-led enterprise, conceived in order to cut out a competitor. John Parkinson – whose *Paradisus terrestris* (1629), the first English book purely on garden flowers rather than medicinal plants, had been a great success – was reported to be working on a new herbal to replace Gerard's. Norton's widow and her colleagues commissioned the apothecary Thomas Johnson to revise the text; his enlarged and improved edition was published in 1633, with a further reissue in 1636. (Parkinson's herbal, *Theatrum botanicum*, eventually appeared in 1640.) This time the illustrations were taken, not from Tabernaemontanus, but from Christopher Plantin; Johnson claimed in his Preface to have 'made use of those wherewith the Workes of Dodonaeus, Lobel, and Clusius were formerly printed', and at the end of the volume – apologizing for some out-of-sequence addenda – 'This worke was begun to be printed before such time as we received all the figures from beyond the Seas'.[23] However, a comparison of superimposed acetate copies reveals that the illustrations were not printed from the same blocks as in Plantin's publications, but were copied, in most cases without right-to-left reversal. I suspect that the Plantin woodcuts were copied onto paper that was then treated with turpentine or an equivalent in order to make it transparent, so that the paper could be turned over for re-copying onto the blocks.

HERBALS AND THE GARDEN

Herbals can have an additional relevance for the history of gardening, for they can provide information about the introduction of new plants into the garden. From Fuchs, for example (cap. lxix), we can tell that *Momordica balsamina* was being grown in Germany by 1540, decades before the generally

[23] Arber, *Herbals*, 129–35; Henrey, *British Botanical and Horticultural Literature*, Vol. 1, 36–54; Anderson, *Illustrated History*, 218–26; Louis, *Mathieu de l'Obel*, 269–74.

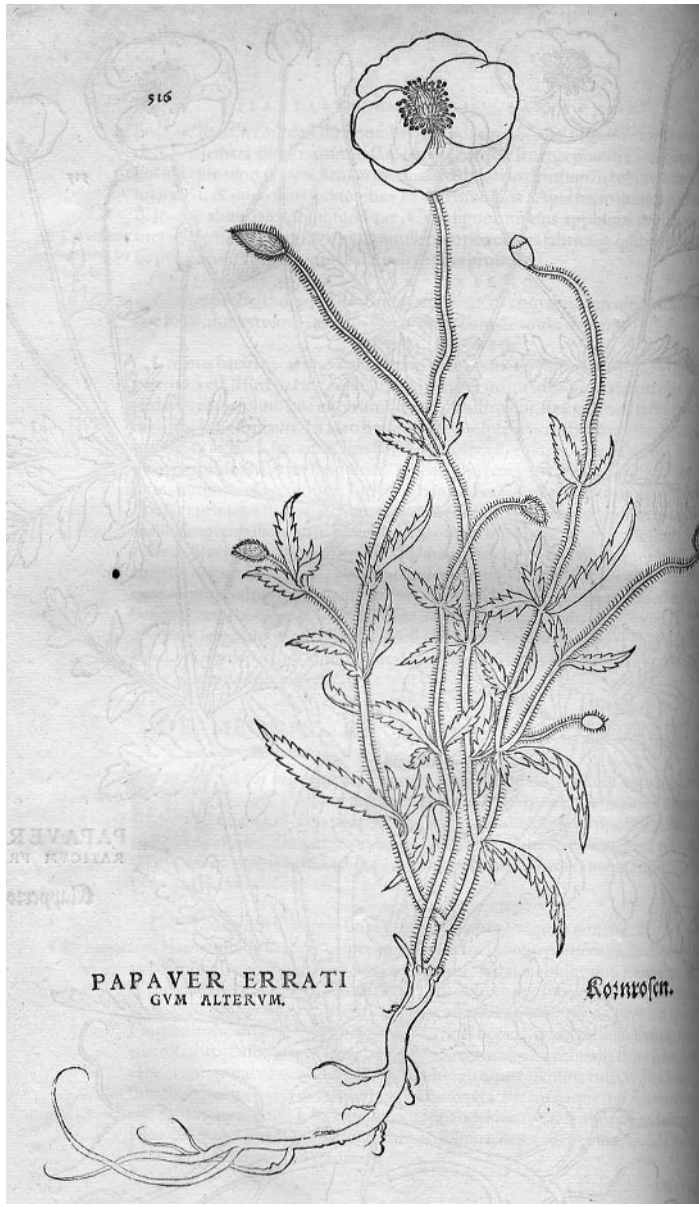

Fig. 6 Poppy, from Leonhart Fuchs, *De historia stirpium* (1542) (Royal Horticultural Society, Lindley Library)

Fig. 7 Poppy, from William Turner, *Herbal* (1568), copied from Fuchs with right-to-left reversal (Royal Horticultural Society, Lindley Library)

accepted date, and the first reference to potatoes being grown in England is found in Gerard's *Herball* (Fig. 8). It should not be assumed that the herbalists are necessarily sources of accurate information about new introductions; the ambiguity of the term 'Indies' alone resulted in a massive circulation of misinformation, and Gerard's statement that potatoes were introduced from

Fig. 8 The first printed illustration of the potato, from John Gerard, *Herball* (1597) (Royal Horticultural Society, Lindley Library)

'Virginia' misled scholars for centuries. But the herbals frequently contain the best information the period can provide on the subject, and the spread of maize and potatoes throughout Europe has been documented in large part from these publications.[24] Nor is it only medicinal plants that are thus documented: Pena and Lobel, in their *Stirpium adversaria nova* (1571), reported

[24] John J. Finan, *Maize in the Great Herbals* (Waltham, MA, 1950: Chronica Botanica); Redcliffe N. Salaman, *The History and Social Influence of the Potato* (Cambridge University Press, 1949).

that the London apothecary Hugh Morgan had a collection of West Indian cacti in his garden, from which they produced the first published illustration of a prickly pear.[25]

I have already remarked on the lack of generally accepted concepts of species and variety in the sixteenth century. Gerard's *Herball* went beyond its brief and included detailed accounts of cultivated varieties of plants like auriculas, daffodils, crocuses, irises, anemones, ranunculus – to such an extent that it is considered a gardening book as well as a herbal (Fig. 9). And while Parkinson's *Paradisus terrestris* (1629) provided a precedent for books dealing specifically with garden plants, some writers of herbals followed Gerard's example, most notably William Salmon in his *Botanologia. The English herbal* (1718). This massive work, dismissed ever since its publication for its belated adherence to Galenic principles of medicine, is only now being recognized as a source of useful information for the student of plant fashions.[26]

THE DECLINE OF THE HERBAL

The Renaissance herbal effectively came to an end in the mid-seventeenth century. The hiatus in publication resulting from the Thirty Years' War meant that the return to 'normal' publishing coincided with the foundation of scientific societies in various countries, a shift of emphasis in botanical writing, and altered standards in publishing. The Civil War in England did not result in such a devastating break, but even so, botanical publication largely lapsed until the Restoration; John Parkinson did publish a 'second edition' of his *Paradisus terrestris* in 1656, but in fact it consisted entirely of unsold sheets of the 1629 printing, with the title-page date altered.

The first factor affecting the production of herbals was the increasing preference given to engravings rather than woodblocks as illustrations. Engraving had been introduced into horticultural publication in the early seventeenth century with a new genre that came to be known as the florilegium: works dedicated to depicting the plants of a particular garden, and focussing largely on ornamental plants rather than medicinal.[27] Engraving was expensive, and difficult to incorporate within the same page as text; while different strategies were employed to resolve the effective break between the description and the illustration, the role of the herbal as a handy guide to plant identification in the field became difficult to sustain.

In the second half of the seventeenth century, botanical encyclopaedias superseded herbals as a genre. Where upmarket herbals survived, they tended

[25] Pierre Pena and Mathias Lobel, *Stirpium adversaria nova* (London: Thomas Purfoot, 1571), 41–73. For the history of the documentation of cacti in herbals, see Gordon Rowley, *A History of Succulent Plants* (Mill Valley CA: Strawberry Press, 1997), 41–73.

[26] On Salmon, see Henrey, *British Botanical and Horticultural Literature*, Vol. 2, 5–7; Brent Elliott, 'The Forgotten Herbal', *The Garden*, Vol. 134 (2009), 42–3.

[27] Brent Elliott, 'The Florilegium', *The Garden*, Vol. 120 (1995), 204–07.

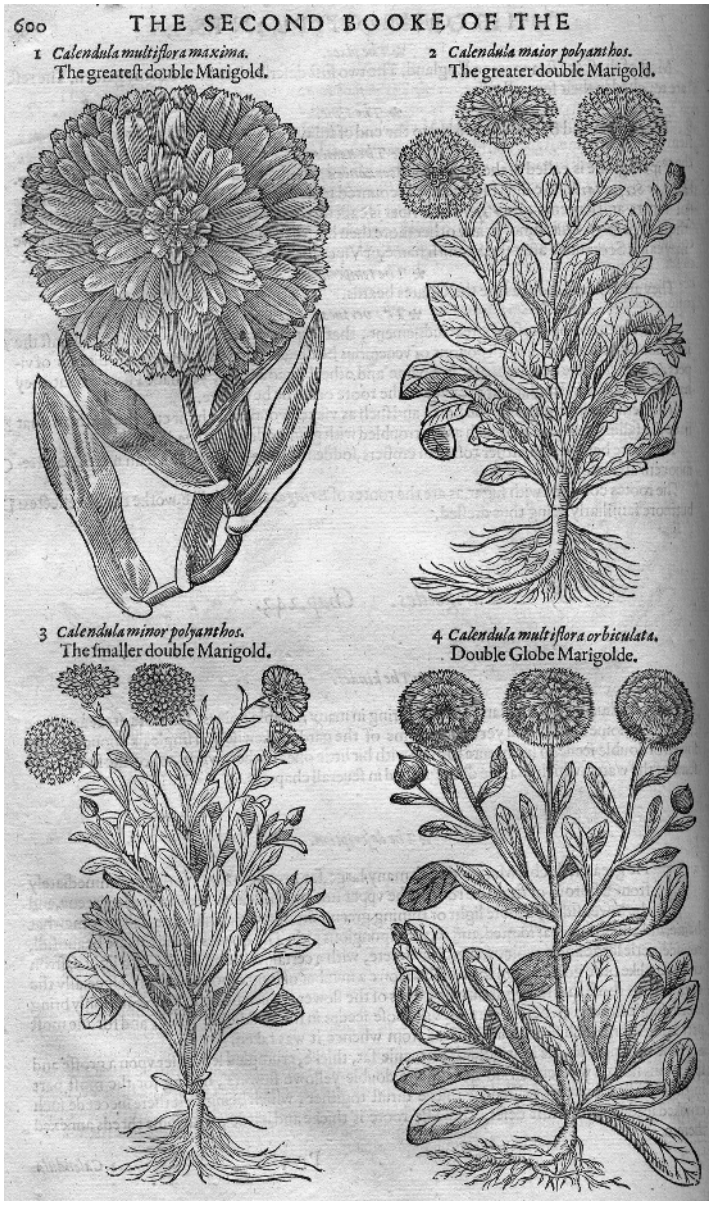

Fig. 9 Marigold cultivars, from John Gerard, *Herball* (1597) (Royal Horticultural Society, Lindley Library)

to have strong institutional affiliations: Robert Lovell's *Pambotanologia . . . or, a complete herball* (1659; 2nd ed. 1665) was based closely on the collections of the Oxford Botanic Garden, and Elizabeth Blackwell's *Curious herball* (1739) on those of the Chelsea Physic Garden. John Pechey's *Compleat herball* (1694) was

the first to divide the text between British natives and exotic plants. The word 'herbal' survived, but publications like James Newton's *Compleat herbal* (1752) and John Edwards' *Edwards' herbal* (1770) are in fact largely collections of engraved illustrations, the former case a pocket encyclopaedia and the latter effectively a florilegium.

There had long been an inconsistency in the sources of medical advice: on the one hand, a long academic tradition of Galenic medicine, and on the other, folk advice based to some degree on practical observation, handed down orally until it entered the literature in the sixteenth century. It is only recently that attempts have been made to distinguish these two sources.[28] The repudiation of Galen in the late seventeenth century, reflected in the dismissal of Salmon's *Botanologia*, meant that doctors and apothecaries in the eighteenth century wished to distance themselves from the herbal tradition. Progressively the word 'herbal' disappeared from the titles of works intended for university use or for the medical profession, to be replaced by the words 'medical botany'.

But the herbal did not disappear; it merely sank below the horizon of the learned, into the crepuscular world associated with almanacs, astrological treatises, and mass-market how-to books. The eighteenth century saw a progressive migration of herbals into the occultist fringe: Michael Bernhard Valentini's *Viridarium reformatum* (1718) was heavily alchemical, while Nicholas Culpeper's *English physitian*, first published in 1652, introduced astrology into the genre. Editions of Culpeper continued to appear regularly into the early nineteenth century, gradually turning into the *English physician and complete herbal*, and finally into *Culpeper's herbal*, while becoming progressively associated with both astrology and Freemasonry.[29] As the association between 'herbals' and quackery became fixed in the educated mind, so the very concept of the herbal fell into desuetude. In 1843, in response to a reader's enquiry, the magisterial *Gardeners' Chronicle* could say, 'We do not know what you mean by a Herbal. The term is disused.'[30]

What happened after that is a story of twentieth-century revivalism.

Lindley Library, Royal Horticultural Society

[28] This is primarily the accomplishment of Gabrielle Hatfield: see her *Memory, Wisdom and Healing: the History of Domestic Plant Medicine* (Stroud: Sutton Publishing, 1999), and David Elliston Allen and Gabrielle Hatfield, *Medicinal Plants in Folk Tradition: an Ethnobotany of Britain & Ireland* (Portland, OR: Timber Press, 2004).

[29] Henrey, *British Botanical and Horticultural Literature*, Vol. 1, 82–8. For a recent defence of Culpeper (alternative medicine v. the Establishment), see Benjamin Woolley, *The Herbalist: Nicholas Culpeper and the Fight for Medical Freedom* (London: HarperCollins, 2004). There has not yet been an historical bibliography of Culpeper; should anyone be inclined to tackle this project, the best collection of editions is at the Wellcome Institute.

[30] *Gardeners' Chronicle* 1843, 400.