



PALEOGRAPHY

A. MATERIALS FOR RECEIVING WRITING

1. *Early Materials*

A great variety of materials has been used to receive writing, even leaving out of consideration materials into which writing has been carved. In ancient times materials that were used to receive writing included such diverse items as the leaves and bark of trees, linen cloth, potsherds (broken pieces of pottery, designated "ostraca" when written on), walls of buildings (as in Herculaneum and Pompeii), metal, and wooden tablets with or without wax coating.

Waxed tablets were used in Greece and Rome from the earliest times. To make these tablets, a piece of wood was hollowed slightly, somewhat as a child's slate today, and the hollowed surface was coated with wax. Several such tablets might be fastened together, a leather thong through holes in the edge of the tablet forming the hinge. Such hinged tablets were doubtless the earliest form of the codex or modern book form. Waxed tablets were used not only for notebooks and temporary materials but also for correspondence and even for legal documents which needed to be preserved. In the latter, two tablets would be hinged face to face, which would protect the written surfaces. They could also be sealed against inspection, as in the case of a will. Waxed tablets were utilized over a period of sev-

eral centuries, long after the classical period. St. Augustine refers to some such tablets which he owned, made of ivory instead of wood. A few waxed tablets, some in Greek and some in Latin, are extant. It is probably on such a tablet (πινακίδιον) that Zechariah, father of John the Baptist, wrote his son's name (Luke 1:63).

2. Papyrus

Papyrus, the writing material from whose name the word "paper" is derived, was the common material for receiving writing for many centuries. Papyrus (πάπυρος) was used in Egypt from the earliest times, the oldest known fragment dating from about 2400 B.C. Papyrus as writing material was taken for granted in Greece in the fifth century B.C. Inexpensive and convenient, papyrus was used for both literary and non-literary writings—letters, receipts, business matters, and other purposes.

The papyrus plant is a reed which grew in swampy areas in the delta of the Nile River and in a very few other places in the Mediterranean world. The plant had a triangular-shaped stalk with a tassel at the top, and grew to a height of from six to twelve feet. The outer layers of the stalk were stripped off, leaving the pithy center. This center section was cut into thin strips which were laid side by side. A second layer was then laid on top of the first, crosswise of it (see Fig. 3). Paste may have been used between the layers.

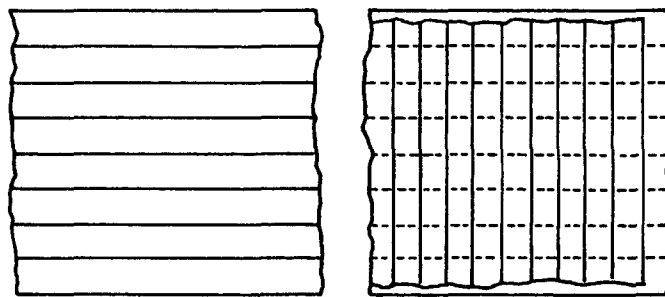


Figure 3

The sheets were then pounded to secure cohesion, left to dry, then smoothed with a piece of ivory or a shell. The pith of the papyrus was known as βίβλος or βύβλος (cf. “Bible,” “bibliography”), and the resulting sheet as χάρτης (cf. “chart”). The latter Greek word occurs in 2 John 12.

The sheets usually ranged in size from 6 by 9 inches to 12 by 15 inches. The sheets were then overlapped slightly and pasted together, and were sold in rolls of twenty sheets. The best sheets were placed on the ends of the roll, since they would receive the greatest wear. Sometimes an extra strip would be placed at the beginning and end of the roll, which would give further reinforcement and would also aid in rolling. In Roman times, the first sheet of the unwritten roll was called the πρωτόκολλον (“first glued sheet”), and was commonly inscribed with the names of the officials who controlled the trade (cf. “protocol”). A book in roll form was called a βίβλος or βιβλίον from the papyrus strips. If a work comprised several rolls, one roll was called a τόμος, from τέμνω, “to cut” (cf. “tome”).

Writing was done on the side of the roll on which the papyrus strips ran left and right, which was the inside of the roll. Writing would be more difficult on the side on which the strips were perpendicular to the line of writing, and only rarely would the back of the roll be written on. Such a roll written on both sides is an *opisthograph*, one of which may be referred to in Rev. 5:1. Papyrus later came to be used in the codex book-form, as is discussed below.

An important item of Egyptian export, papyrus was the common writing material especially until the third century,¹ for classical literature until the sixth or seventh century, and even later for some documents. It is therefore virtually certain that the originals of the NT books were written on papyrus. Papyrus sheets were naturally perishable, and few documents written on papyrus have survived except in the dry sands of Egypt.

¹Dates given are in the Christian era unless designated B.C.

3. *Parchment or Vellum*

The skins of animals (διφθέροι), in the form of tanned leather, were used to receive writing in very ancient times. They made strong and durable rolls. They were used by Persians, Hebrews, and Greeks, among others, but not much by the Egyptians because of their plentiful supply of papyrus. The oldest known specimens of leather scrolls date from about 1500 B.C. Leather rolls have continued to be used occasionally for the Hebrew or down to modern times.

It was a later development, however, which brought animal skins into common use to receive writing. In this process, the skins were soaked in limewater, the hair was scraped off, and the skins were scraped and dried, then rubbed with chalk and pumice stone. The result was a fine, smooth writing surface of long-lasting quality. This material is known as *vellum* or *parchment*. Vellum is properly calfskin, but the term came to refer to other skins of the finer types as well, while parchment referred to ordinary skins; but the two terms are now used interchangeably. The term “parchment” derives from the name of the city of Pergamum, which was noted for its fine quality of this product.

It seems rather surprising that parchment was at first considered inferior to papyrus and was primarily used for notebooks, rough drafts, and other non-literary purposes. As time passed, perhaps partly because papyrus was unable to fill the increasing demands for writing material, and partly because of an increasing recognition of the superiority of parchment, papyrus was more and more displaced in general use. By the third or fourth century parchment was the common material for receiving writing, although papyrus, as has been said, continued to be used to some extent as late as the seventh century.

Only the very earliest NT MSS now in existence are on papyrus. Practically all of the MSS from the fourth to the fourteenth century are written on parchment. In 331 the Emperor Constantine ordered fifty copies of the Bible to be made on parchment for the churches of Constantinople. In 350, old and damaged papyrus volumes from the library of Pamphilus in

Caesarea were replaced by parchment copies. Indeed, the Christian church is given credit for the displacement of papyrus by parchment, when both tradition and the established book trade favored the continuance of the use of papyrus for literary writings. Thus papyrus is the traditional writing material for the pagan classics and parchment for the Christian writings.

4. Paper

Paper was invented by the Chinese—according to Chinese tradition, by one Tsai Lun, in A.D. 89. The oldest known specimens, from the fourth century, are paper made of hemp or flax. Paper became known to the Arabs about the eighth century and was introduced into the Western world at the time of the Crusades. The oldest extant paper MS of Europe is dated 1109. Paper began to be used in Europe for books in the twelfth century, rivaled parchment by the mid-fourteenth, and had virtually replaced parchment by the fifteenth century, shortly before the printing press brought about a revolution in the world of literature.

B. WRITING UTENSILS

1. Stylus

The common instrument for writing on the ancient waxed tablets was a stylus. Made of metal, ivory, or bone, the stylus had a point at one end for writing and a rounded knob at the other for making corrections.

2. Reed Pen

The earliest type of pen for use in writing on leather or papyrus was the reed pen (κάλαμος; see 3 John 13). The earliest known examples of reed pens were frayed at the ends like a brush. Pointed pens date from about the third century B.C. and were used at least to some extent through the Middle Ages and later. It is safe to assume that virtually all extant papyrus MSS, both of the NT and of other documents, were written with a reed pen. To make a reed pen, the reed stalk was dried, sharpened to a

point on one end, and slit somewhat as a modern pen point is slit. Beautiful writing was possible with such pens.

3. Quill Pen

The quill pen is first mentioned much later than the reed pen. A quill would have been too firm for satisfactory writing on papyrus, but was probably introduced soon after parchment came into use. It largely supplanted the reed pen and became the ordinary pen for writing on parchment. The point of the quill was sharpened and slit for writing much as was the reed pen.

4. Other Implements

Ink used in ancient MSS was most commonly one of two kinds: ink made of lamp-black and gum dissolved in water, which produced very black writing; and ink made from nutgalls, which produced a fine rusty-brown color such as that in Codex B and Codex D. Red ink was sometimes used as were other colors, including purple, gold, and silver. Black ink is mentioned in 2 John 12 and 3 John 13.

The scribe would need some additional implements as well, including a knife for making a new pen, a whetstone for sharpening the knife, pumice stone for smoothing the parchment sheet and for sharpening the pen point, and a sponge for erasing and for wiping the pen point.

C. BOOK FORMS

1. Roll

The books (βιβλία) of the first century were papyrus rolls, the form which had been in use for centuries. A papyrus roll was commonly composed of twenty sheets glued together, but more sheets could be added or more than one roll glued together. The title of a work was usually given at the end, but a papyrus tag containing the title was also often attached to the top of the roll as an aid to the reader.

Columns of writing in a roll (or scroll) were ordinarily two to three inches wide, often without regard to the joining of the

sheets. A narrow column would be desirable in a roll, since less of the roll would then have to be opened at one time. Margins between the columns were likewise narrow. The writing was always done so that the roll was used horizontally, not vertically. In Greek, Latin, and other languages in which writing proceeds from left to right, the roll would be unrolled from the right and rolled to the left. In a Hebrew roll the writing and the rolling would be in the opposite direction. Sticks or other types of rollers may sometimes have been used, but the roll could also simply be rolled on itself. When a writer or reader had completed a roll, it was re-rolled by holding the roll under the chin and rolling with both hands. Failure of a reader to re-roll a book would be considered a mark of laziness.

The roll form of book would involve obvious difficulties for reading through a work in several sittings, and especially would involve difficulties for reference purposes. There was even a proverb, "A great book, a great evil." This difficulty of reference became particularly acute in regard to the Christian scriptures. As a result, Christianity exercised the greatest single influence in bringing about the use of the codex book form and the displacement of the roll.

Several NT passages probably refer to papyrus rolls. In 2 Tim. 4:13, βιβλία and μεμβράνας may refer to papyrus rolls and parchment rolls or codices respectively, or possibly to leather rolls and parchment codices respectively. The "roll" of Isaiah, and the process of unrolling and re-rolling it, are referred to in Luke 4:17, 20. John's Gospel is referred to as a βιβλίον in John 20:30. Revelation 6:14 describes the sky as vanishing like a scroll which is rolled up (βιβλίον ἐλισσόμενον). The possible reference to an opisthograph, a roll written on both sides, in Rev. 5:1, has already been mentioned.

2. Codex

Ancient waxed tablets, fastened together by a thong hinge, furnished the model for the modern book form, although it was impractical to fasten together more than a very few tablets.

It was long thought that the change from the roll to the codex form of book coincided with the change from papyrus to parchment. The evidence makes it clear, however, that the codex was common while papyrus was still being used. There are now extant very extensive NT MSS and fragments on papyrus, some from as early as the second century, and not one can be clearly identified as a NT roll.

The codex seems to have been first used for notebooks or for an author's early drafts of a work, even when the final form was to be written on a roll. Its advantages for reading, and especially for reference, soon brought it into common use, especially for the NT. The secular classics continued to be copied on rolls until much later.

It has been said that when the codex first displaced the roll the narrow columns characteristic of the roll were carried over into the codex, with the columns gradually becoming wider for convenience in reading. Codex \aleph , for example (4th cent.), has four columns to a page; Codex B (4th cent.), has three columns; Codex A (5th cent.), two columns, and Codex D (6th cent.), one column. Later MSS usually have one or two columns to the page. On the other hand, contrary evidence is found in the fact that the very earliest NT MSS, the papyri, show no such development, but have one wide column or two narrower columns to the page.

Codices are formed of quires (folded sheets). Occasionally a codex was made with only one folded sheet to a quire. At the other extreme was the book made of a single quire, with all the sheets of the book folded into one quire. This type would be unsatisfactory for all but the briefest books, as it would tend to fly open at the middle, open unevenly, and the center sheets would be smaller or would project beyond the outer sheets. The most common type of quire, however, was formed of four folded sheets, while quires of from three to six sheets are sometimes found. The quires of a given book would, of course, be uniform. In a papyrus quire the sheets would usually be placed so that vertical strips faced each other and horizontal strips

faced each other. In parchment quires the hair side of a sheet would face a hair side, and the flesh side would face a flesh side. The quire itself would likewise be matched to adjacent quires.

New Testament MSS earlier than the fourth century are exclusively on papyrus; those from the fourth century and later are, with a few exceptions, on parchment.

A papyrus codex had one distinct disadvantage for the scribe in that on every alternate page the scribe was forced to write across the fibers. This disadvantage was not found in the papyrus roll, where the writing was done on one side only, nor in the parchment codex, where the difference in the surface of the flesh side and the hair side was much less noticeable.

Since the supply of parchment was not unlimited and since the sheets were quite durable, when a parchment codex was no longer wanted or became unusable the writing was sometimes scraped off and a new text written over it. Sometimes the quires would be turned upside down for the new text. Sometimes the sheets would be separated, cut through the fold, and folded again into sheets half the original size. Codex C is an example of the former and Codex Ξ of the latter. A MS thus rewritten is called a *palimpsest* (from $\pi\acute{\alpha}\lambda\iota\nu$, "again," and $\psi\acute{\alpha}\omega$, "I scrape"; see Plate 5). More than fifty Greek NT MSS of the tenth century and earlier are palimpsests.

In the past, attempts were sometimes made to recover the original text of palimpsest MSS by the use of chemical solutions; but this radical treatment sometimes damaged both the later text and the original. Codex C is one which has suffered in this manner. Other methods, including ultra-violet or infrared light, are now used, both for photography and (in the case of ultra-violet) for direct reading of the MS as well. Indeed, it is sometimes possible to read much of the original text, in spite of the later writing, with no aids other than good light, good eyes, and patience. This is possible because in preparing the sheets for rewriting it was apparently not considered necessary that the original text be completely obliterated, and even now it is often surprisingly visible.

D. HANDWRITING

1. *Styles of Handwriting*

a. Uncial. For many centuries two styles of Greek handwriting existed side by side, one for literary and the other for non-literary writing. The literary hand is known as *uncial* (possibly from the Latin *uncialis*, “inch-high”) or *majuscule*. Uncial letters are derived from the stiff capital letters used in stone inscriptions, but with their lines somewhat rounded and adapted for facility in writing. Uncial letters are not connected to each other. Texts are written with no division between words, although a system of syllable division is carefully observed at the end of a line. The absence of spacing between words seems to have been simply a convention, for if economy of space were important, the size of the letters in many MSS could have been reduced.

In the earlier centuries uncial MSS were written with practically no accents, breathings, punctuation marks, or adornments. As time passed, the use of large and ornate initial letters and other ornamentation, more elegant varieties of writing, paragraph spacing, and punctuation and diacritical marks (accents and breathings) were introduced. A chronological display of MSS would show a general evolution in these respects.² Manuscripts of the NT earlier than the tenth century are written in uncial letters.

b. Minuscule. Alongside the uncial or literary hand there existed a style of writing used for non-literary materials known as *cursive*, a Latin derivative meaning “running.” Cursive letters are connected, but the handwriting is much less continuous than modern English handwriting. Cursive writing was

²See W. H. P. Hatch, *Principal Uncial Manuscripts*, or E. M. Thompson, *Introduction to Greek and Latin Palaeography*, pp. 201–16. Thompson also (pp. 144–47) gives some representative alphabets for the period of the fourth century B.C. through the second Christian century.

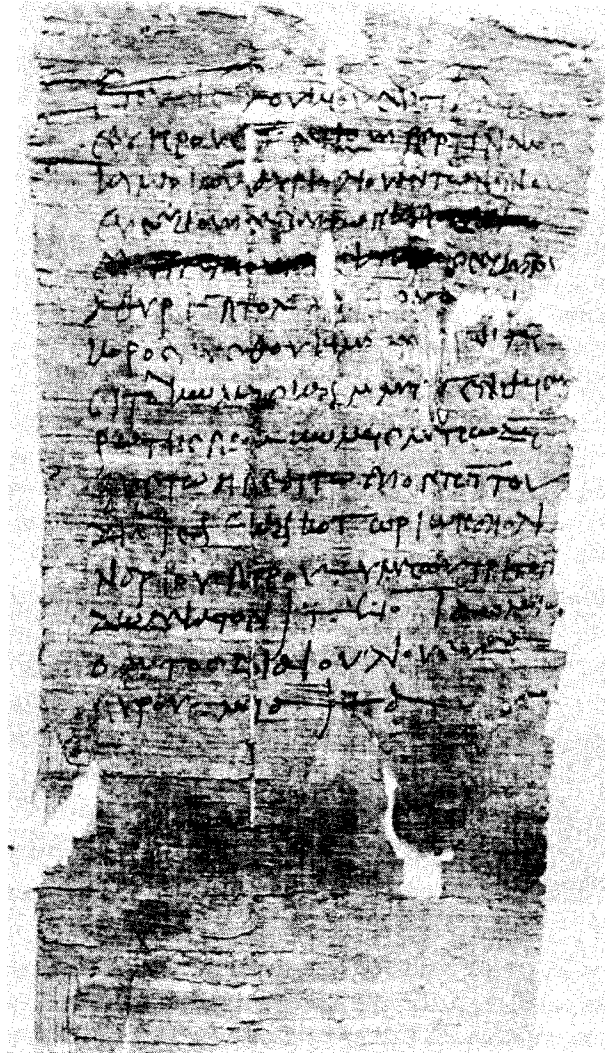


Plate 1

A receipt issued to Horion, son of Apolinarius, A.D. 207. Cursive handwriting. The first four lines are ετους 15 Λουκιου Σεπτιμμιου / Σεουηρου Ευσεβους Περτινακος / και Μαρκου Αυρηλιου Αντωνεινου / Ευσεβους Σεβαστων [] / . (Univ. of Mich. Inv. 2923, P. Mich. VI, 398. Used by permission of the University of Michigan.)

used for personal correspondence, business and legal papers, and such matters (see Plate 1). It seems likely, therefore, that the originals of the letters of St. Paul were written in a cursive hand, since they were written as personal letters and not as formal literature. Almost as soon as they began to be copied, however, they would take on the character of literature and would be copied in the uncial hand of literature. If there were cursive MSS of some of the NT writings in the first century, none are known.

In the early part of the ninth century the cursive hand was somewhat modified and formalized into a *minuscule* or “small-letter” style deemed suitable for books and literature.³ This made the writing of literary MSS more rapid than was possible with uncial letters. By the end of the tenth century this minuscule hand had displaced the uncial hand for literary purposes.

One of the earliest minuscule MSS of the Gospels is dated A.D. 835, which is also the earliest extant MS of the NT to contain a date.

Like the uncial MSS, the earliest minuscules were more carefully and simply written, while more ornamentation and sometimes less care in writing appear in the MSS of later centuries.⁴

Style of handwriting, then, provides a rather definite line of demarcation between two periods of NT MSS and the MSS of other literature as well, with uncial MSS coming from the tenth

³The terms “cursive” and “minuscule” are often used interchangeably. It is well, however, to retain the term “cursive” for the less-formal hand of personal notes and non-literary documents, and “minuscule” for the literary hand which was developed from the cursive, as Hatch, *Minuscule Manuscripts*, p. 3, indicates. There is a distinct difference between the two, as can be seen by comparing the cursive notes which a scribe sometimes added at the bottom of a page of a minuscule NT MS (e.g., Lect. 299), or by comparing a business document with a NT MS (e.g., Thompson, *Palaeography*, Facs. 41, p. 182, and Facs. 54, p. 224).

⁴See Hatch, *Minuscule Manuscripts*, or Thompson, *Palaeography*, pp. 150–83.

century and earlier and minuscule MSS from the tenth century and later.

Approximately nine-tenths of the extant Greek NT MSS are from the minuscule period.

2. Abbreviation

Properly speaking, abbreviation is a general term referring to the shortening of a word in writing. Abbreviation may take one of four common forms: contraction, in which part of the middle of the word is omitted, as in the English “Dr.” for “Doctor”; suspension, in which the end of a word is omitted, as in “Oct.” for “October”; ligatures, in which two or more letters are combined into one syllable, as “ff” and “fi” in some styles of modern type; and symbols, as “&” for “and.”

a. Contraction. In NT MSS, abbreviation by contraction is limited to a definite group of fifteen special words. Since most of them relate to God and to sacred matters, they are commonly designated *nomina sacra*, “sacred names” (the singular, *nomen sacrum*). These words are as follows:⁵

θεός	$\overline{\theta\varsigma}$	μήτηρ	$\overline{\mu\eta\rho}$
κύριος	$\overline{\kappa\varsigma}$	πατήρ	$\overline{\pi\eta\rho}$
υἰός	$\overline{\upsilon\varsigma}$	σώτηρ	$\overline{\sigma\eta\rho}$
Ἰησοῦς	$\overline{\iota\varsigma}$	ἄνθρωπος	$\overline{\alpha\nu\omicron\varsigma}$
Χριστός	$\overline{\chi\varsigma}$	οὐρανός	$\overline{\omicron\nu\nu\omicron\varsigma}$
πνεῦμα	$\overline{\pi\nu\alpha}$	Δαβὶδ	$\overline{\delta\alpha\delta}$
σταυρός	$\overline{\sigma\tau\varsigma}$	Ἰσραήλ	$\overline{\iota\eta\lambda}$
		Ἱερουσαλήμ	$\overline{\iota\lambda\eta\mu}$

The divine names or titles seem first to have been contracted out of reverence, in an attempt to approximate the reverential

⁵The forms given are in the nominative case. The contracted form of other cases of these words would be analogous; e.g., $\overline{\pi\rho\varsigma}$ = πατρός, $\overline{\omicron\nu\nu\omicron\nu}$ = οὐρανόν.

treatment of the sacred name of God in Hebrew MSS. This principle was then extended to a few other words, all of which are associated with sacred matters. Thus, in marked distinction from other abbreviations, these contractions were not made for the purpose of saving space or labor. That this is true is seen in two related facts. In the first place, contraction as a type of abbreviation is distinctly limited to the MSS of the Bible and of Christian literature, and is virtually unknown in secular literature. In the second place, even in biblical MSS these very same words are often not contracted if they are used in any other than the specialized sense; e.g., πατήρ is usually contracted only when it refers to God, and ἄνθρωπος only in such references as “the Son of Man” as a title of Jesus. There are, of course, exceptions to this general principle.

b. Suspension. Suspension is the ordinary type of abbreviation, used to save time or space, and used especially at the end of a line. Suspension is indicated in one of several ways:

(i) The first letter only may be written, with a characteristic mark to show suspension: e.g., ὕ (υἱός), κϞ (καί).

(ii) The first part of the word may be written, with a horizontal line above the last letter to indicate suspension: e.g., τελ̄ (τέλος).

(iii) In NT uncial MSS, suspension is confined almost entirely to the omission of a final ν at the end of a line, indicated by a horizontal line above and following the last written letter: e.g., πολῑ (πόλιν).

(iv) The first part of the word may be written with the last written letter or letters above the line and smaller: e.g., τε^λ (τέλος), τ^{εκ} (τέκνα).

c. Ligatures. Ligatures are not common in uncial MSS. In minuscule MSS the line cannot always be carefully drawn between ligatures and two connected letters, but the following may be suggested:

εγ̄ (εγ) εσ̄ (εσ) ερ̄ (ερ) οῡ (ου) στ̄ (στ).

d. Symbols. Few abbreviation symbols are found in the uncial MSS. In minuscule MSS they are found more often in later than in earlier MSS. The following are some examples:⁶ \mathcal{V} = και, $\overline{\alpha\nu\tau}$ = αυτων, $\overline{\alpha\nu\tau}$ = αυτοις, τ'' = -τον, $\iota\lambda$ = -ιον, $\epsilon^{\curvearrowright}$ = -ιαν, μ' = μου, π^{\curvearrowright} = -πεν, ζ'' = -ζειν.

A summary of the significant paleographical features of Greek NT MSS from the first century down to the age of printing may be seen in the chart on p. 23.

⁶Most of the examples given are found in Lect. 299, the later text written over the palimpsest Codex Ξ. Thompson, *Palaeography*, pp. 80–84, gives an extensive list of symbols.

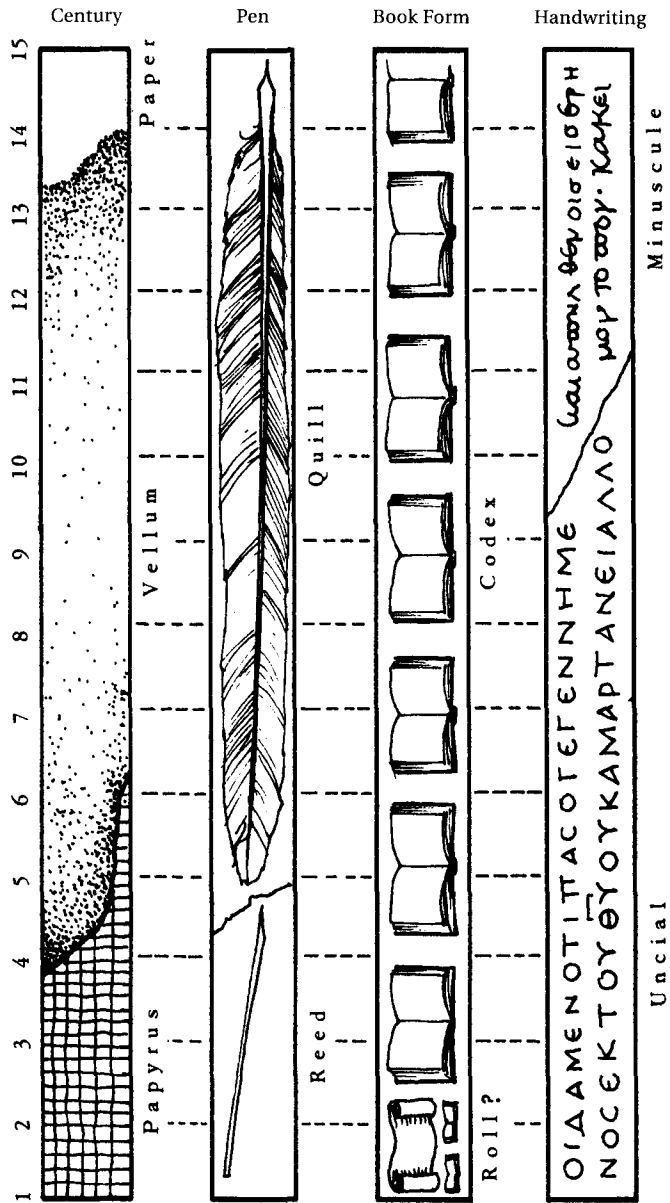


Figure 4