Anglo-Saxon Plant Remedies and the Anglo-Saxons

By Linda E. Voigts*

In the surviving body of vernacular writing from Anglo-Saxon England, medical texts, containing mostly remedies to be derived from plants, bulk large. In addition to glossed remedies and short treatises, four long Old English medical works survive, three of them in unique manuscripts: the *Læceboec* (Bald’s Leech-book), *Lacnunga*, and *Peri Didaxeon*. The fourth text, the *Herbarium Apulei*, is the Old English translation of the late antique herbal falsely attributed to Apuleius and expanded to 185 plants by the addition of the treatise on betony of Antonius Musa and some of the pseudo-Dioscoridean *Ex herbis femininis* recipes; the plant remedies

*Department of English, University of Missouri, Kansas City, Missouri 64110.

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1 An example of a glossed recipe is the recipe “wið eahwaerce” written in the margin of p. 208 of Cambridge, Corpus Christi College 41, a manuscript containing the Old English translation of the *Historia ecclesiastica* of Bede. Shorter medical writings survive not only in glosses but are often sandwiched between other writings as well; e.g., a treatise on the development of the fetus that might properly be called medical is found in a collection of prognostics in British Library Cotton Tiberius A. iii, fols. 40v–41.

2 All of the longer and many of the shorter Old English medical texts were edited in three volumes by Thomas Oswald Cockayne in *Leechdoms, Wortcunning, and Starcraft of Early England*, Rolls Series, 35 (London, 1864–1866). These were reissued (London: Holland Press, 1961) with a new introduction by Charles Singer, but the reprint, which omits Cockayne’s introduction and the key to his *apparatus criticus*, does not replace the Rolls Series volumes. Early in the 20th century some of the discrete texts were re-edited. New editions are currently being prepared for the *Læceboec*, the *Herbarium Apulei*, and *Peri Didaxeon*.


*Peri Didaxeon*, “Concerning Schools of Medicine,” is found in a MS which may be as late as 1200 and so is not included in Ker. The codex, British Library Harley 6258b, contains this text on fols. 51v–66v, following the expanded *Herbarium Apulei* on fols. 1–51. The question of whether the language of this text is late Old English or early Middle English is yet unresolved. Max Löweneck’s edition in Erlanger Beiträge zur englischen Philologie, 12 (Erlangen: Junge, 1896) emphasized the so-called Salernitan material in the work, but Charles Talbot has since established that the Petrocellus-Gariopontus material is not Salernitan at all and is found in the late-9th-century *Læceboec*; “Some Notes on Anglo-Saxon Medicine,” *Medical History*, 1965, 9:156–169. The arguments concerning the stage of the language of *Peri Didaxeon* are discussed in Peter Bierbaum and Detal, *Die botanische Wortschatz des Altenglischen*, Teil II: *Lācnunga, Herbarium Apulei, Peri Didaxeon*, Grazer Beiträge zur englischen Philologie, 2 (Bern: Herbert Lang, 1976), p. xii.
are followed by remedies obtained from animals, *De taxone* and the *Medicina de quadrupedibus* of Sextus Placitus. 3 This remedy book survives in four manuscripts, one of which (British Library Cotton Vitellius C. iii) represents the plant and animal sources of the remedies in brightly colored illustrations. 4 Together these manuscripts make up the earliest body of vernacular medical texts in medieval Europe. Closely related to this tradition is the justly famous illustrated Latin manuscript of the Pseudo-Apuleius herbal from Bury Saint Edmunds, at least some of which seems to be a Latin rendering of the Old English text; it also contains Old English glosses. 5

These Old English texts alone occupy more than five hundred leaves or one thousand manuscript pages, and we cannot estimate the number of codices which failed to survive because of changes in the language or such calamities as the dispersal of monastic libraries in the sixteenth century and the Ashburnham House fire in the eighteenth. 6 What is clear, however, when one considers the number of animal skins necessary for more than a thousand pages of manuscript text, that these surviving codices represent no small investment of resources and time on the part of Anglo-Saxon monastic houses. That observation alone justifies reopening the question of the practicality of these Anglo-Saxon medical texts. Were they written to be used by those who would heal? Would it have been possible in pre-Conquest England to know and use the plants depicted in them? I think the answer to both questions is yes.

Although that answer may appear obvious to those who do not work in the


4The three codices lacking illustrations are Harley 6258b, fols. 1–51, from the late 12th or early 13th century; Harley 585, fols. 1–129v, from the late 10th or early 11th century; and Bodleian Hatton 76, fols. 68–130 (Ker, *Catalogue*, No. 328), from the mid-11th century, a MS written with spaces that correspond to the illustrations in Cotton Vitellius C. iii. On Cotton Vitellius C. iii, fols. 11–85, a codex which seems to date from after 1050, see Ker, *Catalogue*, No. 219; and L. E. Voigts, “A New Look at a Manuscript Containing the Old English Translation of the *Herbarium Apulei*,” *Manuscripta*, 1976, 20:40–60, and 1977, 21:62; and “One Anglo-Saxon View of the Classical Gods,” *Studies in Iconography*, 1977, 3:3–16.

5Bodleian Bodley 130, fols. 1–95v (Ker, *Catalogue*, No. 302). For a facsimile and discussion of the MS, see *The Herbal of Apuleius Barbarus from the Early Twelfth-Century Manuscript formerly in the Abbey of Bury St. Edmunds (MS. Bodley 130)*, described by Robert T. Gunther, Roxburgh Club Publications, 182 (London, 1925). For de Vriend’s arguments that the section of Bodley 130 dealing with remedies to be obtained from animals is a Latin rendering of the Old English text, see *The Old English Medicina de Quadrupedibus*, pp. xiv–liii.

6The disastrous fire of 1731 which damaged many of the MSS in the Cotton Collection, including Vitellius C. iii, was responsible for the near destruction of Otho B. xi, containing a number of herbal recipes related to the *Laceboc* and some which were independent of it; see Ker, *Catalogue*, No. 180. Fortunately, a transcript of a large portion of the codex, copied by Laurence Nowell in 1562, survives as British Library Add. 43703; the recipes are fols. 261–64v. See Roland Torkar, “Zu den ae. Medizinaltexten in Otho B. xi und Royal D. XVII, mit einer Edition der Unica,” *Anglia*, 1976, 94:319–338.
sometimes arcane field of medieval herbals, it is neither the easy answer nor is the traditional one. Our understanding of the uses of pre-Salernitan written medicine, mostly drug therapy to be obtained from plants, has been dominated by two views which must be reevaluated. The first is that the surviving codices manifest an uncritical copying of classical texts with no real understanding and no thought to their practical use. The most extreme statements of this view were articulated by Charles Singer, who deplored the inability of “the wilting mind of the Dark Ages” to deal intelligently with classical herbals and who described the entire corpus of Anglo-Saxon medical texts as “the darkest and deliquescent stage of a [sic] outdated culture.”

This view was shared and disseminated by Wilfrid Bonser, who wrote: “Sterile formulae, which could be applied without any exercise of reasoning, alone survived for use during the Dark Ages. It is these, therefore, . . . which appear in Anglo-Saxon medical practice.”

The second and related notion has to do with the depictions of plants in Cotton Vitellius C. iii and Bodley 130. Historians of medicine and art historians alike assert that these illustrations can have been of no practical value to the Anglo-Saxon user of these codices for two reasons: first, the illustrations are stylized and botanically inaccurate and are therefore unrecognizable; and second, a number of them represent Mediterranean plants not found today north of the Alps. The issue of botanical inaccuracy and stylization can be dealt with briefly. The illustration accompanying the recipes using sage (Salvia officinalis L.) in Bodley 130 has been criticized because the plant is not depicted with opposite leaves. In fact, some of the leaves in the illustration are opposite and others are alternate, but more important they are represented at an angle to the stem, which suggests, along with the coloring, that the artist is portraying the dried plant, from which it is indeed difficult to discern if the leaves are opposite or alternate. (See Fig. 1.) Furthermore, stylistic representations are not by definition useless if one has had any experience with the depicted plant. After all, even today one recognizes the plants on seed packages, knowing full well

7A useful though incomplete guide to the body of early medieval medical writing is Walter Puhlmann, “Die lateinische medizinische Literatur des frühen Mittelalters,” Kyklos, 1930, 3:395-416; this guide of course omits vernacular texts. Most MSS containing early medieval medical texts are found in Beccaria, I codici di medicina del periodo Presalernitano. Although indispensable, Beccaria is not complete. The work omits, e.g., the 9th-century Beneventan MS in Glasgow, Hunter T.4.13.


9Wilfrid Bonser, The Medical Background of Anglo-Saxon England (London: Wellcome Historical Medical Library, 1963 [prepared for publication 1949]), p. 35. This sort of statement is also pervasive in popular treatments of the subject; e.g., in Ernst and Johanna Lehner, Folklore and Odysseys of Food and Medicinal Plants (New York: Tudor, 1962), p. 98, one finds the following statement: “In the Dark Ages many of the herbal manuscripts of early days were destroyed by the martial rulers and their mercenaries who were devoid of any interest in science and culture.”

10See Thomas Downing Kendrick, Late Saxon and Viking Art (London: Methuen, 1949), p. 25, and Kurt Weitzmann, “Das klassische Erbe in der Kunst Konstantinopels,” Alte und neue Kunst, 1954, 5:50. Similarly, Erich Bethe argued in Buch und Bild im Altermum (Leipzig: Harrassowitz, 1945), a work much praised by Weitzmann (see Illustrations in Roll and Codex, Princeton: Princeton University Press, 1947, pp. 9-10), that plant illustration evolved from Lehrbild to Schmuckbild where the plant representations were valued qua pictures, not as guides for acquiring the plants for medical remedies; he insisted (pp. 35-36) that in 12th-century Saxon-Norman herbals the plants could not be recognized from their illustrations. Graupe-Albers, whose focus is on the late antique origins of the herbal illustrations (Spätan-tike Bilder) disagrees with Weitzmann regarding the function of the illustrations.

11See the commentary on fol. 33v in The Herbal of Apuleius Barbarus from the Early Twelfth-Century Manuscript. The leaves of the illustration depicting salvia in Cotton Vitellius C. iii (fol. 51r) are opposite.
that the plants which one grows will not likely approximate the illustrations.\textsuperscript{12}

The question of whether or not Mediterranean plants could have been known in Anglo-Saxon England is a more complex one, to be dealt with at length below. An influential instance of this traditional view is the statement made by Singer more than once that the illustration labeled \textit{hennebelle} in Cotton Vitellius C. iii (fol. 23v) was a meaningless exercise because it represents the Mediterranean plant \textit{Hyoscyamus reticulatus} L., not the \textit{Hyoscyamus niger} L. (henbane) that presently grows in England.\textsuperscript{13} I shall return to this example, but the point is clear that the dominant view of Anglo-Saxon medical manuscripts in this century has been that “the whole herbal,

\textsuperscript{12}Charles Talbot put it aptly (\textit{Medicine in Medieval England}, London: Oldbourne, 1967, pp. 20–21): “The illustrations to these texts are formal rather than natural, and it has been inferred that those who relied on them could not really distinguish or recognize any of the plants described; one might argue equally well that the Anglo-Saxons could not recognize, from the formalized illustrations of buildings, either a church or a monastery.”

\textsuperscript{13}“Greek Biology,” pp. 76–77. Singer repeats this observation in his introduction to Grattan and Singer, \textit{Anglo-Saxon Magic and Medicine}, p. 28. Similarly, Gunther observes that “plants from which the original pictures were taken belonged to a southern flora and either do not occur in Britain or were not available when the scribe was at work on the manuscript”; \textit{The Herbal of Apuleius Barbarus}, p. xxiv.
text and pictures, became quite useless as a practical manual." Therefore, to argue, as I do, that these herbals were copied for actual use with healing plants, it is necessary to undertake a systematic reevaluation of these received notions in terms of manuscript evidence and in terms of our current knowledge of early medieval medicine, of early medieval trade, and of plant cultivation during the minimal climatic optimum.

**MEDICINE IN THE EARLY MIDDLE AGES**

The dictum that early medieval medical texts epitomize uncritical copying of antique medical texts must be revised by what we have learned in the last fifteen years about early medieval medicine in general and by a specific examination of progressive improvement in text and codex. Although we are dealing with largely uncharted territory, we know, thanks to recent research, more about the deliberate encouragement in early medieval Benedictine houses of care for the sick (Rule 36) that is therapeutic rather than simply custodial in nature, and we have learned that early medieval medicine—monastic, ecclesiastical, and in some instances, lay—was pragmatic, empirical, and sometimes efficacious. The seminal work of Brian Lawn has made clear that there was a theoretical base to early medieval medicine, albeit not one devoted to the causes of diseases. Lawn's analysis of the standard early medieval medical *summa*—a compendium containing both theoretical and pragmatic texts—surviving in a number of codices, is invaluable. It makes convincing his argument that the contributions of the Salernitan Adelhard of Bath were based on traditional early medieval medicine and not on Arabic medicine. Similarly, Charles Talbot has established that the so-called Salernitan works of Gariopontus and Petrocellus were in fact used and revised in ninth-century England, and recent analyses show the validity of the treatment prescribed for a number of ailments in the Old English remedy books.

That the pragmatic, empirical practice of medicine in the early Middle Ages probably resulted in better care than did the post-Salernitan school medicine devoted to theoretical etiology has been suggested by John Riddle. This recent emphasis on the early medieval focus on care of the sick rather than on cause of disease reminds us of the importance of Soranus and pseudo-Soranic writings to the medieval transmission of medical texts. It may also suggest, without demanding historical conti-
nuity, that early medieval medicine bears a number of resemblances to the methodist sect of classical medicine, the discipline that disregarded the theories of disease causation and concentrated instead on symptoms and therapeutics.

TEXT AND MANUSCRIPT

In revising the notion that medical texts were academic exercises, these general studies provide a useful background. However, the narrower question of whether or not Anglo-Saxon remedy books were meant to be used is best approached by a consideration of the progressive improvement of texts in the course of their transmission and of manuscripts in the course of their use. Four surviving manuscripts of the Old English translation of the enlarged Pseudo-Apuleius herbal testify to the popularity of this remedy book in Anglo-Saxon England, and an examination of some of the changes made in the transmission of this text of late antique origin proves instructive. In its original form the *Herbarium* seems to have consisted of 130 chapters, each including a depiction of the plant and then a list of remedies provided by the particular simple. In the transmission of this herbal, not only were other plant chapters added, but changes were made in the book to make it a more useful pharmacopeia; lists of synonyms to the plant names were added to each chapter20 and sometimes information concerning the habitat of the plants. Many chapters, like the one on *sclerata* (*chufunge*, Ch. 9), in the Old English version contain information about the ground where the plant best grows. The vernacular text provides this information before the recipes are given, whereas in the standard Latin text (Ch. 8), it is found at the end of the chapter.21

Particularly interesting is the vernacular treatment of the information provided concerning the first plant, betony, source of twenty-nine remedies in the Old English version (forty-seven in the Latin). Betony is simply entered as the first chapter of the Old English herbal, whereas in the Latin it is a separate treatise, "Antonii Musae de herba vettonica liber," almost always found preceding the *Herbarium Apulei*. What is important here is that the Old English text omits the Latin discussions that are not essential for obtaining the plant and using it as a remedy, and it unites at the beginning of the chapter essential information from two discussions. From the introductory Latin material the Old English omits the greetings of Antonius Musa to M. Agrippa and the celebration of betony over other plants; it retains the instructions for gathering betony in August without the use of iron and for drying it. From the concluding material in the Latin text the Old English omits the prayer or incantation to the plant and takes only the statements concerning the use of the plant for soul or body or as a shield against nocturnal visitors and frightening visions and the statement regarding habitat ("nascitur in pratis et in montibus, locis mundis et opacis circa frutices . . ."). This information in the Old English text differs from the Latin in that it does not come after the twenty-nine remedies, however; it is the first information provided on the plant before the instructions on gathering and drying it are given: "Peos wyrt pe man betonicam nemen heo bisp cenned on maedum 7 on cluenum dunlandum 7 on jelfrisedum stowum. . . ." (This plant, which one calls betony, is produced in meadows, and on open moor lands, and in shady places. . . .)


21For the Old English text, see Cockayne, *Leechdoms*, Vol. I, p. 98, and for the Latin text, see Howald and Sigerist, *Antonii Musae*, pp. 39–40. Bodley 130, containing a text that may be a translation back to Latin from Old English (see above, n. 5), also provides the habitat of the plant at the beginning of the entry.
In short, what we find in the Old English version is what might be called an “improved” text, a version easier to use than the Latin. Inessential information, some of it magical, has been omitted, and the information important to anyone who might want to find, dig, and dry the plant has been combined from two locations in the Latin and placed at the beginning of the chapter. The redactor, whether he was working in the vernacular or composing a Latin intermediary, was concerned with making the text a useful one. That he may well have been successful is indicated by the habitat entry for Betonica officinalis L. in Polunin’s *Flowers of Europe*: “Meadows, heaths, woods. June–Oct. All Eur.”

Another change in the history of *Herbarium Apulei* which made it more practical is the addition of tables of contents to enable the user to find a remedy for an ailment without reading through a codex chapter by chapter. In two of the Latin recensions one finds *tituli morborum*, which provide what strikes the twentieth-century reader as a sophisticated information retrieval system—implying that the information is worth getting to. The *tituli morborum* are listings by ailments in the traditional head-to-foot order; under each entry, like *ad capitis fracturam*, is listed the numbers of those plant chapters containing a remedy for that ailment. In the Anglo-Saxon herbals, however, one finds the simpler contents list which cites the plant chapters and under each plant name gives the list of ailments or symptoms for which the plant supplies remedies. Although this arrangement is less sophisticated than the *tituli morborum*, it still helps the user find a recipe. The user of Cotton Vitellius C. iii could move quickly to an entry in the text by matching the rubricated numeral from the contents list with the rubricated numeral at the top of the text leaf. The contents list in this codex (fols. 12–18v) is written in a color-key system as well; it distinguishes among the recipes listed by ailment under the plant names by varying the colors of the upper-case letters beginning the entries. That a contents list was considered important is testified to by the fact that in two Anglo-Saxon codices of the Pseudo-Apuleius herbal—the Old English Harley 585 (fols. 115–129v) and the Latin Bodley 130 (fols. 73–75)—the contents tables were added after the completion of the text. In Bodley 130 it is clear that the rubricated numerals which identify the chapters were coordinated with the selective list of contents in the manner of Cotton Vitellius C. iii and were added by the later scribes who supplied that table.

Two other observations on the improvement of the Pseudo-Apuleius remedy book should be made. At Saint Gall a ninth-century herbal survives which seems to have originated there (Stiftsbibliothek 217). It contains entries for sixty-two plants. Thirty-six of the chapters derive from the *Herbarium Apulei*, but twenty-six have no known source, and a number of those seem to be the addition of alpine plants. One finds as well entries which vary from the *Herbarium Apulei* in the addition of such details as “nascitur in excelsis montis juxta aquas” (Ch. 13, *ginciana*). It may also be significant that the *Ex herbis femininis* treatise which accompanies the Pseudo-Apuleius herbal in the Old English texts seems to be a sophisticated reworking of Dioscoridean materials by someone in Ostrogothic Italy who knew the plants in the treatise.

Other medical texts surviving from Anglo-Saxon England reward an examination

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24The text of this herbal and a discussion of it are to be found in Erhard Landgraf, “Ein frühmittelalterlicher Botanicus,” *Kyklos*, 1928, 1:114–146; *ginciana* is found on p. 128.

25See Riddle, “Theory and Practice,” p. 163. Riddle’s forthcoming publications which unravel the vexed tradition of *Ex herbis femininis* recipes are of major importance to the study of early medieval herbals.
with conclusions similar to those deriving from the *Herbarium Apulei*. The *Lacnunga* contains entries, to be mentioned again, that prescribe, like the ninth-century Saint Gall antidotary, a plant remedy discovered by the Arabs but unknown to the ancients.\(^{26}\) Another indication that Latin medical texts were meant to be used by Anglo-Saxons who knew the plants by vernacular names is the various surviving word lists giving vernacular words for Latin plant names. One can find plant names in the better-known general glossaries like the Corpus, Harley, and Antwerp glossaries,\(^{27}\) but of particular interest are two that are made up of plant lists: the *Durham Herbal Glossary* and the *Laud Herbal Glossary*. Both survive in manuscripts containing Latin medical texts, and it is clear that they have been added to the texts to make the Latin remedies usable for someone who knows the relevant plants by their vernacular names.\(^{28}\) As has already been mentioned, eight of the plants in the illustrated Latin Bury Saint Edmunds herbal are identified in a contemporary hand by their Old English names, and the Latin herbal in Bodleian Ashmole 1431 contains fifty-seven vernacular glosses.

Perhaps the best instance of an Anglo-Saxon vernacular medical text that gives every indication of being intelligently compiled for practical use is the *Læceboc*, the so-called Leechbook of Bald. Consisting of three books, the first two of which are closely related to the circle of King Alfred, it survives in the unique manuscript which may have been copied at the Old Minster, Winchester, circa 950–960. No single Latin source for any of the three books is known; the books seem to be an intelligent amalgam of various Latin sources, such as Alexander of Tralles, Marcellus of Bordeaux, and the Gariopontus-Petrocellus material already mentioned.\(^{29}\) The compilation of these books containing herbal remedies and relatively sophisticated surgical procedures may suggest a longstanding tradition of vernacular medicine, for there is some philological evidence that at least part of the compiled material already existed in Old English.\(^{30}\) A study of the text of the *Læceboc*, like a study of the other Old English medical texts and plant glossaries, makes it difficult to persevere in the


notion that surviving manuscripts represent mindless copying of sterile formulae.

For further confirmation that early medieval medical texts were not copied as academic exercises, it is necessary to examine the surviving manuscripts for evidence of use and for what might be called “improvement in codex” rather than “improvement in text,” that is to say, for additions to manuscripts by users. The addition of contents lists in later hands to two of the Anglo-Saxon herbals (Harley 585 and Bodley 130, where the chapters were also rubricated to agree with the contents list in the manner of Cotton Vitellius C. iii) has already been mentioned, as has the color-key system in the Cotton Vitellius C. iii contents list. That these lists were used and could be personalized can be inferred from the marginal nota sign added to the content listing wid untrumnesse on folio 68v of the Pseudo-Apuleius herbal in Hatton 76 and the identical idiosyncratic nota sign penned beside the corresponding recipe on folio 77; surely some user of the remedy book found a recipe valuable and wanted to signal it in both the contents list and the text so he could find it quickly. Similarly, it is possible to turn quickly to the herbal which begins on folio 68 of Hatton 76 without thumbing through the codex; a leather tag has been sewn to the folio.

Marginal notations provide evidence of use, although it is impossible to be certain what meaning the signs had for those consulting the codex; they may have been used to mark a passage for future reference or they may have been made in the process of recopying the codex. Whatever the reason, a number of users have made notations in the Læceboc, and these have been largely disregarded in discussions of the manuscript. There are seventeen silver circles painted in the margin of Royal 12 D. xvii at various points and twenty-five notation signs in ink, most of them marks in the shape of an X or a plus sign. There are even more drypoint notation signs, and they are mostly larger than the ink signs; most of them X-marks or cross-marks. In addition, the codex displays nearly thirty elongated nota signs which, Ker suggests (No. 264), indicate that the manuscript was read in the twelfth or thirteenth century. There are other sorts of marginal notations as well; in four instances marginal Latin comments have been scratched out, although one Latin gloss does survive, as do two Old English correction glosses. Marginal neums are also to be found on folios 30v and 89v.

Perhaps the strongest indication that an Anglo-Saxon medical manuscript was considered a living remedy book and not an artifact is the addition of other recipes by later users. Many instances of this practice can be found in the illustrated vernacular herbal in Cotton Vitellius C. iii. Previously unnoticed fragments of later writing around a hole on folio 11 are part of a recipe using senecio.31 On the last leaf of the Sextus Placitus portion of the herbal, folio 82v, begins an accumulation of miscellaneous Latin and Old English recipes in different eleventh- and twelfth-century hands. These recipes end on folio 83v and are followed by a Latin tract on urine in a twelfth-century hand on folios 84–85. Folio 18v, following the contents list and preceding the ornamental title and author portrait, was originally blank, except for three words. The leaf now contains, in the left column and a portion of the right, two Old English recipes with Latin titles in red, “ad vertiginem” and “ad pectoris dolorem.” It should also be mentioned that the illustrator or colorist has supplied, in a number of instances, vernacular plant names to label the illustrations.32 Yet another

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31 It is possible to make out “ad ner. 7dolorecl . . . cum axungia et alia. senecio. pecto / lib. ruun vitica.” A relevant recipe is the third remedy in Ch. 76 of the Herbarium Apulei, “Ad pedum tumorem vel dolorem aut idem nervorum. Herba senecion tunsa cum axungia .. .” (italics mine).
32 See Voigts, “A New Look,” pp. 41–42, for a discussion of these labels. One might conclude that those illustrations that bear the artist’s vernacular labels (in spelling that sometimes varies from that of the text)
addition is on the leaf facing the beginning of the herbal, folio 10v; this leaf contains in the right column the Latin names of seventy-eight plants in a twelfth-century hand with barely discernible Old English glosses above twenty-one of them. This list consists of those plants treated in the popular Latin poem attributed to Macer (Odo of Meung) and usually titled either “De viribus herbarum” or “De virtutibus herbarum.” 33 All of these examples of “improvement in codex” make it clear that not only were Anglo-Saxon medical books intended to be used, they were also subject to alteration and addition to make them better guides to healing.

ECCLESIASTICAL EXCHANGE AND COMMERCIAL TRADE IN THE EARLY MIDDLE AGES

The evidence of the use of these remedy books brings one to the question of the availability of plants discussed and depicted in them. The answer to that question is both another way of countering the first dictum that Anglo-Saxon medical books are academic exercises and of responding to the second, that texts and illustrations were useless where they involve plants not indigenous to transalpine Europe, a reservation that applies to medical texts deriving from antiquity 34 as well as to those early medieval texts which incorporate Arab discoveries like galingale and zedoary. 35 The fact of the matter is that Mediterranean and Eastern plants could be had in Europe throughout the early Middle Ages both in a not-for-profit exchange and by way of commercial trade. First, there is a good deal of evidence of exchange among individual ecclesiastics and between religious houses. Too much should not be made of the (c. 754) letter of Bishop Cynehard of Winchester to Lull in Mainz asking for medical books because those he had dealt with ingredients unknown to him and difficult to obtain. 36 The letter seems less typical to me than one of the several early-eleventh-century letters of Fulbert of Chartres which deal with the dispatch of herbs; Fulbert says in a letter which accompanies a packet of medicines and herbs for Adalbero of Laon that Adalbero can easily find the instructions for the administration of the medicines in his own antidotaria. 37 Other continental examples can be cited. Gregory of Tours refers to the exchange of herbs between monastic houses, and Alcuin writes of the death of one Basil who had formerly conveyed medicines to the recipient of the


I have found three instances in the correspondence of Boniface where the Roman ecclesiastics specify the herbs and spices they are sending to the Anglo-Saxon archbishop in Germany. A letter survives, in a ninth-century formulary, which may have been written by Walahfrid Strabo, requesting seeds of chive which were not to be bought in France.

While continental practice may suggest an analogous situation in pre-Conquest England, more important for a consideration of Anglo-Saxon medical books is the evidence of ecclesiastical exchange of plants among Anglo-Saxons. Denehard, Lull, and Burchard of the eighth-century Anglo-Saxon mission to Germany wrote of sending pepper and cinnamon along with frankincense to Abbess Cuniburg in England (739–741). Saint Willibald, the widely travelled native of Wessex who became Bishop of Eichstadt around 740, seems to have been an amateur trafficker in controlled substances. In 726 he obtained balsam in Jerusalem and was able to smuggle it through customs at Tyre by passing it off as petroleum in a gourd which did indeed contain petroleum in the outer segment. Another important instance seems to be implied in chapters near the end of the Book II of the Leceboe of Bald (Royal 12 D. xvii, fols. 105v–106r) where we are told that the recipes given there had been ordered to be told to King Alfred by Elias III, Patriarch of Jerusalem (c. 879–907). That these recipes, which call for Levantine ingredients—scammony, ammoniacum, tragacanth, galbanum, balsam, and petroleum—were transmitted to Alfred along with the ingredients has been inferred on the basis of Asser's telling of Elias sending gifts as well as letters to Alfred.

As the reference to the customs station deluded by Willibald's stratagem implies, commercial trade in medicinal herbs and control thereof certainly occurred in the early Middle Ages alongside the more informal exchanges of churchmen and religious houses. In the late seventh and early eighth centuries the monks of Corbie imported "considerable quantities" of herbs from Marseilles, and a ninth-century shopping list survives from that house as well—a list of twenty-three herbs, mostly exotica, to be purchased "at the market," perhaps in Cambrai. In 793 a Spanish Muslim visiting Mainz marvelled at the quantity of "Indian" spices to be found there. We know the Carolingians obtained herbs from Spain, Africa, and the Levant by trading in Provence, and overland trade through Lombardy during the seventh through the ninth centuries seems to have involved herbs, was closely

39 Ep. 62, 84, 85 in Die Briefe des heiligen Bonifatius und Lullus.
41 Ep. 49 in Die Briefe des heiligen Bonifatius und Lullus.
43 See Wright's discussion of this passage in the prefatory material to the facsimile, Bald's Leechbook, pp. 17–18.
45 For the list, see Riddle, "Introduction," p. 194; see also Lopez, "The Trade," p. 261.
regulated, and, by special agreement, favored Anglo-Saxon traders. It is also worth remembering that the depots administered by the government of the Eastern Empire to control foreign trade were called ἀνάθεμα, the word which came later to mean a storehouse for drugs and in the form we now know it, apothecary, to mean a dispensary.48 To be sure, we cannot assume that the amarium pigmentarum of an Anglo-Saxon house contained all the plants for 185 chapters of the Herbarium Apulei, but there is certainly evidence to conclude that at least some of the Mediterranean plants would have been available through trade.

PLANT CULTIVATION: THE MINIMAL CLIMATIC OPTIMUM

Even with the explanations of the availability of southern plants to Northern Europe via trade, we are still left with the objection to the usefulness of herbal illustrations which depict southern plants; one has no need for the illustration of a living plant if one can obtain sap, oil, dried leaves, or seeds in trade. However, this traditional judgment, like the first, bears reassessing, in this case in terms of recent research in palaeoclimatology and in terms of a careful study of the monastic herb garden.

Traditional disparagement of Anglo-Saxon herbal illustrations by historians of medicine and art seems to have assumed that the climatic conditions and floristic zones of Europe today prevailed in the Middle Ages as well, and indeed, under present circumstances, manuscript miniatures of Mediterranean plants seem inappropriate for England. Climatic conditions during the Anglo-Saxon period were, however, not the same as they are today, and although most of us have a vague notion that Greenland once was green and that Vinland was not a fantasy in A.D. 1000, that information has had little impact on our understanding of the Anglo-Saxon world. To my knowledge, no one has attempted to accommodate the question of southern plants in Anglo-Saxon herbals to the recent work in palaeoclimatology and its related disciplines, palynology, dendrochronology, and historical phytogeography. It is time to do that.

Speculation on the impact of climate change on historical civilizations is crucial to some recent explanations linking the decay of Mediterranean civilizations in two different instances to periods of Saharanlike conditions in that region (accompanied by a corresponding amelioration of weather conditions in the North of Europe). For example, the decline of Byzantine civilization in the seventh through the eleventh centuries has been linked to the famine, plague, and depopulation that were a consequence of the reduced rainfall of the climate change. Of late, similar explanations for historical patterns in Northern Europe have been offered. Behind these explanations lie, for English history at least, the important work in palaeoclimatology of H. H. Lamb and the application of this sort of study to historical interpretation, particularly in regard to continental Europe, by Emmanuel LeRoy Ladurie.51

What seems clear now is that the history of Northern Europe was decidedly

47Ibid., pp. 271, 279.
48Ibid., p. 275. Surely many if not most of the Eastern drugs required in the 9th-century Saint Gall antidotary and discussed in detail by Riddle in "Introduction," pp. 186–189, were obtained through trade.
50Rhys Carpenter, Discontinuity in Greek Civilization (Cambridge: Cambridge University Press, 1966); see esp. pp. 1–17.
affected by what is called the "minimal climatic optimum," or the "secondary climatic optimum"—that is to say, a period from around the ninth century to the thirteenth when the climate of Northern Europe was warmer and drier than it has been since, even in the comparatively warm period of the first half of the twentieth century.\(^5^2\)

During the peak of this xerothermic period, circa A.D. 1000–1200, mean annual temperatures in Northern Europe were at least \(^1^\circ\) to \(^2^\circ\) C higher than they are now,\(^5^3\) and annual rainfall was 10 percent less than its present amount.\(^5^4\) This was the era of population buildup and overflow in Scandinavia, the time, in short, of good centuries for the North of Europe and bad for the South.\(^5^5\) This era was followed by a period from 1200 to 1400 of climatic decline in Northern Europe\(^5^6\) (and an upswing in Mediterranean civilization\(^5^7\)) and a period of partial recovery from 1400 to 1550 before the "little Ice Age" of 1550 to 1850.\(^5^8\)

While these climate changes can be discerned from growth patterns of trees in North America and Japanese annual records of the date of the first cherry blossoms that go back to the ninth century,\(^5^9\) it is European evidence that pertains here. During the minimal climatic optimum, preglacial trees thrived at heights in the Alps where they have failed to grow since, even in the comparatively warm twentieth century.\(^6^0\) Of particular importance for the Anglo-Saxon world are the archaeological evidence and the written records of Anglo-Saxon vineyards. The *Domesday Book* recorded in 1085 thirty-eight vineyards in England in addition to those of the king. English wine was considered equal to that of France in terms of quality as well as quantity; there were more than half a dozen vineyards of over five acres, and at least some of them, as in Gloucestershire and at Thorney, were unprotected. A vineyard was maintained at Ely for several centuries.\(^6^1\) Similarly, remains of medieval tillage, evidenced by surviving ridge and furrow, indicate that plowing went on in Redesdale in Northum-

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55 Carpenter, *Discontinuity in Greek Civilization*, p. 15. Scandinavian population expansion to the New World was, of course, possible because of climatic conditions of Greenland; see W. Dansgaard, *et al.*, "One Thousand Centuries of Climatic Record from Camp Century on the Greenland Ice Sheet," *Science*, 1969, 166:377–381.


57 Carpenter, *Discontinuity in Greek Civilization*, p. 15.


berland up to a height of 1,050 feet for some two centuries until 1250 or 1300. Cultivation has not been attempted there subsequently.  

It is difficult to assess precisely the implications of this xerothermic period for floristic zones in Anglo-Saxon England. Many factors other than temperature and rainfall must be considered, factors like biotype variation, soil content, and the Anglo-Saxon plowing which altered floristic zones in England. Furthermore, there are plant distributions, like that of the strawberry tree, *Arbutus unedo* L. (Mediterranean region and three counties in Ireland), that defy explanation. Nonetheless, the period when Anglo-Saxon medical texts calling for Mediterranean plants were copied (10–12th centuries) and when Anglo-Saxon herbals of Mediterranean origin were illustrated (1050 and 1100) was an era of comparatively warm, dry summers, an important characteristic of Mediterranean floristic zones. While I do not suggest that the Mediterranean plants represented in the herbals grew wild in Anglo-Saxon England, I would argue that it would not have been difficult to cultivate them during the minimal climatic optimum, and there is some scientific evidence of the introduction of plants during this era. Palynological evidence indicates that the woad, *Isatis tinctoria* L., prescribed in the Old English *Herbarium Apulei* and mentioned five times in the *Laceboc* and once in the *Lacnunga*, was cultivated in England during the Anglo-Saxon period. Similarly, the Mediterranean peony, *Paeonia mascula* (L.) Mill., a plant celebrated for its medical use in the *Herbarium Apulei*, is found naturalized in England only at Steep Holm, on the grounds of a thirteenth-century Augustinian priory; it was formerly found growing on the site of the abbey near Winchcombe in Gloucestershire, an eighth-century foundation.

**PLANT CULTIVATION: THE HERB GARDEN**

That the presence in England of two Mediterranean medical plants named in Anglo-Saxon remedy books seems to result from Anglo-Saxon cultivation is a crucial point for this paper and one which raises a final area of concern in the matter of Anglo-Saxon knowledge of Mediterranean plants—that of the monastic herb garden. It is important to emphasize the easily overlooked implications of the minimal climatic optimum that made cultivation of southern plants easier, but the cultivation practices

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67Godwin, *History of British Flora*, p. 480. The Old English word is *wad*. For the Old English Pseudo-Apuleius herbal, see Cockayne, *Leechdoms*, Vol. I, p. 174, and for the Latin text, see Howald and Sigerist, *Antonii Musae*, p. 127. See Bierbaumer, *Der botanische Wortschatz des Altenlischen*, Teil I und II, s.v. *wad*. The plant was also used as a source of dye and may have been gathered in this connection, if not cultivated, by the blue-painted Britons encountered by the Romans.
bear examination in their own right. We are, after all, not so much dealing with native floral populations as we are with pampered plants grown within the cloister walls that radiate heat and provide shelter from the wind—plants that are weeded, mulched, and watered, in many instances annuals, for which the question of winter hardiness is irrelevant. Indeed, the history of cultivated plants is quite a different matter from the history of floristic zones of indigenes.

Medieval herb gardens represent a continuation of an ancient institution. Pliny in the book of the *Historia naturalis* which deals with plants produced “by Mother Earth for medicinal purposes only” tells of having examined nearly all the plants of which he writes in the special garden of the botanical authority Antonius Castor. We know as well that the Romans made some effort to acclimatize delicate plants from other regions; evidence remains of special buildings, with windows of talc and heated by flues, for sheltering plants in winter. While there is no proof of continuity between the Roman and medieval gardens in transalpine Europe, it should be pointed out that gardens were found with Roman villas on the Moselle and the Rhine, and one would assume that villas in Roman Britain carried on the practice as well. The significance of the gardens of antiquity is that the cultivated garden plants of Rome became the cultivated garden plants of Europe, at least until 1560; and as recently as the nineteenth century an analysis of German peasant gardens concluded that the plants contained therein were of Greek or Latin origin, plants mentioned in Dioscorides, Pliny, and other antique writers.

Valuable records of plant cultivation from the early Middle Ages survive in the garden lists from the court of Charlemagne. Two shorter lists are found in the inventories of five royal estates; the estate of Asnapius lists twenty herbs and vegetables and eight trees, and the estate of Treola inventories twenty-seven and ten. Of even greater interest is the *Capitulare de Villis*, circa 800, which reflects the estate reforms of either Charlemagne or his son, Louis the Pious. The *Capitulare* contains royal command giving the names of seventy-two vegetables and medicinal plants and sixteen fruit and nut trees to be grown in the garden, “Volumus quod in horto omnes herbas habeant, id est lilium, rosas, fenigrecum, costum, . . .” Many of these plants and trees are southern, such as cumin, capers, figs, but there is no reason to think that the emperor was not quite serious in his wish to have the plants grown in his gardens, and indeed, it is not unlikely that many of the plants could have been grown with careful cultivation. It has been suggested that Carolingian gardeners acclimatized southern and eastern plants which Charles acquired as a result of his

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70E.g., cumin, *Cuminum cyminum* L., listed both in the *Capitulare de villis* of Charlemagne and in the Saint Gall cloister plan, is an annual.


72*Historia naturalis* XXV 5, 9, ed. W. H. S. Jones, Loeb Classical Library (Cambridge, Mass.: Harvard University Press, 1966), Vol. VII, p. 142. Pliny here uses the word *hortulus* as does Walahfrid some centuries later; the word seems to have a more precise meaning than simply the diminutive form of *hortus*.


dealings with the Caliph Haroun-al-Rashid.\textsuperscript{78}

The continental records which are more germane to an Anglo-Saxon focus than royal documents are those describing monastic herb gardens, for literate Anglo-Saxon culture was dominated by monasticism, and the surviving Anglo-Saxon medical texts seem to be the products of monastic scriptoria.\textsuperscript{79} Numbered among the continental monastic records is the famous plan for the exemplary Carolingian monastery, the Saint Gall cloister, which depicts elaborate facilities for the care of the sick and a herb garden with sixteen plots designated by the names of medicinal plants. The medical garden, adjacent to the \textit{domus medicorum}, should not be confused with the vegetable garden with designations for eighteen plants, or the orchard-cum-cemetery diagram representing both graves and fruit and nut trees.\textsuperscript{80} As in the case of the \textit{Capitulare}, we find cumin and figs named.\textsuperscript{81} The most personal account of a monastic herb garden is in the \textit{Hortulus} of Walahfrid Strabo, Abbot of Reichenau, 838–849, a poem which celebrates the labor of the garden and considers twenty-nine plants, twenty-one of which he has cultivated. Recounting the effort involved in hacking out nettles, building up the beds, spreading manure, and carrying water, the poem tells of some plants grown from seed, others from stocks, of training gourds on props, of the superiority of the betony of the garden over that which grows wild, of drying plants to store for the winter. It is clear that the abbot speaks from a genuine involvement with the cultivation of plants when he celebrates in hexameters the medicinal values of the plants he raises.\textsuperscript{82} Another poem by a continental monk dealing with remedies to be obtained from seventy-seven plants was also popular in the Middle Ages. In fact, the plant names from the "\textit{De virtutibus herbarum}" of Macer (Odo of Meung) have already been mentioned; they are found with Old English glosses in Cotton Vitellius C. iii, on the folio preceding the Old English illustrated Pseudo-Apuleius herbal.\textsuperscript{83}

Unfortunately, our records of Anglo-Saxon monastic gardens are not so rich as those for the Continent. We do know, however, that there was a garden at Ely from the seventh century on,\textsuperscript{84} and that the first abbot was famed for his planting and grafting skills in the garden and orchard.\textsuperscript{85} Similarly, another East Anglian house, Thorney, which is not far from Ely and like Ely has already been mentioned for its vineyards, was famous for its tree garden and the luxuriant growth of its plants.\textsuperscript{86} The proximity of these two fenland houses with a reputation for horticulture and viniculture may be more than a coincidence. Neither is remote from Bury Saint Edmunds where Bodley 130 was painted, and I have argued elsewhere that the conventions of the monastic dedication page in the vernacular illustrated \textit{Herbarium Apulei} suggest

\textsuperscript{79}Although we do not know the origin of all the surviving Anglo-Saxon remedy books, we do know that Bodley 130 was a product of Bury Saint Edmunds, that the unique manuscript containing the \textit{Laceboc} was copied at the Old Minster, Winchester, and that the monastic dedication page (fol. 11v) in Cotton Vitellius C. iii tells us something about the origin of that codex (for a discussion of the dedication page, see Voigts, "A New Look," pp. 44–60).
\textsuperscript{81}Gothein does not think that the fig or laurel could have been grown at Saint Gall (\textit{A History of Garden Art}, Vol. I, p. 173), but again I believe that judgment overlooks the characteristics of the xerothermic period and the circumstances of monastic horticulture.
\textsuperscript{82}The \textit{Hortulus} of Walahfrid Strabo (see above, n. 40), and Fischer-Benzen, \textit{Gartenflora}, pp. 187–188.
\textsuperscript{83}See above, n. 33.
that that codex could have originated at an East Anglian monastery like Peterborough, Croyland, Ramsey, Thorney, or Ely.87

While we lack an Anglo-Saxon equivalent of the Saint Gall cloister plan, a post-Conquest diagram of the abbey at Canterbury may well suggest practices from more than a century before. In this drawing half of the rectangular cloister is designated “herbarium,” and while it lacks the plant labels of the Saint Gall plan, it does represent the area filled with stylized drawings of plants.88 The gardener’s records from the Norwich chartulary postdate the Conquest by three hundred years and so cannot serve to imply Anglo-Saxon practices, although surely the responsibilities and efforts entailed by the garden are not unique to the later period.89

**IMPLICATIONS**

The time has surely come to put to rest the notion that the Anglo-Saxons who compiled, copied, and illustrated the surviving vernacular and Latin remedy books epitomized the “wilting mind of the Dark Ages.” We must discard the first dictum that the surviving texts represent mindless copying of “sterile formulae,” and the second that the illustrations were of no worth because they are stylized and depict Mediterranean plants. We must rather look at the sophisticated handling of text by the Anglo-Saxon makers and users of medical books, at the vernacular revision in the *Herbarium Apulei* of the Latin tract on betony, for example, a reorganization that deletes the nonessential, mostly magical, section and unites the important material about habitat and preparation of the plant at the beginning of the chapter. We must also look at the way Anglo-Saxons attempted to make their books as useful as possible, by adding tables of contents and recipes, by marking recipes with marginal notations, by providing Latin-vernacular herbal glossaries to Latin remedy books and glossing Latin plant names with the vernacular labels. We must likewise acknowledge that Anglo-Saxon abbesses and kings acquired exotic drugs through informal exchange, largely through ecclesiastics, and similarly, we must consider that some exotic plants were likely obtained through trade. Most important, we must admit to the probability that Anglo-Saxon monks and nuns cultivated Mediterranean plants with great care and under more auspicious climatic conditions than exist today, remembering that plants like peony, formerly not native to Britain, were naturalized after cultivation during the pre-Conquest era. In short, we must grant that Anglo-Saxons valued healing plants, that they valued books about healing plants, and that they dealt with both intelligently.

Two final examples should make this point. The first is a reconsideration of Chapter 5 in the Old English *Herbarium Apulei*, dealing with hennebelle (Fig. 2). We have been told that this chapter is useless as it stands in Cotton Vitellius C. iii (fol. 23v) because the illustration does not depict the henbane, *Hyoscyamus niger* L., that is now native to England; rather it portrays the Mediterranean *Hyoscyamus reticulatus* L.90 The fact is that Anglo-Saxons knew full well that the hennebelle depicted was not the dangerous native plant; not only does it not resemble it, but the text carefully

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88The plan, which seems to have been drawn as a guide to the waterworks, the most prominent element in the sketch, is bound with the Edwine Psalter executed at Saint Augustine’s, Canterbury, in the 12th century, now Cambridge, Trinity College R. 16. 2. See Plt. 228 in Crisp, *Mediaeval Gardens*, Vol. II.
distinguishes between the two plants: “Peos wyrt þe man symphoniacam nemneð 7 oðrum naman belone 7 eac sume men hennebelle hatad wiht on bèganum landum 7 on sandigum landum 7 on wyrttunum. þonne ys oðer þisse ylcan wyrte sweart on hiwe. 7 stiðran leafum 7 eac ætrigum. þonne ys seo æerre hwitre 7 heo hæfð þas mægnum.” (This plant which one calls symphoniaca and others name belone and also some men call hennebelle grows on cultivated lands and on sandy lands and in gardens. Then there is another [of] this sort of plant [which is] dark in color and [has] stiffer leaves and [is] also poisonous. The first one then is the whiter and it has the powers.) Again, the vernacular text has placed at the beginning of the chapter the material found at the end of the Latin text, and this is given pride of place to make certain that the user does not utilize the poisonous native relative of the healing plant by mistake. The compiler and illustrator did not make a stupid mistake; rather they made every effort to direct the user to the correct plant. And a correct plant it is, for after looking through scores of dried varieties of solanaceae one is struck by the
verisimilitude of the illustration to the Mediterranean and Turkish varieties of *Hyoscyamus*: *H. aureus* L., *H. pusillus* L., *H. reticulatus* L.91

Finally, I think we must take Walahfrid Strabo, the monastic cultivator of plants, at his word in describing the situation that must have obtained in Anglo-Saxon England as well as at Reichenau. He speaks of paying a great deal of money for Indian pepper, and he commends a recipe using pennyroyal for an ailing stomach, saying he knows for a truth that it works, but he will also grant that wearing a sprig of pennyroyal behind one’s ear is simply a matter of custom and habit.92 Most significant, however, he writes that he knows what he does about plants and gardening because he has learned from common opinion, and from reading ancient books, and from hard labor. That must surely also be the case with Anglo-Saxon users of plant remedies, and we must grant them that.

Hae non sola mihi patefecit opinio famae
Vulgaris, quaesita libris nec lectio priscis;
Sed labor et studium, quibus otia longa dierum
Postposui, expertum rebus docuere probatis.93

91 For a number of helpful illustrations, see A. I. Poyarkova, “Contributions to the Systematics of the Species Henbane Related to *Hyoscyamus Reticulatus* L.” *Journal Botanique de l’URSS*, 1942, 27:117–130. While Pliny discusses four varieties of *Hyoscyamus* (XXV 17, 35–37), I do not think the Anglo-Saxon herbal tradition draws on this discussion. If anything, the Anglo-Saxon treatment resembles in some points Pliny’s distinction between black and white hellebore (XXV 21, 48–52).

92 *Hortulus*, pp. 52–54.


This I have learnt not only from common opinion
And searching about in old books, but from experience—
Experience of hard work and sacrifice of many days
When I might have rested, but chose instead to labor.