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| א |  | *Papyrus and*  *Parchment*: |
| *Biblical*  *Writing*  *Materials* |
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Scripture quotations not in quotations from others are from the New Revised Standard Version,

unless indicated otherwise.

## Scripts

1. **Egypt**
   1. c. 3000 bc-ad 391: hieratic (priestly) script
      1. Hieratic script is “a cursive form, used beside the hieroglyphic for three thousand years . . .” (Diringer 61)
      2. “In the Proto-Dynastic Period of Egypt, hieratic first appeared . . . True monumental hieroglyphs carved in stone did not appear until the 1st Dynasty, well after hieratic had been established as a scribal practice. . . . [They] are related, parallel developments . . .” (“Hieratic”)
         1. “The earliest texts from Egypt are produced with ink and brush, with no indication their signs are descendants of hieroglyphs.” (“Hieratic”)
         2. “True monumental hieroglyphs carved in stone did not appear until the 1st Dynasty, well after hieratic had been established as a scribal practice.” (“Hieratic”)
   2. c. 3000 bc-ad 396: hieroglyphics
      1. ἱερός (*hierós* “sacred”) and γλυφικός (*glyphikós* “engraved”). (“Egyptian Hieroglyphics”)
      2. number of characters (“Egyptian Hieroglyphics”)
         1. 3100-1069 (Old, Middle, and New Kingdoms): about 800.
         2. 331 bc on (Greco-Roman period): over 5000.
      3. ad 396: end of hieroglyphics (“Egyptian Hieroglyphics”)
         1. “Monumental use of hieroglyphs ceased after the closing of all non-Christian temples in ad 391 by the Roman Emperor Theodosius I . . .” (“Egyptian Hieroglyphics”)
         2. ad 394: “the last known inscription is from Philae, known as the Graffito of Esmet-Akhom, from ad 394.”
   3. 1550-1200 (Late Bronze Age)
      1. “. . . hieroglyphic Egyptian inscriptions . . . dis­covered in Canaan [prove] that the Egyptian system of writing must have been known to some Canaanite scribes.” (Mazar 274)
      2. Israel Stele
         1. Rameses II (1279-13) was succeeded by Merneptah (1213-03).
         2. Merneptah “conducted a campaign in Canaan [and set up] the “Israel Stele.” . . . [“Israel”] appears here (as a name of a tribe) for the first and only time in Egyptian sources.” (Mazar 234)
   4. 600s on: demotic (popular) script
      1. “. . . in Egypt, in drawing on papyrus, . . . the brush-pen naturally gave to the signs a bolder, more cursive form, and little by little, alongside the hieroglyphic system a cursive form was developed, in which the signs lost more and more their [158] original pictorial character.” (Diringer 158-59)
      2. 600s on: “a highly cursive derivative of hieratic, known as demotic . . ., gradually developed.” (Diringer 159)
   5. c. ad 1-600s: Coptic
      1. c. ad 1-600s.
      2. The script is “the Greek alphabet with the addition of six to seven signs from the demotic script to represent Egyptian phonemes absent from Greek.” (“Coptic.” *Wikipedia*. 9 Feb. 2007)
      3. “Several distinct Coptic dialects are identified, the most prominent of which are Sahidic and Bohairic.” The others are Akhmimic and Fayyumic. (“Coptic.” *Wikipedia*. 9 Feb. 2007)
      4. It was spoken in Egypt until the 1600s ad. (“Coptic.” *Wikipedia*. 9 Feb. 2007)
      5. The “Bohairic dialect continues to be the liturgical language of the Coptic Orthodox Church of Alexandria.” (“Coptic.” *Wikipedia*. 9 Feb. 2007)
2. **Mesopotamia**
   1. 3200-600 bc: cuneiform
      1. Earliest known form of writing.
      2. From Latin *cuneus*, “wedge.”
      3. About 2000 graphemes (characters) represent syllables.
      4. Used for Akkadian, Elamite, Hittite (and Luwian), Hurrian (and Urartian) languages.
   2. 3200-1550 bc: Sumerian
      1. Sumerian (predecessor of cuneiform)
         1. A logographic script: simplified pictures represent “single objects or words.” (Diringer 21)
         2. A language isolate (unrelated language).
      2. Sumerian cuneiform
         1. A syllabary (each writing unit is a consonant plus a vowel). (“Sumerian.” *Wikipedia*. 9 Feb. 2008.)
         2. There are over 250,000 Sumerian clay tablets. (Diringer 87)
         3. 95% are economic: “contracts, wills, receipts and letters.” (Diringer 87)
   3. 2500 bc-ad 100: Akkadian cuneiform
      1. Akkadian was a Semitic language, spoken in Assyria and Babylonia. (“Akkadian.” *Wikipedia*. 9 Feb. 2008.)
         1. 2500-1950: Old Akkadian
         2. 1950-1530: Old Babylonian/Old Assyrian
         3. 1530-1000: Middle Babylonian/Middle Assyrian
         4. 1000-600: Neo-Babylonian/Neo-Assyrian
         5. 600 bc-ad 100: Late Babylonian
      2. “Akka­dian became the lingua franca of the entire ancient Near East.” (Mazar 224)
      3. “. . . Assyrian cuneiform writing [75] . . . was at certain times practically a syllabary . . .” (Diringer 75-76)
3. **alphabet**
   1. c. 1500s: Proto-Canaanite
      1. Both Proto-Canaanite and Proto-Sinaitic “are known only from a few short and mostly incomplete inscriptions written on rocks, pottery vessels, and stone and metal objects. Most of these texts cannot be deciphered with certainty . . .” (Mazar 276)
      2. Two short inscriptions and one longer one belong to c. 1550. (Mazar 276)
      3. “The longest [is] on the shoulder of a painted jar . . .” (Mazar 276)
         1. It is “a blessing to a goddess.” (Mazar 275)
      4. F.M. Cross (*Symposia* 101, 111): “The invention of the Proto-Canaanite alphabet was an act of stunning innovation, a simplification of writing which must be called one of the great intellectual achievements of the ancient world . . .” (Mazar 276)
   2. c. 1050: Phoenician
      1. Derived from Proto-Canaanite. (“Phoenician Alphabet.” *Wikipedia*. 10 Feb. 2008.)
   3. c. 1000-c. 450: Paleo-Hebrew
      1. Derived from the Phoenician alphabet. (“Paleo-Hebrew Alphabet.” *Wikipedia*. 10 Feb. 2008.)
      2. Even after it was replaced by square Aramaic script (c. 450), it was used for
         1. Hasmonaean coins (140-37 bc) and
         2. coins in the First Jewish War (ad 66-73) and Second Jewish War (ad 132-35). (“Paleo-Hebrew Alphabet.” *Wikipedia*. 10 Feb. 2008.)
   4. c. 1400s: Minoan (Linear A)
      1. a Cretan writing system for a non-Greek language (still unde­ciphered). (Mallory 69)
   5. 1300s: Mycenaean
      1. 1300s: Linear B
         1. Linear B is a syllabic script, developed from Linear A. (Mallory 69)
         2. 3000 clay tablets from Mycenae, Pylos, and Knossos are the earliest recorded Greek. (Mallory 69)
      2. angular
         1. The classical alphabet of Greece was an angular script for writing on monuments. (Diringer 159)
         2. “. . . from the classical alphabets there sprang the Greek uncial, cursive and minuscule scripts . . .” (Diringer 159)
      3. cursive
         1. “. . . papyrus, and still more parchment, [made] curves possible.” (Diringer 159)
         2. With a pen, curves are easier than angles. (Diringer 159)
   6. pre-800: Greek
      1. Derived from the Phoenician alphabet. (“Phoenician Alphabet.” *Wikipedia*. 10 Feb. 2008.)
      2. The alphabet “is perhaps [the Canaanites’] most important contribution to Western civilization, [since] Greek scripts were a direct evolvement from the Canaanite alphabet.” (Mazar 276)
   7. 600s: Latin
      1. 700s bc: Etruscans adopt the Greek alphabet (from Cumae, a Greek colony in southern Italy). (“Old Italic Alphabet.” *Wikipedia*. 9 Feb. 2008.)
      2. 600s bc: Latins adopt 21 of the 26 Etruscan letters. (“Latin Alphabet.” *Wikipedia*. 9 Feb. 2008.)
      3. c. 100-1 bc: Rome conquers Greece and adopts two Greek letters, Y and Z. (“Latin Alphabet.” *Wikipedia*. 9 Feb. 2008.)
      4. angular
         1. The classical alphabet of Rome was an angular script for writing on monuments. (Diringer 159)
         2. “. . . from the classical alphabets there sprang . . . the Latin uncial, semi-uncial, cursive and minuscule hands.” (Diringer 159)
      5. cursive
         1. “. . . papyrus, and still more parchment, [made] curves possible.” (Diringer 159)
         2. With a pen, curves are easier than angles. (Diringer 159)

## Clay Tablets in General

Diringer, David. *The Book Before Printing*: *Ancient*, *Medieval and Oriental*. London: Hutch­inson’s Scientific and Technical Publications, 1953. Rpt. New York: Dover, 1982.

Wiseman, D.J. “Books In The Ancient Near East And In The Old Testament.” *The Cambridge History of the Bible*, ed. Peter R. Ackroyd and C.F. Evans. Vol. 1: *From the Beginnings to Jerome*. Cambridge: Cambridge UP, 1970. 30-48.

1. **introduction**
   1. Clay was “The cheapest and most durable writing material . . .” (Wiseman 32)
   2. 3100 bc-ad 100: clay tablet use (Wiseman 32)
      1. 500s bc: the last extant “cuneiform clay tablet . . .” (Diringer 112)
   3. “the basic form never changed”: (Wiseman 32)
      1. usually rectangular
      2. content determined size:
         1. ¼ x ¼ in.

up to

* + - 1. 18 x 12 in. (Wiseman 32)
    1. “. . . a larger surface was obtained by . . . prisms, cones or barrel[s] . . .”
  1. Clay tablets were “dried in the sun or [if important] in a kiln.” (Wiseman 32)

1. **stylus**
   1. “The scribe wrote his wedge-shaped (cuneiform) signs with a stylus . . .” (Wiseman 32)
   2. A cut reed gives a wedge shape.
   3. Or wood, etc.
2. **direction of writing**
   1. clay tablets: text was inscribed
      1. down the front from left to right (usually),
      2. across the bottom edge,
      3. down the back from right to left (usually),
      4. “across the upper edge
      5. “[then] along the left and right edges.” (Wiseman 32)
   2. Greek and Latin columns: left to right
      1. Suetonius (c. ad 75-160, *De vita Caesarum*, *Iulius* 56) says that “down to the time of Caesar [d. 44 bc] it was the custom to write official documents *transversa charta*, *i*.*e*. the reverse way, that is, across the whole width of the roll, so that the lines of the writing were at right angles to the long sides of the roll.” (Diringer 137)
3. **erasure**
   1. The stylus could smooth away an error. (Wiseman 33)
   2. “. . . or the surface of a new tablet [could be] cleaned off by a damp cloth before the clay had hardened.” (Wiseman 33)
4. **colophon**
   1. In the last column. (Wiseman 33)
   2. “. . . like the title-page of a modern book, [it] might include
      1. “the title of the work according to its opening words,
      2. “the name of the scribe (sometimes with his patronym),
      3. “the name of the owner
      4. “and sometimes the date and category or purpose of the composition.” (Wiseman 33)
   3. Colophons might contain a blessing and a curse.
      1. blessing: “let him who loves Nabū and Marduk preserve this and not let it leave his hands.” (Wiseman 33)
      2. curse: “on any who should ‘alter, put it in the fire, dissolve it in water, bury it, destroy it by any means, lose or obliterate’ [it] . . .” (Wiseman 33)
   4. “If the text was but one tablet or ‘chapter’ . . . in a longer work the colophon would [give] the number of the tablet within the series . . .” (Wiseman 33)
   5. The “first line of the following tablet and the total number of lines in the tablet may also be given.” (Wiseman 33)
5. **series of tablets** (**book**)
   1. “A literary work could consist of any number of tablets . . .” (Wiseman 33)
   2. The Epic of Gilgamesh took 11 tablets (later, 12). (Wiseman 33)
   3. The *Enuma Anu Ellil*, an “astrological omen series” of 8,000 lines, took 71 tablets. (Wiseman 33)
6. **storage**
   1. “Storage containers were provided with labels or tags of clay inscribed with a summary of their contents.” (Wiseman 33)
7. **printing**
   1. “The Babylonian invention of reverse-engraved brick stamps and seal inscriptions enabled them to make exact replicas of brief formal inscriptions on clay.” (Wiseman 33)
   2. “The short step from this to the mass production or ‘printing’ of other texts was, however, never taken.” (Wiseman 33)

## Clay Tablets in Israel

1. **introduction**
   1. No clay tablets have texts of the Bible.
   2. But several sets of clay tablets are relevant.
2. **1800-1550** (Middle Bronze Age IIB-C)
   1. no hieroglyphics in Israel
      1. 1650-1550 (Hyksos rule): “the imitation of Egyptian hieroglyphs on Hyksos scarabs demonstrates how unfamiliar this latter writing system was to the Semitic population of Palestine.” (Mazar 224)
   2. 6 clay inscriptions
      1. 1800-1550: the only writing is 6 clay inscriptions, in Akkadian cuneiform. (Mazar 224)
         1. Hazor: four inscriptions
            1. “a clay tablet with a judicial document”
            2. “an inscribed model liver used by priests as an omen”
            3. “a fragment of a Mesopotamian study text (a list of weights and measures)”
            4. “a local West Semitic name incised on a jar.” (Mazar 224)
         2. Gezer: one clay tablet, a list of names. (Mazar 224)
         3. Hebron: one clay tablet, “a register of sacrifices.” (Mazar 224)
      2. “These sparse finds demonstrate the use of Akkadian language by official scribes in the country during that period . . .” (Mazar 224)
      3. “Professional scribes in the large urban centers of Syria and Palestine (such as Hazor) mastered Akkadian and were ac­quainted with Mesopotamian literature.” (Mazar 224)
3. **c**. **1385-35**: **Amarna letters** (Late Bronze Age, 1550-1200)
   1. c. 1887-1903: discovery. Amarna was capital of the New Kingdom (1550-1069 bc).
   2. over 360 letters on clay tablets in Akkadian (Mazar 233)
      1. Akkadian was the international language at the time.
   3. Tell el-Amarna: on the Nile about 180 miles S of the Delta (Middle Egypt) (Mazar 2)
   4. found in the palace of Akhenaten (Amenophis IV, 1352-36) (Mazar 233)
   5. They are “diplomatic correspondence” of Amenophis III [1388-51] and, primarily, Akhenaten [1351-34] to or from “rulers of Canaanite cities, though there are also letters from . . . Babylon, the Hittite empire, and Alasha (most probably Cyprus).” (Mazar 233)
4. **c**. **1450-1195 bc**: **Ugarit** (**Ras Shamra**) (excavated 1929)
   1. A flourishing trade center; destroyed by earthquake. (*American Heritage Dictionary of the English Language*. 3rd ed. New York: Houghton Mifflin, 1996.)
   2. “The rich archives of Ugarit’s palace and the libraries of the city’s temples” are “the most significant and authentic documentation for the study of Canaanite culture.” (Mazar 238)
   3. “. . . the local religious literature [provides] invaluable sources for the study of the origins of biblical language and literature.” (Mazar 238)
5. **1300-1000**: **other Canaanite cities**
   1. jar handles: a few brief texts (Mazar 363)
   2. clay tablets
      1. Clay tablets “have been found at Gezer, Megiddo, Jericho, Ta‛anach and Beth-Shemesh among other Palestinian sites . . .” (Wiseman 33)
      2. These were all city-states.
      3. “Each independent ruler must have had in his service professional scribes who had mastered Akkadian.” (Mazar 274)
      4. “Akkadian was studied in local scribal schools, as demonstrated by bilingual and trilingual dictionaries (a frag­ment of such a dictionary tablet was found at Aphek).” (Mazar 274)
   3. direction of writing
      1. 1200-1000: the direction of Hebrew “had not yet crystallized . . .” (Mazar 363)
         1. sometimes left to right
         2. sometimes right to left
         3. sometimes top to bottom
6. **587**: **Nabu-sharrussu-ukin**
   1. discovery
      1. July 5, 2007: Michael Jursa, Viennese Assyriologist, found in the British Museum a small (about 2 in. x 4 in.) cuneiform tablet with this text.
   2. translation
      1. “(Regarding) 1.5 minas (0.75 kg) of gold, the property of Nabu-sharrussu-ukin, the chief eunuch, which he sent via Arad-Banitu the eunuch to [the temple] Esangila: Arad-Banitu has delivered [it] to Esangila. In the presence of Bel-usat, son of Alpaya, the royal bodyguard, [and of] Nadin, son of Marduk-zer-ibni. Month XI, day 18, year 10 [of] Nebuchadnezzar, king of Babylon.”
      2. The tablet is “a bill of receipt acknowledging Nabu-sharrussu-ukin’s payment of 0.75 kg of gold to a temple in Babylon. The tablet is dated to the 10th year of the reign of Nebuchadnezzar II, 595 bc, 12 years before the siege of Jerusalem.”
   3. the tablet and the Bible
      1. Nabu-sharrussu-ukin was Nebuchadnezzar II’s “chief eunuch” at the siege of Jerusalem.
      2. Jeremiah refers to him: Jer 39:9-14, “Then Nebuzaradan [Nabu-sharrussu-ukin] the captain of the guard exiled to Babylon the rest of the people who were left in the city, those who had deserted to him, and the people who remained. 10Nebuzaradan the captain of the guard left in the land of Judah some of the poor people who owned nothing, and gave them vineyards and fields at the same time. 11King Nebuchadrezzar of Babylon gave command concerning Jeremiah through Nebuzaradan, the captain of the guard, saying, 12”Take him, look after him well and do him no harm, but deal with him as he may ask you.” 13So Nebuzaradan the captain of the guard, Nebushazban the Rab-saris, Nergal-sharezer the Rab-mag, and all the chief officers of the king of Babylon sent 14and took Jeremiah from the court of the guard. They entrusted him to Gedaliah son of Ahikam son of Shaphan to be brought home. So he stayed with his own people.”

## Wood

1. **German tribes**
   1. “Wood was the main writing material . . . of the ancient Germanic tribes.” (Diringer 27)
   2. “book”
      1. “Book” is from Old English *bóc*, “beech tree.” [24] German “*Buch*” means “beech.” (Diringer 24)
   3. “write”
      1. “Write” derives from Old English *writan* [25] (“scratch,” “draw,” on wood) [26] (Diringer 25-26)
   4. c. 100s ad: runes
      1. c. 100s ad: Germans adopt the Roman alphabet. (“Old Italic Alphabet.” *Wikipedia*. 9 Feb. 2008.)
      2. Runes were “the “national” writing of the ancient Germanic peoples.” (Diringer 36)
      3. Runes have “thorny, elongated and angular shapes . . . [Probably runes] were originally carved on wood, so that the straight strokes and the angular shapes, which could be carved with ease, were preferred to curves.” (Diringer 36)
      4. c. 600 bc-1200s ad: runic inscriptions (Diringer 36)
2. **Rome**
   1. bark
      1. *liber*: “book”
         1. pre-500 bc: *liber* meant “rind” or “the inside bark of a tree . . .” (Diringer 33)
            1. Roman tradition says bark was written on in early times. (Diringer 33-34)
            2. No doubt “the finest and thinnest part of the bark of such trees as the . . . linden, the lime, the ash, the maple, and the elm, was used as writing material . . .” (Diringer 34)
            3. The Sumatran, Central Asian, Indian, and American Indian peoples use similar barks. (Diringer 34)
            4. The British Museum has a piece of bark with Latin writing. (Diringer 34)
      2. *libellus*: “little book”, “pamphlet” (Diringer 33)
         1. by 500 bc: *libellus* means, not document, but complete book (Suetonius, Nerva 52). (Wiener)
      3. derivatives (of *liber* and *libellus*)
         1. “library”
         2. “libretto” (book containing an opera’s text) (from Italian)
         3. “libel” (from *libellus*)
         4. Late Latin *librāria* (sc. *taberna*): “bookseller’s (sc. shop)” (Diringer 34)
            1. Spanish *libreria*: “bookseller’s shop”
   2. tree leaves
      1. In Greece and Rome use of “leaves for writing was quite familiar.” (Diringer 44)
      2. Latin *folium* (“leaf”)
      3. derivatives (Dirin­ger 44)
         1. “leaf” itself
         2. “folio”
         3. “foliate”
         4. “foil”

(See also “Wooden Tablets.”)

## 1200-1000 (Iron Age I): Bronze Arrowheads

1. **1000s**: **five inscribed bronze arrowheads**
   1. The “Bronze Age” is 3300-1200. (Mazar 30)
      1. The earliest extant bronze is late 3000s, Iran. (“Bronze.” *Wikipedia*. 10 Feb. 2008.)
   2. The arrowheads were found south of Bethlehem. (Mazar 362)
   3. Four say “Arrow of *‛Abd lb*’*t*.” (Mazar 362)
      1. “The title *lb*’*t* probably means “lionesses”; it recalls the presence of mercenary archers called *leba*’*im* (= “lions”) among David’s warriors prior to his ascension to the throne . . .” (Mazar 362)
      2. Ps 57:4, “I lie down among lions that greedily devour human prey; their teeth are spears and arrows, their tongues sharp swords.”
   4. The fifth says “‛*‛Abd lb*’*t*” on one side and “Ben ‛Anat” on the other. (Mazar 362)
      1. “Ben ‛Anat” “is a well-known Canaanite name at Ugarit and Egypt . . .” (Mazar 362)
      2. In the Bible, Shamgar Ben ‛Anat is “one of the Israelite “minor” judges who fought the Philistines (Judges 3:31).” (Mazar 362)
      3. Judg 3:31, “After him [Ehud] came Shamgar son of Anath, who killed six hundred of the Philistines with an oxgoad. He too delivered Israel.”
   5. The date, the location near Bethlehem (David’s birthplace), and the probable reference to mercenary archers “suggest that [the arrows] could have been connected with his activities in [362] the vicinity.” (Mazar 362-63)

## Ten Commandments

1. **Ten Commandments**
   1. For “a permanent monumental and religious [inscription],” stone was used. (Wiseman 33)
   2. treaties
      1. “Oriental treaties were inscribed on tablets, or engraved on a stele.” (de Vaux 148) (“*Steel*” or “*stee­lee*,” an upright stone slab or pillar.)
      2. “Oriental treaties on tablets or a stele were “placed in a sanctuary in the presence of the gods.” (de Vaux 148)
   3. “Thus the Decalogue . . . [was] inscribed on stone.” (Wiseman 33)
      1. Exod 24:12, “The Lord said to Moses, “Come up to me on the mountain, and wait there; and I will give you the tablets of stone, with the law and the commandment, which I have written for their instruction.”“
      2. A copy of the Decalogue on stone was on the altar. (Wiseman 33)
         1. Deut 27:2-4, “On the day that you cross over the Jordan into the land that the Lord your God is giving you, you shall set up large stones and cover them with plaster. 3You shall write on them all the words of this law . . . 4you shall set up these stones . . . on Mount Ebal, and you shall cover them with plaster.”
         2. Josh 8:30, 32, “Joshua built on Mount Ebal an altar to the Lord . . . 32And there, in the presence of the Israelites, Joshua wrote on the stones a copy of the law of Moses, which he had written.”
      3. Joshua also copies the Law in a “book,” but sets up a stone memorial.
         1. Josh 24:26-27, “Joshua wrote these words in the book of the law of God; and he took a large stone, and set it up there under the oak in the sanctuary of the Lord. 27Joshua said to all the people, “See, this stone shall be a witness against us; for it has heard all the words of the Lord that he spoke to us; therefore it shall be a witness against you, if you deal falsely with your God.”“
2. **ark of the covenant**
   1. In the ancient Near East, “Tablets were usually stored on shelves in a special archive room or in wooden or clay boxes or jars [or] in reed baskets.” (Wiseman 33)
      1. Jer 32:14, “Thus says the Lord of hosts, the God of Israel: Take these deeds, both this sealed deed of purchase and this open deed, and put them in an earthenware jar, in order that they may last for a long time.”
   2. Like the Egyptians, “the Hebrews . . . used a special wooden storage box for texts of great importance . . .” (Wiseman 33)
      1. “The Decalogue was engraved on two tablets and deposited in the sacred tent, in the Ark ‘of the Covenant’ or ‘of the Law’.” (de Vaux 148)
      2. Exod 25:16, “You shall put into the ark the covenant that I shall give you.”
      3. 1 Kgs 8:9, “There was nothing in the ark except the two tablets of stone that Moses had placed there at Horeb, where the Lord made a covenant with the Israelites, when they came out of the land of Egypt.”
      4. Heb 9:4, “In it [the Holy of Holies] stood the golden altar of incense and the ark of the covenant overlaid on all sides with gold, in which there were a golden urn holding the manna, and Aaron’s rod that budded, and the tablets of the covenant . . .”

## 925-586: Stone

(divided monarchy, Iron Age IIB-C)

1. **introduction**
   1. “Monumental inscriptions incised on stone . . . were known in Israel and Judah, particularly in their capital cities.” (Mazar 515)
   2. Of “Monumental inscriptions incised on stone . . . The only complete text . . . is the Siloam inscription . . .” (Mazar 515)
   3. “The rest are fragmentary . . .” (Mazar 515)
      1. “. . . two [were] found in Jerusalem . . .” (Mazar 515)
      2. “. . . one [was found] at Samaria (the latter includes only one word).” (Mazar 515)
      3. “These fragments may have been from royal stelae erected in the capitals . . .” (Mazar 515)
   4. The “Monumental inscriptions incised on stone [are] in lapidary Paleo-Hebrew script . . .” (Mazar 515)
   5. “Such royal inscriptions were inscribed in a formal script most probably by royal scribes.” (Mazar 515)
   6. “A specific type of official notation is curses against tomb robbers, found on the facades of monumental tombs in Jerusalem . . .” (Mazar 515)
      1. “An exceptional Iron Age cemetery was found in the Siloam [522] village, opposite the City of David. . . . On one of the facades of the tombs, the following Hebrew inscription was incised: “This is [the sepulcher of] . . . yahu who is over the house. There is no silver and no gold here, but [his bones] and the bones of his maid servant with him. Cursed be the [523] . . . man who will open this.” [525] (Mazar 522-25)
2. **c**. **850**: **Mesha stele** (= **Moabite Stone**): ***Yahweh*** (**long form**) **outside the Bible**
   1. 1868: found at Dhiban (biblical Dibon, capital of Moab) (Mazar 542)
   2. It “carries the longest and most important Iron Age inscription found on either side of the Jordan River.” (Mazar 542)
   3. “It commemorates the liberation of Moab from Israelite rule by King Mesha‛ . . .” (Mazar 542)
      1. The king of Israel at the time was Jehoram (c. 851-c. 842).
   4. Translation: (lines 14-18): “Kemosh said to me, “Go, take Nebo from Israel.” And I went in the night and fought against it from the daybreak until midday, and I took it and I killed it all: seven thousand men and (male) aliens, and women and (female) aliens, and servant girls. Since for Ashtar Kemosh I banned it. And from there I took the vessels of Yahweh [“*Yhwh*,” long form: de Vaux 339], and I brought them before Kemosh.” (“Mesha Stele.” *Wikipedia*. 5 Feb. 2007.)
3. **c**. **700**: **Hezekiah’s Tunnel inscription**
   1. Hezekiah: Albright says 715-687 bc.
   2. tunnel
      1. Discovered in 1838. (Mazar 484)
      2. Hezekiah’s Tunnel “led all the water of the Gihon Spring through an underground tunnel to the Tyro­poeon [Valley], on the other side of the hill . . .” (Mazar 483)
         1. 2 Kgs 20:20, “the deeds of Hezekiah, . . . how he made the pool and the conduit and brought water into the city, are they not written in the Book of the Annals of the Kings of Judah?”
         2. 2 Chr 32:3-4, “he planned with his officers and his warriors to stop the flow of the springs that were outside the city; and they helped him. 4A great many people were gathered, and they stopped all the springs and the wadi that flowed through the land, saying, “Why should the Assyrian kings come and find water in abundance?”“
         3. Isa 22:11, “You made a reservoir between the two walls for the water of the old pool. But you did not look to him who did it, or have regard for him who planned it long ago.”
            1. “Hezekiah’s Tunnel most probably filled a water reservoir in the Tyropoeon Valley, perhaps the one “between the two walls” mentioned by Isaiah . . .” (Mazar 484)
      3. It is more than 6 football fields long. (Mazar 484)
         1. “It runs under the ridge of the City of David in extraordinary S-shaped curves. The hewing was carried out by two groups of laborers working from opposite ends until they met . . .” (Mazar 484)
         2. “. . . Hezekiah’s Tunnel was cut without vertical shafts, making the work exceedingly difficult due to air and light deficiency and the distance from the outlet through which the hewn rock chips were removed.” (Mazar 484)
   3. inscription
      1. “The dramatic moment in which the two groups met was perpetuated in the Siloam inscription, incised on the tunnel’s wall close to its end. Written in a poetic style, it is one of the longest and most important monumental Hebrew texts from the period of the Monarchy.” (Mazar 484)
      2. The inscription: “. . . and this was the matter of the tunnel: While [the hewers wielded] the axe(s), each man towards his fellow, and while there were still three cubits to be he[wn, there was hear]d a man’s voice calling to his fellow; for there was a fissure (?) in the rock on the right and [on the left]. And on the day it was tunneled through, the hewers struck [the rock], each man towards his fellow, axe against axe. And the water flowed from the spring towards the pool for one thousand and two hundred cubits. And a hundred cubits was the height of the rock above the head(s) of the hewers.” (Qtd. in Mazar 484)
4. **700s-600s**: (**most**) **seals and seal impressions**
   1. seals
      1. “Seals [were] made of different types of hard, semiprecious stones . . .” (Mazar 518)
      2. “The majority of Judean seals . . . were undecorated and included only the name and title of their owner; others featured certain artistic motifs . . .” (Mazar 518)
      3. “The seals belonged to . . . prestigious personalities.” (Mazar 518)
         1. “. . . an official’s seal from the kingdom of Israel [with] a roaring lion . . . bears the name “Shema` servant of Jeroboam”; Shema` may have been a minister of Jeroboam II [king of Israel; Albright: 786-46 bc].” (Mazar 518)
         2. One has the title, “servant of the king,” with the king’s name: “Abiyau servant of Uzziah [king of Judah; Albright: 783-42 bc]” . . .” (Mazar 519)
         3. *Lamelech* seals relate “to the royal military administration during the time of Hezekiah.” (Mazar 518-19)
   2. seal impressions
      1. official documents
         1. “. . . official documents were undoubtedly inscribed on papyrus and sealed with strings and stamped clay sealings.” (Mazar 515)
         2. “If anything of these official documents has been preserved, it is the stamped pieces of clay (bullae) alone . . .” (Mazar 515)
      2. Seal “impressions [are] on jar handles and on clay bullae . . .” (Mazar 518)
      3. c. 600-587: clay bullae. Three groups “are of special importance . . .” (Mazar 518)
         * 1. c. 587 bc: a group at Lachish
           2. c. 587: a group “uncovered in a house in the City of David”
           3. “a group from an unknown context” (Mazar 518)
   3. biblical names
      1. “Berachyahu son of Neriyahu the scribe”: he “may be identified with Baruch, Jeremiah’s scribe during the time of Jehoiakim (Jeremiah 36) . . .” (Mazar 519)
      2. “Jerahmeel the king’s son”: “we presume [this] was Jehoiakim’s son sent to arrest Jeremiah (Jeremiah 36:26) . . .” (Mazar 520)
      3. “Gemaryahu son of Shaphan”
         1. He was “an impor­tant official in Jerusalem during the time of Jeremiah (Jeremiah 36:10-12) . . .” (Mazar 520)
         2. His “seal impression was discovered among the fifty-one bullae uncovered in the City of David . . .” (Mazar 520)
      4. “Gedal­yahu Over the House” (a stamped bulla)
         1. He “may be identified with Gedaliah Son of Ahikam, the appointed governor of Judah after the destruction of Jerusalem (Jer. 39:14).” (Mazar 520)
         2. His “seal impression was found at Lachish . . .” (Mazar 520)

## Ivory

Mazar, Amihai. *Archaeology of the Land of the Bible 10*,*000-586 bc*. Anchor Bible Reference Library. New York: Doubleday, 1990.

1. **c**. **700**: **ivory** (**scepter**?)
   1. “. . . a small ivory pomegranate-shaped object . . . is incised in miniature letters . . .” (Mazar 518)
   2. Hebrew inscription: “*lby*[*t Yhw*]*h qds khnm* . . .” (Mazar 518)
   3. Translation: “belonging to the tem[ple of the Lor]d [Yah­weh], holy to the priests.” (Mazar 518)
2. **Used in temple**?
   1. It “may have been used by priests in the temple of Jerusalem . . .” (Mazar 518)
   2. It was perhaps “a ceremonial scepter.” (Mazar 518)
   3. It “thus may be the only object and inscription which can be related directly to the temple of Jerusalem during the Biblical time.” (Mazar 518)

## Ostraca

1. **introduction**
   1. “ostraca”: “brief inscriptions written in ink on pottery sherds” (Mazar 410)
      1. or “or fragments of limestone” (Diringer 48)
   2. advantages
      1. Potsherds were a “readily accessible . . .” (Wiseman 33)
      2. Potsherds were cheap. (Harris 193, Wiseman 33)
      3. Potsherds were durable. (Harris 193)
      4. “Potsherds . . . were perhaps as readily used by the Greeks as sheets of paper are now.” (Harris 94)
   3. disadvantages
      1. Potsherds were “highly inconvenient . . .” (Harris 94)
      2. “. . . they could not be used for lengthy texts if these were to be portable.” (Harris 94)
   4. uses: “Temporary notes, letters and accounts . . .” (Wiseman 33)
   5. “Ostraca are the richest group of Hebrew inscriptions.” (Mazar 515)
2. **1100s**: **ostracon**: **pupil’s alphabet**
   1. 1100s: “An incised ostracon [was] a pupil’s exercise. [361] One of its lines lists the letters of the alphabet . . .” (Mazar 361-62)
3. **850-750**: **Samaria ostraca** (exact date uncertain)
   1. 63 ostraca (Mazar 410)
   2. Found in the acropolis of Samaria, in the royal administrative headquarters of the Kingdom of Israel. (Mazar 409-10)
   3. They are “Trade memoranda or tax accounts . . .” (Wiseman 33)
      1. They are “receipts or delivery notes . . .” (Mazar 516)
      2. “They are records of oil and wine deliveries received at Samaria from the outer townships probably as taxes. The listings note the year (apparently the regnal year of one of the kings of Israel), the place of origin, the name of a person (possibly the royal official) who received the merchandise, and the type of goods (such as “old wine,” or “bathing oil”).” (Mazar 410)
   4. “The common suffix of personal names was *-yw*, or *-baal*, in contrast to ‑*yahu* dominant in Judah.” (Mazar 410)
4. **Negev fortresses**
   1. 1000-922: probably David and/or Solomon built in the Negev the approximately 50 “fortified enclosures (commonly called “fortresses”) . . .” (Mazar 390)
      1. “located on hills within sight of each other” (Mazar 390)
      2. “to secure the routes crossing the Negev [to] the Red Sea, where commercial ties with Arabia had been established.” (Mazar 395)
   2. Arad ostraca
      1. Arad was “a royal fortress which must have served as an important administrative and military stronghold of the kingdom of Judah . . .” (Mazar 438)
      2. The fortress was 55 yards square (about ½ a football field). (Mazar 438)
      3. Most of the Arad ostraca are “letters or copies of official documents . . .” (Mazar 516)
      4. The ostraca show that Arad
         1. received “flour, oil, and wine” (“perhaps as royal taxes”);
         2. redistributed them to “other Negebite forts and troops.” (Mazar 441)
   3. c. 800 (Mazar 515): Kuntillet `Ajrud (“solitary hill of the water wells,” Mazar 447)
      1. the site
         1. 80 miles south of Kadesh-Bamea (Mazar 446)
         2. The building was 16½ x 27⅓ yards. (Mazar 447)
         3. date: c. 850-750 (so pottery assemblage; “used for a short time”) (Mazar 449)
         4. “combination of Judean and Israelite traditions” (Mazar 449)
            1. Israel

“The large jars . . . are typically Judean . . .” (Mazar 449)

But the inscriptions have “the theo­phoric suffix ‑*yw* of personal names . . . as opposed to the Judean ‑*yahu* . . .” (Mazar 449)

And they mention “Yahweh of Samaria.” (Mazar 449)

* + - * 1. “there was Israelite trade activity related to the Red Sea [in] the time of Jehoshaphat” (King of Judah; Albright: 873-49 bc). (Mazar 449)

1 Kgs 22:48-49, “Jehoshaphat [king of Judah] made ships of the Tarshish type to go to Ophir for gold; but they did not go, for the ships were wrecked at Ezion-geber. 49Then Ahaziah son of Ahab [king of Israel] said to Jehoshaphat, “Let my servants go with your servants in the ships,” but Jehoshaphat was not willing.”

* + - * 1. “The combination of Israelite and Judean elements may reflect a time when the northern kingdom’s sphere of influence extended to Judah, such as during the reign of Athaliah [Albright: 842-37 bc].” (Mazar 449)

2 Kgs 8:26, 11:1-20, “Ahaziah was twenty-two years old when he began to reign; he reigned one year in Jerusalem. His mother’s name was Athaliah, a granddaughter of King Omri of Israel. . . . 11:1-3Now when Athaliah, Ahaziah’s mother, saw that her son was dead, she set about to destroy all the royal family. 2But Jehosheba, King Joram’s daughter, Ahaziah’s sister, took Joash son of Ahaziah, and stole him away from among the king’s children who were about to be killed; she put him and his nurse in a bedroom. Thus she hid him from Athaliah, so that he was not killed; 3he remained with her six years, hidden in the house of the Lord, while Athaliah reigned over the land. . . . 13she went into the house of the Lord to the people; 14when she looked, there was the king standing by the pillar, according to custom, with the captains and the trumpeters beside the king, and all the people of the land rejoicing and blowing trumpets. Athaliah tore her clothes and cried, “Treason! Treason!” . . . 16[But] she was put to death. . . . 20So all the people of the land rejoiced; and the city was quiet after Athaliah had been killed with the sword at the king’s house.”

* + 1. inscriptions
       1. “The texts are [447] blessings and dedications . . .” (Mazar 447-48)
          1. “The texts from Kuntillet ‛Ajrud . . . provide the best collection of Israelite prayers, blessings, and dedications . . .” (Mazar 515)
       2. “Some of the inscriptions were written on the plaster of doorjambs (compare Deuteronomy 6:9).” (Mazar 447)
       3. Deut 6:4-9, “Hear, O Israel: The Lord is our God, the Lord alone. 5You shall love the Lord your God with all your heart, and with all your soul, and with all your might. 6Keep these words that I am commanding you today in your heart. 7Recite them to your children and talk about them when you are at home and when you are away, when you lie down and when you rise. [Tefillin:] 8Bind them as a sign on your hand, fix them as an emblem on your forehead, [Mezuzot:] 9and write them on the doorposts of your house and on your gates.”
       4. An inscription “on the rim of a large stone trough . . . reads, ‘“Obadyau, son of ‛Adnah, may he be blessed by God.”“ (Mazar 448)
       5. On a large pithos (point-bottomed jar), a blessing formula in ink includes “the astounding combi­nation *lyhwh šmrn wl´šrth*, “Yahweh of Samaria and his Asherah.”“ (Mazar 448)
          1. A painting of the two deities accompanies the inscription. (Mazar 447)
          2. “These important texts throw light on aspects of Israelite theology in the Old Testament period, of which there are few traces in the Bible.” (Mazar 448)
          3. “The discoveries at Kuntillet ‛Ajrud open a window onto the world of contemporary Israelite religion in a period prior to the Deuteronomic theology of Jerusalem which inspired our Masoretic Old Testament.” (Mazar 449)
       6. “The religious activity at the site may have been related to some peculiar sect in Israel such as the Rechabites, mentioned in connection with Kenites and scribes in 1 Chronicles 2:55.” (Mazar 449)
          1. 1 Chr 2:55, “The families also of the scribes that lived at Jabez: the Tirathites, the Shimeathites, and the Sucathites. These are the Kenites who came from Hammath, father of the house of Rechab.”
       7. “The discoveries at Kuntillet ‛Ajrud . . . illustrate the special role of the desert, and perhaps of Mount Sinai, in Israelite [449] religion and spiritual life, as known also from biblical literature.” (Mazar 449-50)
          1. “The location of the site may be related to traditions concerning Mount Sinai, as almost during the same period Elijah is said to have gone to “Horeb, the mountain of God” . . .” (Mazar 449)
          2. 1 Kings 19:8, “He got up, and ate and drank; then he went in the strength of that food forty days and forty nights to Horeb the mount of God.”
  1. 700s-600s (Mazar 450): Tell el-Kheleifeh
     1. Tell el-Kheleifeh is “at the head of the Red Sea . . .” (Mazar 397)
     2. The fortress was the “southernmost Iron Age site in Palestine . . .” (Mazar 450)
     3. Nelson Glueck, its excavator in 1937, identified it as Ezion-Geber. (Mazar 397)
     4. “A seal with the name “Jotham” [may refer] to King Jotham, the son of Uzziah.” (Mazar 450)
        1. c.733-c. 717: Jotham
        2. 2 Kgs 15:32-38, “In the second year of King Pekah son of Remaliah of Israel, King Jotham son of Uzziah of Judah began to reign. 33He was twenty-five years old when he began to reign and reigned sixteen years in Jerusalem. His mother’s name was Jerusha daughter of Zadok. 34He did what was right in the sight of the Lord, just as his father Uzziah had done. 35Nevertheless the high places were not removed; the people still sacrificed and made offerings on the high places. He built the upper gate of the house of the Lord. 36Now the rest of the acts of Jotham, and all that he did, are they not written in the Book of the Annals of the Kings of Judah? 37In those days the Lord began to send King Rezin of Aram and Pekah son of Remaliah against Judah. 38Jotham slept with his ancestors, and was buried with his ancestors in the city of David, his ancestor; his son Ahaz succeeded him.”

1. **c**. **621**: **ostacon**: **Metsad Hashavyahu**
   1. A letter, an ostracon, complains “about the confiscation of a cloak . . .” (Wiseman 33)
   2. “. . . a fourteen-line letter found at Metsad Hashavyahu about a mile south of Yavneh-Yam [is] generally interpreted to be a plea from an agricultural worker to an official concerning the worker’s garment taken in pledge by a man named Hashavyahu ben Shabay and never returned, contrary to customary law (expressed in Ex. 22:25-26; Deut. 24:12-15, 17).”
   3. “. . . even a poor corvée worker has access to communication by letter in an emergency situation.” (Niditch 52)
   4. “The letter . . . probably dates to the time of Josiah [c. 638-c. 609].” (Niditch 52)

## 925-586: Silver

(divided monarchy, Iron Age IIB-C)

1. **pre-587**: **silver talismans**
   1. Two engraved “silver talismans [were found] in a repository of a burial cave at Ketef Hinnom (Jerusalem) . . .” Published in 1986. (Mazar 516)
   2. pre-587: They “are of the utmost importance [516] for the study of the antiquity of the biblical text.” (Mazar 516-17)
   3. “Inscriptions engraved in miniature letters . . .” (Mazar 517)
      1. “They include the earliest verses of biblical texts known so far.” (Mazar 517)
      2. Previously, “the earliest biblical texts known [were] the Dead Sea Scrolls,” c. 250 bc-ad 68. (Mazar 517)
   4. Aharonic Blessing (Priestly Benediction)
      1. “One of the texts in the silver talismans is almost identical to Numbers 6:24-25 . . . The other text is a shorter version of the same blessing.” (Mazar 517)
      2. Num 6:24-25, “The Lord bless you and keep you; 25the Lord make his face to shine upon you, and be gracious to you; [26the Lord lift up his countenance upon you, and give you peace.]”
      3. See Ps 67:1, “May God be gracious to us and bless us and make his face to shine upon us.”
   5. “This biblical text was attributed by modern scholars of biblical criticism to the Priestly Code, which is considered to be the latest of the four hypothetical sources of the pentateuch. The discovery shows that at least this particular blessing was well known and widely used by Jews in Jerusalem already before the destruction of the first temple.” (Mazar 517)

## 587: Judah’s Downfall

1. **destruction**
   1. 587: “Jerusalem was heavily destroyed and burnt, as shown by the finds . . .” (Mazar 458)
   2. “Most of the Judean towns and fortresses excavated in the Shephelah [western foothills], the Negev, and the Judean Desert [eastern foothills] were destroyed during the Babylonian invasion.” (Mazar 459)
2. **stone**: **dedications and prayers**
   1. “On three occasions, dedications and prayers were found incised on cave walls in the Shephelah and in the Judean Desert.” (Mazar 515)
   2. 587: “One of these, in a cave at Khirbet Beit-Lei in the Shephelah, includes a prayer to Yahweh and notes of concern for the fate of Jerusalem. The Khirbet Beit-Lei graffiti were perhaps written by refugees who fled from Jerusalem after its fall in 586 b.c.e.” (Mazar 515)
3. **ostraca**: **Lachish letters**
   1. Lachish was “the main fortress of Judah in the war of 701 b.c.e.” (Mazar 458)
   2. The Lachish letters are “letters from besieged Lachish *c*. 589 b.c.” (Wiseman 33)
   3. “Lachish (Stratum II) was destroyed in a heavy fire. The Lachish letters [were] found in the burnt debris at the city gate . . .” (Mazar 458)
   4. The Lachish letters “were written by a certain Hoshayahu to his commander Yaush probably during the last days of Judah.” (Mazar 458)
      1. N.H. Tur-Sinai and others thought Hoshayahu was “the commander of a small fortress outside Lachish, and Yaush was . . . the commander of Lachish.” (Mazar 459)
      2. Yigael Yadin “believed that the ostraca were drafts of one and the same letter sent from Lachish to Jerusalem, Hoshayahu being the commander of Lachish and Yaush a high official in the capital.” (Mazar 459)
         1. Yadin thought they were “rough drafts of texts which were to be copied onto papyrus or parchment . . .” (Mazar 516)
   5. Ostracon 4 “ends with the sentence “And may my lord know that we are watching for the beacons of Lachish, according to all the signs which my lord has given, for we cannot see [the signals] of Azekah.” These words must refer to the importance of fire signals in the last war against the Babylonians.” (Mazar 459)

## “Yahweh” Outside the Bible

1. **pre-1250**: ***Yhw3*** (**a Shasu country**)
   1. “The only name found outside the Old Testament and before the period of the exodus that can be legitimately compared with the name Yahweh is *Yhw3*, [*sic*] the name of a Shasu country . . .” (de Vaux 343)
   2. The Shasu were nomads east of Egypt. (Redford)
   3. There is, however, no evidence that this geographical or ethnic name may also have been the name of a deity.” (de Vaux 343)
2. ***Yahweh*** (**long form**) **outside the Bible**
   1. c. 850: the Mesha stele (= Moabite Stone)
      1. 1868: found at Dhiban (biblical Dibon, capital of Moab) (Mazar 542)
      2. It has “the longest and most important Iron Age inscription found on either side of the Jordan River.” (Mazar 542)
      3. “It commemorates the liberation of Moab from Israelite rule by King Mesha‛ . . .” (Mazar 542)
         1. The king of Israel at the time was Jehoram (c. 851-c. 842).
      4. Translation: (lines 14-18): “Kemosh said to me, “Go, take Nebo from Israel.” And I went in the night and fought against it from the daybreak until midday, and I took it and I killed it all: seven thousand men and (male) aliens, and women and (female) aliens, and servant girls. Since for Ashtar Kemosh I banned it. And from there I took the vessels of Yahweh [“*Yhwh*,” long form: de Vaux 339], and I brought them before Kemosh.” (“Mesha Stele.” *Wikipedia*. 5 Feb. 2007.)
   2. 700s: “Yahweh” is on a seal (de Vaux 339)
   3. later 600s: it is on the ‛Arad ostraca (de Vaux 340)
   4. pre-587?: it is in (possibly pre-exilic) graffiti (de Vaux 340)
   5. c. 589: it is frequent in the Lachish letters (de Vaux 340)
3. ***Yah* outside the Bible**
   1. Two readings are uncertain. (de Vaux 340)
      1. 800-600: a Samaritan ostracon has *lyh*. (de Vaux 340)
      2. 600s: a Megiddo ostracon has Megiddo has *lyw*. (de Vaux 340)
   2. 400s bc: “In the Elephantine papyri, the short form *Yhw* occurs every time except once, when it appears as *Yhh*.” (de Vaux 340)
   3. 400s bc: But in the Elephantine ostraca, “the form is always *Yhh*.” (de Vaux 340)

## c. 1225: Merneptah Stele

“Merneptah Stele.” *Wikipedia*. 28 Dec. 2007. 13 Feb. 2008. Web.

1. **Merneptah** (Egyptian pharaoh, r. 1213-03, fourth ruler of Dynasty 19)
2. **Merneptah stele itself**
   1. 1896: discovered by Flinders Petrie.
   2. It is a 10-foot black granite stele erected by Amenhotep III (1388-51/50 bc).
   3. Merneptah’s text is added, c. 150 years later, on the reverse side of Amenhotep’s stele.
   4. Most of the text glorifies Merneptah’s defeat of the Libyans.
3. **Merneptah stele and Israel**
   1. It is “the only Egyptian document generally accepted as mentioning [Israel].”
   2. “It is also, by far, the earliest known attestation of Israel.”
   3. The last two lines refer to a prior military campaign in Canaan, mentioning four defeated states.
   4. translation:

“Canaan is captive with all woe. Ashkelon is conquered, Gezer seized, Yanoam made nonexistent; Israel is wasted, bare of seed.” (Or: “Israel lies waste, its seed no longer exists.”)

## Papyrus Plant

1. “**papyrus**”
   1. Egyptian *twfy*
   2. Hebrew *sûp*
   3. Greek χάρτης (*khártēs*) (Latin *charta*) meant
      1. “the pith of the papyrus plant . . .” (Diringer 34)
      2. a “leaf” of papyrus writing material (Diringer 125)
      3. “papyrus prepared for writing but not yet written upon . . .” (Diringer 125)
      4. English “chart”, “charter”, “card” (Diringer 125)
   4. Greek παπύρος (*papúros*)
      1. *Papúros* “is of Egyptian origin . . .” (Diringer 125)
      2. suggestions for “its original meaning . . .” (Diringer 125)
         1. “the growth of the River (Nile)”
         2. “the (one) belonging to the River (Nile)”
         3. “the (stuff) belonging to Pharaoh” (“as a royal monopoly”)
      3. *Papúros* meant
         1. papyrus plant (Goodspeed and Sparks 651)
         2. papyrus roll (Goodspeed and Sparks 651)
      4. Mark 12:26 nrsv translates it as “book”: when the Sadducees question Jesus about the resurrection, Jesus replies, “have you not read in the book [*papúros*] of Moses, in the story about the bush, how God said to him, ‘I am the God of Abraham, the God of Isaac, and the God of Jacob’?”
   5. Latin *Cyperus papyrus*
      1. *Papyrus antiquorum* (Diringer 126)
      2. Linnaeus: *Cyperus papyrus* (Diringer 126)
   6. modern languages (from Latin *papyrus*)
      1. English “paper,” French *papier*, German *Papier*, Russian *papka* (Diringer 125)
2. **papyrus plant**
   1. where found
      1. It “grew abundantly in the marshy districts of Lower Egypt.” (Diringer 126)
         1. It grows in 6 feet of water. (Diringer 128)
         2. It “became emblematic of the north . . .” (Diringer 126)
         3. (The “flowering rush . . . was employed for Upper Egypt.” Diringer 126)
      2. “It also grew, but in small quantities, in northern Palestine.” (Diringer 126)
         1. Wiseman says “Syria.” (Wiseman 30)
      3. Papyrus “was imported into Greece, Italy and the other Mediterranean countries, already manufactured; [probably no] native papyrus grew in any of these countries.” (Diringer 126)
         1. “. . . at no time in the ancient world was papyrus as writing material manufactured outside Egypt . . .” (Diringer 154)
         2. C.H. Roberts: “Egypt supplied the whole Roman Empire . . .” (Diringer 153)
      4. today
         1. “Nowadays, it grows only in the Sudan, Abyssinia, and particularly in Sicily, near Syracuse, where it was probably introduced during the Arab occupation . . .” (Diringer 128)
         2. “It is reared as a curiosity in many botanical gardens . . .” (Diringer 128)
   2. physical description
      1. stem
         1. leafless
         2. 4-15 feet above the water (Diringer 128)
         3. triangular cross-section (Diringer 128)
         4. “. . . it tapers gracefully upwards towards the extremity.” (Diringer 128)
      2. top
         1. fan-like
         2. a “top of delicate green rays” (Diringer 128)
         3. the “feathery tufts wave on [the] slender stalks” (Diringer 128)
      3. root
         1. “The root lies obliquely . . .” (Diringer 128)
         2. It “is about the thickness of a man’s wrist . . .” (Diringer 128)
      4. “With the help of other reeds and water plants [papyrus] formed an impenetrable thicket—a floating forest.” (Diringer 128)

## Papyrus Scrolls in General

1. **manufacture of papyrus**
   1. “The best papyrus factories were in Alexandria, hence the “Alexandrian papyrus” was known all over the Greek and Roman worlds.” (Diringer 126)
   2. Pliny the Elder’s (ad 23-79) description (*Naturalis historia* 13.11-12) of papyrus manufacture in the Egyptian factories
      1. Pliny: “Paper is made from the papyrus, by splitting it with a needle into very thin leaves, due care being taken that [128] they should be as broad as possible. That of the first quality is taken from the centre of the plant, and so in regular succession . . . the leaves of papyrus are laid upon [a table] lengthwise, as long indeed as the papyrus will admit of, the jagged edges being cut off at either end; after which a cross layer is placed over it. . . . the leaves are pressed together, and then dried in the sun; after which they are united to one another, the best sheets being always taken first, and the inferior ones added afterwards.” (Qtd. in Diringer 128-29)
   3. glue
      1. “. . . what material was employed . . . has not been determined.” (Diringer 129)
         1. “. . . gum, glue, or starch [are] most likely . . .” (Diringer 129)
         2. Some scholars think “the Egyptians made a kind of glue from flour, hot water, and a little vinegar.” (Diringer 129)
   4. wholesale papyrus
      1. Schubart thinks wholesale papyrus was sold in bales, not in sheets or rolls.
      2. The retailer cut it into sheets and rolls. (Diringer 126)
         1. A “scribe did not usually write on separate sheets which were later glued together to form a roll . . . he wrote on the roll already made up before he started writing on it; indeed, the writing frequently ran over the junction of two sheets.” (Diringer 134)
         2. “If a book was of greater length [than a roll], the scribe could glue on a second roll to the first; if it did not reach the length of a roll of twenty sheets, he could cut off the superfluous material.” (Diringer 129)
   5. “Although, when made, it is of about the same consistency as paper, it does not stand the damp; and, if kept dry, becomes very brittle with age (as dead leaves do).” (Diringer 165)
2. **individual sheet sizes**
   1. widths of Egyptian papyri
      1. *Greenfield Papyrus* 8¼ inches
      2. *Hunefer Papyrus*: 10-11½ inches
      3. *Ani Papyrus*: 12-13 inches
      4. *Nu Papyrus*: 15 inches (Diringer 134)
   2. Greek papyri
      1. “. . . the sheets of the fine Greek papyri are much smaller than the Egyptian.” (Diringer 134)

|  |  |
| --- | --- |
| **sheet sizes of greek papyri** | |
| *small* | |
| “smallest papyrus roll known” (“it contains epigrams”) [134] | 2 inches wide |
| sheets in “pocket rolls containing poetry” [134] | c. 5 inches wide |
| a copy of the *Iliad* [134] | 9¾ wide x 5-6 inches high |
| *average* | |
| “the common size for books” [134] | 10 wide x 7½ inches high |
| individual sheets’ usual width [129] | 9 inches wide |
| a papyrus of Bacchylides of Ceos (poet, 400s bc) [134] | 9¾ wide x 8-9 inches high |
| *large* | |
| literary papyri rarely exceeded: [134] | 13 wide x 9 inches high |
| a copy of Plato’s *Symposium* [134] | 12¼ inches wide |
| a copy of Isocrates’s *Panegyricus* [134] | 12¼ inches wide |
| a copy of the *Iliad* [134] | 12½ inches wide |
| a tax-register scroll has the widest sheets [134] | 15½ wide x 5 inches high |

* + 1. Retailers sold single sheets (*kollémata*). (Diringer 133)
       1. “. . . they would suffice for short . . . letters or documents.” (Diringer 133)
       2. For instance, “the second and third *Epistles* of St. John . . .” (Diringer 133)

1. **scroll sizes**
   1. lengths
      1. Pliny the Elder (ad 23-79, in *Naturalis historia* 13.11-12): “There are never more than twenty of these sheets to a roll (*scapus*).” (Qtd. in Diringer 129)
         1. He probably means the usual length when papyrus rolls were “placed on the market . . .” (Diringer 129)
         2. Since individual sheets averaged 9 inches in width,
            1. “a roll of twenty sheets would have been 15 feet long.” (Diringer 129)

|  |  |
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| **scroll lengths** | |
| *average* | |
| Greek papyrus rolls vary in length from [133] | 14 to 35 feet |
| “Greek literary rolls” are [132] | rarely over 35 feet |
| 35 feet is sufficient for 2-3 books of Homer’s *Iliad* |  |
| A papyrus from Elephantine has *Iliad* Book 24.  So a complete *Iliad* could have been 24 scrolls. [133] |  |
| A roll has fragments of *Odyssey* Book 3. [133] |  |
| With all of Book 3, it would be 7 feet. [133] |  |
| With Books 1-3, it would be 21 feet. [133] |  |
| 35 feet is sufficient for 2 books of Plato’s *Republic*. |  |
| 35 feet is sufficient for a one book of Thucydides’ *Peloponnesian War*. |  |
| 35 feet is sufficient for 1 long gospel (Matthew, Luke, or John). |  |
| 35 feet is easily “held in one hand” [133] | about 2½ inches thick |
| *large* | |
| Some scrolls, if complete works, were | c. 50 feet |
| Plato’s *Phaedo* (*Pap*. *Petrie* 5, 200s bc) |  |
| Thucydides’ *Peloponnesian War* Book 2 (*Pap*. *Oxyrh*. 225, 100-1 bc) |  |
| But the complete work could have been two 25-foot rolls. [133]  A roll with Gen 1:16-25:8 (Berlin Pap. 911) makes this probable. [133] |  |
| “several Egyptian liturgical rolls” [129] | 50 feet or more |
| *Nu Papyrus* [129] | 65½ feet |
| *Ani Papyrus* (“probably the finest extant Egyptian book”) [129] | 76 feet |
| *Nebseni Papyrus* [129] | 77 feet |
| *Greenfield Papyrus* [129] | 123 feet |
| *Great Harris Papyrus* [129] | 133 feet |
| c. 1164 bc [130] | 79 sheets, which are: |
| tells “achievements and benefactions of Ramses III” [129] | 20 inches wide |
|  | 16¾ inches high |
| Scholiasts (commentators) say *Iliad* and *Odyssey* were each on 1 roll. [130] | would be 50 yards |
| Scholiasts say Thucydides’ *Peloponnesian War* was on one roll. [130] | would be 100 yards |
| a roll said to have existed at Constantinople [130] | 120 yards |
| “such rolls were too cumbrous for ordinary reading” [130] |  |
| Callimachus (c. 305-240 bc), librarian at the Library of Alexandria [130] | *méga biblíon*, *méga kakón*  (“big book, big bad”) [132] |

* 1. heights
     1. Scroll height “was limited by the length of the strips of pith . . .” (Diringer 133)
     2. Extant papyri range from under 2 inches to over 15 inches. (Diringer 133)
     3. Single sheets averaged 9-11 inches high by 6-9 inches wide. (Diringer 133)
        1. Literary rolls averaged 10 inches in height. (Diringer 133)
     4. small
        1. “rolls recovered at Herculaneum”: about 6 inches high (and 2-3 inches in diameter). (Diringer 133)
     5. large
        1. A “fine and large sheet was in Rome called *macrocollum* . . .” (Diringer 133)
        2. *Ani Papyrus*: 15 inches (Diringer 133)
        3. *Great Harris Papyrus*: 17 inches (Diringer 133)
        4. *Greenfield Papyrus*: 19 inches (Diringer 133)

1. **writing case**
   1. Egyptian *gstì*
   2. Hebrew *qeset*
   3. “Ezekiel’s scribe had a ‘writing case’ at his side . . .”
      1. Ezek 9:2-3, 11, “six men came from the direction of the upper gate, which faces north, each with his weapon for slaughter in his hand; among them was a man clothed in linen, with a writing case at his side. . . . 3. . . The Lord called to the man clothed in linen, who had the writing case at his side . . . 11Then the man clothed in linen, with the writing case at his side, brought back word, saying, “I have done as you commanded me.”
   4. The writing case was “probably the hollowed reed or wooden palette which held the brushes, pens, [and] inks . . .” (Wiseman 31)
   5. “. . . hanging from it [might be] a rag for erasing errors by washing . . .” (Wiseman 31)
      1. Num 5:23, “the priest shall put these curses in writing, and wash them off into the water of bitterness.”
   6. “. . . hanging from it [might be] a penknife used for trimming pens or papyri . . .” (Wiseman 31)
      1. Jer 36:23, “As Jehudi read three or four columns, the king would cut them off with a penknife and throw them into the fire in the brazier, until the entire scroll was consumed in the fire that was in the brazier.”
2. **writing instruments**
   1. c. 900s: reed pen
      1. “The reed-pen was in use from the early first millennium in Mesopotamia from which it may well have been adopted . . .” (Wiseman 31)
      2. Jeremiah mentions a “scribe’s pen.” (Wiseman 31)
         1. Jer 8:8, “How can you say, “We are wise, and the law of the Lord is with us,” when, in fact, the false pen of the scribes has made it into a lie?”
         2. “The ‘scribe’s pen’ (Jer. 8:8) was a brush fashioned from rushes (*Juncus maritimis*) about 6-16 in. long, the end being cut to a flat chisel-shape to enable thick and thin strokes to be made with the broad or narrow sides.” (Wiseman 31)
   2. c. 200s bc: quill pen
      1. The “quill pen seems to have come from the Greeks in the third century b.c.” (Wiseman 31)
3. **columns**
   1. Greek manuscripts
      1. “The width of the columns varies from two and a half inches to four inches . . .” (Diringer 133)
   2. Latin manuscripts
      1. “The width of the columns . . . is nearly eight inches.” (Diringer 133)
   3. “Many rolls have about 100 columns and from 2,000 to 3,000 lines . . .” (Diringer 133)
   4. “. . . the largest manuscript contains about 160 columns.” (Diringer 133)
4. **writing columns on papyrus rolls**
   1. “Columns in Greek is *sélides*; in Latin, *paginae* (hence, the word “page”). (Diringer 135)
   2. They ran from left to right. (Diringer 135)
   3. “The lines of writing generally ran parallel to the long sides of the roll . . .” (Diringer 135)
   4. line length
      1. poetry
         1. “In poetry, the width of the column is adapted to the length of the lines . . .” (Diringer 135)
         2. “. . . when large letters are used, its width may even reach 7½ inches . . .” (Diringer 135)
         3. A “sumptuous Homer” (*Iliad*, Bodleian Library, Oxford) reaches “9¾ inches, including the margin . . .” (Diringer 135)
         4. Bacchylides papyri may be only 4-5½ inches, including the margin. (Diringer 135)
         5. 300s bc: in “the earliest preserved Greek literary document [Timotheus papyrus; Berlin] . . . the length of the lines varies between 6¼ and 10 inches.” (Diringer 135)
      2. prose
         1. “In Greek prose texts, the lines are much shorter.” (Diringer 135)
         2. “The normal width is between two and three inches.” (Diringer 136)
         3. “In some papyri, the lines are 1¾ . . . or 2¼ [135] . . ., including margins . . .” (Diringer 135, 137)
         4. Others vary “between 2¼ and 4 inches, including margins . . .” (Diringer 137)
         5. In Aristotle’s “Constitution of Athens” (*Athenaíōn Politeía*), “written in a nonliterary hand . . ., the lines of one column are eleven inches wide . . .” (Diringer 137)
   5. prose papyri: number of lines per column
      1. Within a papyrus, the number of lines per column varies little. (Diringer 137)
      2. Between papyri, the number of lines per column varies greatly. (Diringer 137)
      3. But most have 25-45 lines per column. (Diringer 137)
         1. Of 70 pagan manuscripts that Milne studied,
            1. 3 (“all poetry”) have less than 20 lines per column
            2. 12 have less than 25 lines per column
            3. 47 have 25-45 lines per column
            4. 11 have more than 45 lines per column
            5. 6 (3 poetry and 3 prose) have more than 50 lines per column (Diringer 137)
   6. prose papyri: number of letters in a line
      1. Within a column, the number of letters per line varies little. (Diringer 137)
      2. Between papyri, the number of letters per line varies greatly. (Diringer 137)
         1. Hardly any have less than 16 letters per line. (Diringer 137)
         2. Most have 18-25 letters per line. (Diringer 137)
   7. justification
      1. “The right-hand edge is generally uneven, mainly because of the rules fixing the division of words between lines.” (Diringer 137)
   8. margins
      1. “The margins between the columns were not large; they varied between about half an inch and one inch, in the more elegant books; so that the columns were close together.” (Diringer 137)
      2. upper and lower margins
         1. In “more elegant books, the [upper] was about 2-2½ inches, and the [lower was] 2½-3 inches.” (Diringer 137)
         2. In “common books, the margins were curtailed.” (Diringer 137)
      3. “Lines or words omitted in the text were sometimes written in these margins, and an arrow indicates the place where they should be inserted.” (Diringer 137)
   9. “. . . the earliest vellum codices [have] three or four columns to a page.” This is “probably a survival of the parallel columns of writing on papyri . . .” (Diringer 137)
   10. direction of lines
       1. Suetonius (c. ad 75-160, *De vita Caesarum*, *Iulius* 56) says that “down to the time of Caesar it was the custom to write official documents *transversa charta*, *i*.*e*. the reverse way, that is, across the whole width of the roll, so that the lines of the writing were at right angles to the long sides of the roll.” (Diringer 137)
5. **quality grades**
   1. “The finished papyrus varied . . . just as we have many grades of paper . . .” (Diringer 134)
   2. Some were coarse; others had “very fine texture.” (Diringer 134)
   3. “In Rome, there were about ten sorts or qualities of papyrus.” (Diringer 134)
      1. *hieratica*
         1. “The best grade (made of the heart of the stalk), in which the papyrus strips are the longest, and thus the width of the sheet is greater, was called by the Egyptians *hieratica* or “sacred”, because they used it in writing their sacred books.” (Diringer 134)
         2. By the Romans the *hieratica* was sometimes called *regia* (“royal”)—so, for instance, Catullus (Valerius Catullus, 87-*c*. 54 b.c.) mentions the *chartae regiae* as the best-grade papyri; afterwards it was termed *Augusta*, in honour of the Emperor Augustus . . .” (Diringer 134)
         3. *Augusta* “was thirteen digits, about nine to ten inches wide, and was [134] prepared for writing on one side only; it was thin and semi-transparent.” (Diringer 134-35)
         4. “In Claudius’ time, the *Augusta* papyrus was improved upon, and was then called *Claudia*; this was a foot wide, thicker than the best papyrus of an earlier date, and prepared for writing on both sides.” (Diringer 135)
      2. *Livia*
         1. “The second grade was sometimes called, in Rome, *Livia*, from the name of Livia, the wife of Augustus.” (Diringer 135)
      3. “Under the governorship of Cornelius Gallus, a fine-quality papyrus, called *Corneliana*, was manufactured.” (Diringer 135)
      4. “Other grades of papyrus were named after the location of its factory (*amphitheatrica*, *Saltica*, *Taeniotica*).” (Diringer 135)
         1. *Fanniana*: in Rome “a grade called *Fanniana* was used, which was manufactured in the factory belonging to a certain Fannius.” (Diringer 135)
      5. “The commoner kinds of papyrus, when used for accounts or literary purposes, were sometimes used over again for schoolboys’ exercises or rough notes. Sometimes the *verso* . . . of the papyrus was used for these purposes; at other times, the original writing was sponged out, as in a parchment palimpsest . . ., and the *recto* of the papyrus was used over again.” (Diringer 135)
      6. “. . . coarse papyrus, generally used for wrapping up parcels or merchandise, was called *emporetica*, “merchants’ papyrus”.” (Diringer 135)
   4. “. . . it is probable that [a] similar classification existed in Egypt, but we have no evidence to prove it, and the various grades cannot be identified in the papyri which have been recovered.” (Diringer 135)
6. **preparation of papyrus scrolls**
   1. “In the early stage of the employment of papyrus for literary purposes in Greece and Rome, the papyrus rolls apparently consisted of sheets . . . sewn together by strings. The damage caused by this procedure, where the material was so frail as papyrus, led to the [use of] glue.” (Diringer 138)
   2. references to glue
      1. Cicero 4.4; 7.32 (quoting Pollux) (Diringer 138)
      2. “. . . Pliny confirms it.” (Diringer 138)
   3. “Usually, prepared rolls were used for writing upon, but sometimes the columns or pages were written first, and afterwards pasted [138] together into a roll . . .” (Diringer 138-39)
   4. Rolls were prepared by slaves called *glutinatores*; later they were prepared by the *bibliopegy*, “bookbinders.” (Diringer 139)
   5. “The first operation . . . was to cut the margins (*frons*) of the papyrus above and below perfectly even, and the rolls at the beginning and end square.” (Diringer 139)
   6. smoothing with pumice stone
      1. “. . . the scribes [first] smoothed the interior . . .” (Diringer 139)
      2. “They then gave the edges and the exterior of the roll the most perfect polish possible . . .
      3. “Horace, Pliny, Martial, Ovid, and Catullus . . . bear testimony to this use of pumice . . .” (Diringer 139)
      4. Pumice “to the present day is used by hand-bookbinders in some of their operations.” (Diringer 139)
   7. “The edges at each end of the roll were coloured just as are the edges of some modern books: for instance, Ovid [*Tristia* 1.2.8] describes a roll with black edges.” (Diringer 139)
   8. title
      1. “Then, a projecting label . . . of papyrus or vellum . . . was affixed to the roll, usually at the end, but sometimes in the middle of the edge of the roll.” (Diringer 139)
         1. Diringer says the Greek for the label was “*síllybos*.” (Diringer 139)
         2. But the *Random House Unabridged Dictionary* (2006, online) says that Latin *syllabus* was “prob. a misreading (in mss. of Cicero) of Gk *síttybās*, acc. pl. of *síttyba* label for a papyrus roll . . .”
      2. The label had on it the *titulus*, hence English “title.” (Diringer 139)
      3. “The *titulus* corresponded not only to our title-page, but sometimes also to the “lettering-piece” and contents-table combined . . .” (Diringer 139)
      4. “. . . sometimes it bore the total number of pages, verses or lines.” (Diringer 139)
         1. “Thus Josephus reckons 60,000 lines at the end of his twentieth book of *Antiquities* . . .” (Diringer 139)
         2. “. . . and Justinian gives to the *Digests* “centum quinquaginta paene milia versum”.” (Diringer 139)
      5. “The *titulus* sometimes also contained the price.” (Diringer 139)
      6. “The title was generally coloured, often of a red tinge . . .” (Diringer 139)
      7. examples
         1. “Roman frescoes (Fig. XI-2) show rolls with their labels hanging out.” (Diringer 139)
         2. “The British Museum papyrus fragment containing poetry by Bacchylides has still the label inscribed *Bakkhylidou Dithyramboi*; this fragment, probably belonging to *c*. 50 b.c., was found in Egypt in 1897.” (Diringer 139)
   9. colophon
      1. “Instead of the label with the *titulus*, sometimes the papyrus roll had a title which was written at the end of the book.” (Diringer 139)
      2. “The fact that the title was appended at the end, seems to imply that when a roll had been read it was left with its end outside, and a newcomer—before taking the trouble to re-roll it in order to bring the beginning to the outside—would see the title of the book at the exposed end of the roll.” (Diringer 139)
7. **opistographs**
   1. Greek *ὀπισθόγραφος* (*opisthógraphos*)
   2. Latin *opisthographus*
   3. “recto” and “verso”
      1. *recto*: side with horizontal fibers (Diringer 138)
      2. *verso*: side with vertical fibers (Diringer 138)
   4. Egyptian papyri “are often written on both sides . . .” (Diringer 138)
      1. “. . . examples in which the texts on the *verso* are earlier than the *recto* are not limited to any one period.” (Diringer 138)
         1. “Sometimes this is the result of washing out earlier texts on the *recto* . . .” (Diringer 138)
   5. Graeco-Roman papyri
      1. “Ordinarily only one side of the papyrus [the *recto*] was used for writing, and as a rule only one side was used in books meant for sale . . .” (Diringer 137)
      2. Rolls “for private use or [for] rough copies” also used the *verso*. (Diringer 138)
         1. Ancient writers refer to opisthographs. (Diringer 138)
            1. Lucian (*Vit*. *Auct*. 9; *Ezekiel* 2.10)
            2. Pliny (*Ep*. 3.5.17)
            3. Juvenal (1.1.5)
         2. But not many extant Graeco-Roman literary texts are opisthographs. (Diringer 138)
            1. The magical roll British Museum Pap. 121 is an outstanding example of an opistograph [*sic*].” (Diringer 138)
         3. “Such rolls mark either the poverty of the writer or the excess of his matter.” (Diringer 138)
      3. “In some instances, papyrus rolls already written on their *recto* have been again used, and the new text is inscribed on the *verso*; for example, the *Athēnaíōn Politeía* . . .” (Diringer 138)
         1. “Such copies were generally for private use, but sometimes they were produced for the cheap market.” (Diringer 138)
         2. With “a few exceptions” (in the 200s bc), “writing on the *recto* . . . almost invariably precedes that on the *verso* . . . [So] valuable evidence for dating may be obtained from such documents.” (Diringer 138)

## History of Writing on Papyrus Scrolls

1. **introduction**
   1. languages and scripts used on papyri
      1. Egyptian papyri are in hieratic, hieroglyphic, demotic, and Coptic. (Diringer 147)
      2. Papyri are also in Hebrew, Aramaic, Persian, Syriac, Greek, Latin, and Arabic. (Diringer 147)
   2. “Books in the form of rolls:
      1. “roll written in page form;
      2. “roll written longitudinally;
      3. “and roll written across its width.” (Diringer 193)
2. **Egypt**
   1. non-writing uses
      1. “It formed a substitute for wood, which was never plentiful in Egypt.” (Diringer 128)
      2. “. . . boats, vessels, canoes, mats, ropes and sandals were made by weaving its stalks together . . .” (Diringer 128)
      3. “. . . blankets and clothes were produced from its bark.” (Diringer 128)
      4. “It was used as fuel . . .” (Diringer 128)
      5. “. . . according to some scholars, [it was] even cooked for eating, and sweet drinks were made of its juice.” (Diringer 128)
   2. writing
      1. As “the main material for writing,” it was a major export. (Diringer 128)
      2. 3000-2750 (First Dynasty): “earliest preserved papyrus—though noninscribed” (Diringer 141)
      3. 2686-2181: Old Kingdom
         1. 2450-2300: “earliest hieratic papyri” (Diringer 141)
         2. 2300-2181: “Fragments, apparently found in the family archives of the Governor of Elephantine” (Diringer 141)
      4. 2025-1700: Middle Kingdom
         1. “. . . papyri from the Middle Kingdom are not too plentiful.” (Diringer 141)
         2. “. . . hieratic papyri contain copies of much more ancient documents, dating even from the First to the Fourth Dynasties [2600-2450 bc] . . .” (Diringer 141)
         3. 2000-1800: *Papyrus Prisse* (Diringer 141)
            1. It has the wisdom books of Ke’gemni (2600-2450) and Ptaḥ-ḥotep (2450-2300). (Diringer 141)
            2. “It is thus one of the chief collections of Egyptian moral and religious teachings . . .” (Diringer 144)
      5. 1550-1069 (New Kingdom): papyrus copies of the *Book of the Dead*
         1. stone copies
            1. c. 3000-2500: the *Book of the Dead* was carved on the sarcophagi of kings and nobles (Diringer 144)
            2. 2300: earliest extant stone copies (Diringer 144)
         2. papyrus copies
            1. Since the number of texts had increased until there was no room for them on the coffin, “they were written out on rolls of papyrus, which were . . . bound up inside the bandages of the mummy . . .” (Diringer 144, 146)
            2. 1550-1500: earliest extant papyrus copy (Diringer 146)
            3. Widths varied from 15-90 feet. (Diringer 146)
            4. Heights varied from 1-1½ feet. (Diringer 146)
   3. Coptic papyri
      1. 300s ad: “*Papyrus Q* [is the] Oldest Coptic Gospel (*St*. *John*).” (Diringer 150)
3. **Assyria**
   1. “Papyrus was known also in Assyria, but in Prof. G. R. Driver’s opinion the word by which “papyrus” is known, seems to be first mentioned in a text of the Assyrian king Sargon (721-705 b.c.).” (Diringer 147)
4. **Israel**
   1. “. . . the first biblical texts, were written on scrolls . . . perhaps made of papyrus . . .” (Mazar 515)
   2. c. 750: Papyrus Muraba‛at 17 (P. Mur. 17)
      1. introduction
         1. only Hebrew papyrus “from the time of the Monarchy . . .” (Mazar 515)
         2. “oldest papyrus found outside Egypt . . .” (Goodspeed and Sparks 655)
         3. “earliest known papyrus inscribed in a North Semitic language.” (Brown )
         4. “a Hebrew letter dated *ca*. 750 b.c. . . .” (Goodspeed and Sparks 655)
      2. discovery site: Murabba‛at
         1. “The four caves of Wadi Murabba‛at are 15 mi. SE of Jerusalem, about 2 mi inland from the Dead Sea, roughly 12 mi. S of Qumran . . .” (Brown )
         2. 1952 (Jan.-Feb.): the “inaccessible site” was excavated. (Brown )
      3. contents
         1. NEED TEXT.
         2. The letter “belongs to the period of King Uzziah’s [c. 784-c. 733] economic activity in the Judean desert and the Negeb . . .” (Goodspeed and Sparks 655)
            1. 2 Chr 26:2, 7, 10, “He [Uzziah] rebuilt Eloth and restored it to Judah . . . 7God helped him against the Philistines, against the Arabs who lived in Gur-baal, and against the Meunites. . . . 10He built towers in the wilderness and hewed out many cisterns, for he had large herds, both in the Shephelah and in the plain, and he had farmers and vinedressers in the hills and in the fertile lands, for he loved the soil.”
         3. P Mur 17 is a palimpsest. (Brown )
            1. It was reused “to record a list of contributors . . .” (Goodspeed and Sparks 655)
   3. c. 200-1 bc: Nash Papyrus (“Hebrew Decalogue and *Shema*`,” Diringer 151)
      1. Tov says “1st or 2d century a.d.”) (Tov)
      2. pre-1947: before the Dead Sea Scrolls, “the earliest witness to the Hebrew text was” the Nash papyrus. (Tov)
      3. “. . . actually a liturgical text . . .” (Tov)
      4. It combines the two versions of the Decalogue. (Tov)
         1. Exod 20:2-17 (Elohistic recension)
         2. Deut 5:6-21 (Deuteronomic recension)
   4. medieval
      1. Otherwise, “There are not many Hebrew papyri extant, and they are mainly late.” (Diringer 150)
      2. E.g., 700s-800s ad (Diringer 160): a Hebrew papyrus codex at Cambridge University Library (Diringer 150)
5. **Aramaic papyrus scrolls**
   1. 515 bc: “earliest Aramaic papyrus”; “found in Egypt” (Diringer 150)
   2. 400s bc: Elephantine
      1. 1903: papyri are found “from a Jewish military colony” on the island of Elephantine in Upper Egypt (at the First Cataract of the Nile). (Diringer 148)
      2. almost 100 “official and private documents” (Diringer 148)
      3. in Aramaic (“the *lingua franca* of the ancient Near East of the day”) (Diringer 150)
      4. “information of a religious and economic nature” (Diringer 150)
6. **Minoan**, **Phoenician**, **Etruscan**
   1. The materials employed were perishable. (Diringer 51)
   2. “For this reason we shall never be able to read the many books which we have reason to believe existed, for instance, amongst the Minoans, the Phoenicians and the Etruscans.” (Diringer 51)
   3. Etruscan
      1. Etruria was roughly modern Tuscany. (Diringer 51)
      2. We have almost 9,000 inscriptions (on stone, pottery, bronze objects, lead, walls, etc.). (Diringer 51)
      3. “. . . the only extant Etruscan manuscript which may be considered as a “book”, is the Agram (or Zagreb) document . . . written on linen wrappings of an Egyptian mummy . . .” (Diringer 51)
      4. Roman literary sources mention Etruscan “religious, liturgical, “wisdom”, and other books.” (Diringer 51)
      5. Etruscan remains undeciphered. (Diringer 51)
7. **papyrus in Greece**
   1. 900s: Greeks knew papyrus from at least the 900s. (Diringer 153)
      1. 900s: Tyre and Sidon replace Byblos as Phoenicia’s leading city. (Diringer 153)
      2. Since Greek *býblos* (papyrus reed) and *biblíon* (papyrus scroll) come from “Byblos,” they presuppose Byblos’ heyday. (Diringer 153)
   2. 700s: “if there was writing in the days of Homer and Hesiod,” they were probably written on papyrus. (Diringer 151)
   3. at least by 600s: “the papyrus roll was the regular material for book production in Greece; it continued to be so . . . up to the fourth century a.d., *i*.*e*. for over a millennium, and it lingered on as writing material down to about the year a.d. 1000.” (Diringer 153)
   4. 600-300: references to papyrus on Greek soil are few.
      1. c. 450: Herodotus, *Histories* 5.58
         1. “. . . in earlier times [leather] was used only [by] necessity.” (Diringer 151)
         2. “. . . papyrus was the only writing material for the books of all civilized peoples.” (Diringer 151)
      2. 400s: an Attic tomb relief has a boy reading an “obviously . . . papyrus” roll. (Diringer 151)
      3. late 400s: an inscription in Athens (Diringer 151)
      4. 300s: an inscription in the Peloponnese (Diringer 151)
   5. extant Greek papyri
      1. 1000-400: no papyri are extant. (Diringer 153) (1000-400 is the “classical period”: *The World Almanac and Book of Facts 1997*. *Microsoft Bookshelf*. Redmond: Microsoft, 1997.)
      2. “With very few exceptions, [papyri in Greek] now available comes from Egypt . . .” (Diringer 153)
         1. From 331 bc Egypt “became more or less completely Hellenized.” (Diringer 153)
         2. Dry conditions preserved papyri.
8. **papyrus in Rome**
   1. Latin *volumen* (“volume”)
      1. Latin *volvere* means “to roll” (sc. a papyrus). (Diringer 125)
      2. Latin *volumen* means “roll”, “or rather “a thing rolled up” . . .” (Diringer 125)
         1. *Volumen* parallels Greek *kúlindros*, “cylinder,” (Diringer 125)
         2. Latin “*evolvere*, “to unroll”, was often used in the sense of “to read” (a book).” (Diringer 126)
         3. “In Roman times the term *volumen*, like *liber*, was in common use for “book”. Only one book was included in a “volume”, so that a work generally consisted of as many volumes as books.
   2. Latin *explicitus* (“explicit”)
      1. English “explicit” means “fully and clearly expressed” but also “readily observable.” (*American Heritage Dictionary of the English Language*. 3rd ed. New York: Houghton Mifflin, 1996.)
      2. *Explicitus* means “the end (of the roll).” (Diringer 126)
      3. It is probably a contraction of *explicit*(*us*) *est liber*, “the book is (unrolled) to the end”.” (Diringer 126)
   3. Upper classes used papyrus.
      1. The “convenient material for some purposes—long letters, and books of all kinds—was papyrus.” (Harris 194)
      2. “Papyrus was extensively used by the elite, and all well-to-do Romans were familiar with it.” (Harris 194)
         1. Suetonius (*DJ* 56) mentions “Letters from magistrates to the Senate on *charta* . . .” (Harris 194 n. 104)
         2. “Papyrus was probably used for long and polished letters of the kind which were published in Cicero’s correspondence . . .” (Harris 194 n. 104)
         3. “Pliny routinely wrote his letters on papyrus [*Ep*. 3.14.6, 5.2] (but there may also be a hint in the latter passage that some people would regard *charta* as a serious expense).” (Harris 194 n. 104)
         4. “Letters written between Tomi and Rome might be on papyrus (Ov. *Trist*. iv.7.7, v.13.30; cf. *Heroid*. xvii.20).” (Harris 194 n. 104)
   4. Lower classes did not use papyrus.
      1. Papyrus was “quite expensive for most people . . .” (Harris 195)
         1. Papyrus may have been inexpensive in Egypt. (Harris 195)
         2. But Egypt was the “source of supply. . . . The real price of papyrus would have been much higher in Greece or Italy, not to mention Spain or Britain . . .” (Harris 195)
      2. “Papyrus was sometimes reused . . .” (Harris 195 n. 106)
         1. Erasing was easy. (Harris 195 n. 106)
         2. But since rolls were rarely reused, reuse did not lower the price. (Harris 195 n. 106)
      3. ad 45-49: at Tebtunis, Egypt
         1. a sheet cost 2 obols
         2. a roll cost 4 drachmas.
         3. Unskilled laborers earned 3 obols a day.
         4. Skilled laborers earned 6 obols a day.
         5. So a sheet of papyrus cost about $40 (today’s dollars). (Harris 195)
   5. conclusion
      1. Papyrus “was not in most parts of the Empire a standard everyday material for ordinary citizens.” (Harris 195)
      2. Books “on papyrus were very expensive for most of the inhabitants of the Roman Empire.” (Harris 195)
9. **earliest Greek biblical papyri**
   1. earliest Septuagint fragments
      1. 100s bc: “fragments of a papyrus roll now preserved in the John Rylands Library, at Manchester . . . are from the book of *Deuteronomy* . . .” (Diringer 158)
   2. earliest New Testament fragments
      1. c. ad 100-150: “fragments of the New Testament are preserved in the John Rylands Library . . . They are from the *Gospel of St*. *John*” (18:31-33). (Diringer 158)

## The Leather Scroll in Israel

1. **introduction**
   1. “Many facts suggest that the ancient Hebrews employed leather as a writing material at an early time.” (Diringer 175)
   2. Exod 26:14 suggests that “the art of preparing and colouring skins was known in very early times . . .” (Diringer 175)
      1. Exod 26:14, “You shall make for the tent a covering of tanned rams’ skins and an outer covering of fine leather.”
   3. “The earliest parchment books . . . were in roll form.” (Diringer 203)
   4. Jews “have continued until this very day to write ritual copies of the Law on parchment scrolls . . .” (Diringer 203)
2. ***megillah*** (“**roll**”)
   1. “. . . only papyrus or leather (including parchment) could form book rolls.” (Diringer 175)
   2. So either papyrus or parchment is implied in Ezek 2:9, Zech 5:1. (Diringer 175)
      1. Ezek 2:9, “I looked, and a hand was stretched out to me, and a written scroll was in it.”
      2. Zech 5:1, “Again I looked up and saw a flying scroll.”
   3. later Jewish use of *megillah*
      1. *Megillah* means the *Book of Esther*. (Diringer 175)
      2. The *Five Megilloth* are Esther, Song of Songs, Ruth, Lamentations, and Qoheleth (Ecclesiastes). (Diringer 175)
      3. *Megillah* “is never used . . . for any other Biblical book.” (Diringer 175)
3. ***sepher*** (most Bibles translate “book,” Wiseman 32)
   1. Early Hebrew *sepher* is uncertain. (Diringer 175)
   2. Sometimes it means “a legal or a private document.” (Diringer 175)
   3. “In Phoenician and Aramaic inscriptions it even means “inscription”.” (Diringer 175)
   4. In the Bible *sepher* is used for “historical chronicles, legal codes, collections of poems, and even the Sacred Scriptures.” (Diringer 175)
   5. *Sepher* “often means “letter”“ (e.g., Est 9:25, Lachish ostraca). (Diringer 175)
      1. 2 Kgs 5:6, Naaman “brought the letter to the king of Israel . . .”
      2. Est 1:22, Ahasuerus, king of Persia, “sent letters to all the royal provinces . . .”
      3. Est 9:25, “the king . . . gave orders in writing [a *sepher*] that the wicked plot that he [Haman] had devised against the Jews should come upon his own head . . .”
4. ***megillath sepher*** (nrsv “scroll of the book”)
   1. “Since prepared skins of goat or sheep would be readily available to the Israelites the ‘scroll of the book’ (*megillat sēper*; Ps. 40:7; Ezek. 2:9; Jer. 36:2) was probably made from one of these accessible materials.” (Wiseman 32)
   2. Ps 40:7, “6Burnt offering and sin offering you have not required. 7Then I said, “Here I am; in the scroll of the book it is written of me. 8I delight to do your will, O my God . . .”
   3. Ezek 2:9-3:3, “I looked, and a hand was stretched out to me, and a written scroll was in it. 10He spread it before me; it had *writing on the front and on the back*, and written on it were words of lamentation and mourning and woe. 3:1He said to me, O mortal, eat what is offered to you; eat this scroll, and go, speak to the house of Israel. 2So I opened my mouth, and he gave me the scroll to eat. 3He said to me, Mortal, eat this scroll that I give you and fill your stomach with it. Then I ate it; and in my mouth it was as sweet as honey.”
   4. “written within and without” (*panīm ve-aḥōr*)
      1. “When the ‘inside’ of the roll was completed the scribe would either paste on additional sheets or, more easily and thus more frequently, continue on the ‘outside’ or back (as Ezek. 2:10).” (Wiseman 31)
      2. That the roll was “written within and without” suggests “leather rather than papyrus.” (Diringer 175)
   5. Jeremiah 36
      1. Jer 36:1-4, “In the fourth year of King Jehoiakim [*605 bc*] . . ., this word came to Jeremiah from the Lord: 2 Take a scroll [*megillat sēper*, “scroll of the book”] and write on it all the words that I have spoken to you against Israel and Judah and all the nations . . . 4 Then Jeremiah called Baruch son of Neriah, and Baruch wrote on a scroll at Jeremiah’s dictation all the words of the Lord that he had spoken to him.”
      2. *megillath sepher* as “leather roll”
         1. In the Mishnah “*sepher* is used for leather or parchment, and in the mishnaic tractate *Makkoth* (“Stripes”) we are told that the Law was written upon the hides of cattle: this statement reflects an ancient tradition.” (Diringer 175)
         2. “This tradition no doubt underlies the *Talmud* regulation that all copies of the *Torah* (or “Law”) must be written on rolls (or scrolls) of skin; thanks to this regulation, which is still in force, there exist many thousands of such Law Scrolls in the Jewish synagogues all over the world.” (Diringer 175)
      3. Jer 36:9, “In the fifth year of King Jehoiakim [*November 604 bc*], all the people [held] a fast before the Lord.”
         1. “. . . the occasion [was] a fast proclaimed by Jehoiakim because of Neuchadrezzar’s advance against Ashkelon . . .” (Metzger and Murphy 1018 OT)
      4. Jer 36:10-19, “Then, in the hearing of all the people, Baruch read the words of Jeremiah from the scroll, in the house of the Lord . . . 14Then all the officials . . . said to Baruch, “We certainly must report all these words to the king.” 17Then they questioned Baruch, “Tell us now, how did you write all these words? Was it at his dictation?” 18Baruch answered them, “He dictated all these words to me, and I wrote them with ink on the scroll.” 19Then the officials said to Baruch, “Go and hide, you and Jeremiah, and let no one know where you are.”
      5. Jer 36:21-23, “and Jehudi read it to the king [*Jehoiakim is illiterate*.] . . . 22 Now the king was sitting in his winter apartment . . ., and there was a fire burning in the brazier before him. 23 As Jehudi read three or four columns [*delatôt*], the king would cut them off with a penknife [*ta*‛*ar ha-sopher*] and throw them into the fire in the brazier, until the entire scroll was consumed in the fire that was in the brazier.”
         1. “columns” (Jer 36:23)
            1. Hebrew *delatôt* (“[door]-leaves”) “could refer to the sheet or column of writing.” (Wiseman 31 n. 1)
         2. “penknife” (Jer 36:23)
            1. “According to Kenyon, the *ta*‛*ar ha-sopher* . . . was the scribe’s scraping-knife, part of the normal equipment of a scribe writing on leather or parchment, and used for erasures, as shown in medieval pictures; this would point to the probability that the roll was of leather.” (Diringer 176)
            2. “According to other scholars, however, the “penknife” was probably used for sharpening the reeds, which served for writing on papyrus.” (Diringer 176)
      6. Jer 36:24-26, “Yet neither the king, nor any of his servants who heard all these words, was alarmed, nor did they tear their garments. 25Even when Elnathan and Delaiah and Gemariah urged the king not to burn the scroll, he would not listen to them. 26And the king commanded Jerahmeel [and others] to arrest the secretary Baruch and the prophet Jeremiah. But the Lord hid them.”
      7. Jer 36:27-32, “Now, after the king had burned the scroll with the words that Baruch wrote at Jeremiah’s dictation, the word of the Lord came to Jeremiah: 28Take another scroll and write on it all the former words that were in the first scroll, which King Jehoiakim of Judah has burned. 29And concerning King Jehoiakim of Judah you shall say: Thus says the Lord, You have dared to burn this scroll, saying, Why have you written in it that the king of Babylon will certainly come and destroy this land, and will cut off from it human beings and animals? 30Therefore thus says the Lord concerning King Jehoiakim of Judah: He shall have no one to sit upon the throne of David, and his dead body shall be cast out to the heat by day and the frost by night. . . . 32Then Jeremiah took another scroll and gave it to the secretary Baruch son of Neriah, who wrote on it at Jeremiah’s dictation all the words of the scroll that King Jehoiakim of Judah had burned in the fire; and many similar words were added to them.
5. **400s bc**: **Elephantine**
   1. 400s: “In the Jewish colony of Elephantine, beside the famous papyri, there was found a fragment of [a letter (Diringer 190) on] leather, which contains a few broken lines of Aramaic text . . .” (Diringer 176)
   2. Elephantine is an island in the Nile at the border of Nubia.
   3. c. 650: Manasseh probably founded it as a military installation to assist Pharapho Psammetichus I in his Nubian campaign.
   4. Elephantine papyri appeared on the black market in the late 1800s.
   5. Most of the hundreds of papyri are from the period of Persian rule, 495-300 bc.
   6. They are largely in Aramaic (Persia’s lingua franca).
6. **c**. **150 bc**: **Letter of Aristeas**
   1. 285 bc: the *Letter of Aristeas* “refers to a magnificent copy of the Law written on *diphthérai*, *i*.*e*. leather, in letters of gold, which was supposed to have been sent to King Ptolemy I (of Egypt) in 285 b.c., for the purpose of making the *Septuagint* translation of the Hebrew Bible into Greek.” (Diringer 176)
   2. This is “evidence of the use of leather or parchment for the Hebrew Law Scrolls . . .” (Diringer 176)
7. **Dead Sea Scrolls**
   1. “While some of the scrolls were written on papyrus, a good portion were written on a brownish animal hide that appears to be gevil.” (“Dead Sea Scrolls.” *Wikipedia*. 10 Feb. 2008.)
   2. “Most of the Dead Sea Scrolls . . . are written on *gevil*.” (“Gevil.” *Wikipedia*. 10 Feb. 2008.)
   3. gevil
      1. “There are three qualities of parchment known to Jewish law. *Gevil* is parchment made from the whole hide, after the hair is removed. The other two qualities result from splitting the hide into two layers; however, there is some confusion about their identification.” (“Gevil.” *Wikipedia*. 10 Feb. 2008.)
      2. “According to law, the ancient Hebrews prepared (and some modern Jews still prepare) hides with salt, flour and *mey afatzim* (wasp residue/gall-nut water). Others use more modern chemical processes, though some believe that this invalidates the parchment for scribal use.” (“Gevil.” *Wikipedia*. 10 Feb. 2008.)
   4. “The scrolls were written with feathers from a bird . . .” (“Dead Sea Scrolls.” *Wikipedia*. 10 Feb. 2008.)
   5. The ink “was made from carbon black and white pigments.” (“Dead Sea Scrolls.” *Wikipedia*. 10 Feb. 2008.)

## Parchment

1. “**parchment**”
   1. “Parchment . . . is leather manufactured more elaborately.” (Diringer 190)
   2. Greeks
      1. *diphthéra*: “leather”
         1. Greeks called parchment *diphthéra*. (Diringer 190)
         2. by c. 450: they were using leather. (Diringer 189)
         3. 1857: physician Pierre Bretonneau coins the word “diphtheria,” because a tough membrane forms in the throat, making breathing difficult. (Harper, Douglas. *Online Etymology Dictionary*. *Dictionary*.*com*. 13 Feb. 2008. <http://dictionary.reference.com/browse/­diphtheria>.)
      2. Latin *membrana*: “leather”
         1. Greeks also “used the Latin term *membrána* . . .” (Diringer 190)
         2. 2 Tim 4:13, Paul says to Timothy, “When you come, bring the cloak that I left with Carpus at Troas, also the books, and above all the parchments [*tà bíblia*, *málista tàs membránas*].”
      3. *pergamēnē*: “parchment”
         1. c. 301 ad (Edict of Diocletian): first use of the Greek term *περγαμηνή* (*pergamēné*). (Diringer 190)
         2. Pergamum
            1. Pergamum was a city-state in Asia Minor. (Diringer 170)
            2. 197-80 bc: Eumenes II of Pergamum purportedly invents parchment.

Pliny the Elder (*Natur*. *Hist*. 13.11) quotes a story from Varro. (Diringer 170)

“King Ptolemy of Egypt [probably Ptolemy V Epiphanes (204-180)] . . . feared that the library of Eumenes, King of Pergamum [probably Eumenes II, 197-58] might come to surpass the library of Alexandria, and he therefore [170] laid an embargo on the export of papyrus from Egypt . . .” So Eumenes invented parchment. (Diringer 170-71)

“But this account is not” historical. (Diringer 171)

1923: several parchment documents found in Dura Europos on the Euphrates, dated 196-89 bc, show that parchment was “already in use at a place far distant from Pergamum.” (Diringer 190)

Perhaps “. . . Pergamum was a particularly important emporium for trade in parchment and a great centre for its manu­facture, probably with the aid of some new appliances by which the Pergamum product, *i*.*e*. the “parchment”, became famous.” (Diringer 192)

Or perhaps “in the period of Eumenes II parchment came temporarily to the front as a material of book production.” (Diringer 192)

* 1. Romans
     1. *Pergamena* (or *charta Pergamena*): “parchment”
        1. “. . . *i*.*e*. stuff prepared at Pergamum . . .” (Diringer 170)
  2. derivative (from “Pergamum”): “parchment”

1. **definitions**
   1. *leather*: “hides or skins of animals . . . [that] is simply tanned . . .” (Diringer 171)
      1. “. . . parchment is much more complicated” (see “manufacture” below). (Diringer 172)
      2. Parchment was a slow improvement on the use of leather. (Diringer 171)
   2. *parchment*: “Parchment . . . is leather manufactured more elaborately.” (Diringer 190)
      1. It is “the prepared skin of animals such as cattle, sheep, goats, and occasionally deer, and preferably from the young of these animals.” (Diringer 170)
      2. “. . . the skin [of] sheep, lambs, kids, goats, asses, pigs, or cattle, especially calves. . .” (Diringer 172)
   3. *vellum*: “The finer quality (derived from the calf) was called vellum (in Latin *vitulinum*); it is finer in grain, whiter and smoother than ordinary parchment.” (Diringer 170)
      1. *uterine vellum*: “The whitest and thinnest kind (made from the skin of an aborted calf) was called uterine vellum, and was employed chiefly for elaborate miniatures.” (Diringer 170)
   4. incorrect usages
      1. In common usage, “parchment” and “vellum” “are synonymous.” (Diringer 170)
      2. “. . . some scholars employ [“parchment”] for sheepskin and [“vellum”] for calfskin . . .” (Diringer 170)
2. **manufacture**
   1. The skin is “washed and divested of its hair or wool . . .” (Diringer 172)
   2. It “is soaked in a lime-pit . . .” (Diringer 172)
   3. It is “stretched tight on a frame, and scraped clear of the remaining hair on one side and the flesh on the other . . .” (Diringer 172)
   4. “. . . it is then wetted with a moist rag, covered with pounded chalk, and rubbed with pumice stone . . .” (Diringer 172)
   5. “. . . finally, it is allowed to dry in the frame.” (Diringer 172)
3. **advantages of parchment over papyrus**
   1. “With the introduction of parchment, a fine smooth writing material was produced, almost white in colour, capable of receiving writing on both sides, and of great enduring power.” (Diringer 192)
   2. “The chief qualities of parchment—when in later times its manufacture was greatly improved—especially of vellum, are its semi-transparent fineness and the striking beauty of its polish, particularly on the hair side. The flesh side of the parchment is somewhat darker, but it retains the ink better.” (Diringer 192)
   3. “The advantages of parchment over papyrus were no doubt obvious . . .” (Diringer 192)
      1. “. . . it was a much tougher and more lasting material than the fragile papyrus . . .” (Diringer 192)
      2. “. . . the leaves could receive writing on both sides . . .” (Diringer 192)
      3. “. . . ink, particularly if recently applied, could be easily re­moved for corrections . . .” (Diringer 192)
      4. “. . . and the surface could be readily made [192] available for a second writing (a second-hand manuscript of this sort is known as “palimpsest” . . .).” (Diringer 192-93)
      5. Parchment is “the most beautiful and suitable material for writing or printing upon that has ever been used, its surface being singularly even and offering little or no resistance to the pen . . .” (Diringer 170)
      6. Kenyon: the vellum book was “capable of the greatest magnificence and beauty that books have ever reached.” (Qtd. in Diringer 203)
   4. Parchment had some defects. (Diringer 194)
      1. In “parchment codices the edges of the leaves are apt to cockle.” (Diringer 194)
      2. “. . . it was much heavier than papyrus, and more difficult to handle.” (Diringer 194)
      3. Galen (Claudius Galenus, born ad 130, prolific physician and philosopher) said “parch­ment, which is shiny, strains the eyes much more than papyrus, which does not reflect light.” (Diringer 194)
      4. It was much more expensive.

## Parchment Scrolls in Greece and Rome

1. **c**. **250-200 bc**: **earliest use of parchment** (**parchment**, **not leather**)
   1. from leather to parchment
      1. Leather is “hides or skins of animals . . . leather is simply tanned . . .” (Diringer 171)
      2. “It is uncertain how and when the change came about from the use of leather to that of parchment . . .” (Diringer 172)
   2. c. 250-200 bc
      1. 196-89 bc: several parchments found in 1923 at “the ruins of Dura Europos on the Euphrates” (Diringer 190)
         1. One “bears the years 117 and 123 of the Seleucid era, equivalent to 196-195 and 190-189 b.c. . . .” (Diringer 190)
      2. Since parchment was used in the early 100s “at an outpost such as Dura Europos, [no doubt] in more central places it was employed at least in the late third century b.c.” (Diringer 192)
   3. 100-1 bc: three parchments (one in Pahlavi, two in Greek) (Diringer 190)
      1. Before 1909 no parch­ment “could be attributed to a pre-Christian date.” (Diringer 190)
      2. c. 1909: “in a cave in the mountain Kuh-i-Sālān, near Avromān (Persian Kurdistan) [was found] a hermetically sealed stone jar containing millet seeds as well as three parchment documents . . .” (Diringer 190)
         1. 88 bc: “earliest Greek document written on parchment” (Diringer 191)
         2. 22-21 bc: second earliest Greek parchment (Diringer 190)
   4. c. ad 200: “the earliest extant specimens of parchment used for literary purposes [are] two leaves . . .” (Diringer 190)
      1. One (in the British Museum) is “a fragment of an oration by Demosthenes . . .” (Diringer 190)
      2. One (in the Berlin Museum) is “a fragment from Euripides.” (Diringer 190)
   5. 200s ad: a Greek fragment of Tatian’s *Diatessaron­* (Diringer 192)
   6. c. ad 300: fragments of the *Iliad* and the *Odyssey*
2. **Romans**
   1. “Among the Romans parchment (*membrāna*) was extensively used . . .” (Diringer 192)
   2. Animal skins “prepared for writing upon must have been in use among pastoral people in early times . . .” (Diringer 192)
   3. “. . . but the purposes of *membrāna* and *charta* (“papyrus”) were distinct until late in the Empire . . .” (Diringer 192)
3. **200 bc-ad 200**: **ambivalence toward parchment**
   1. “For the first four or more centuries of the employment of parch­ment, its use was not very popular.” (Diringer 192)
   2. 100 bc-ad 100: parchment is “used chiefly for notebooks, “for which purpose it competed with the wax tablet” (Kenyon).” (Diringer 192)
      1. Cicero, *Letters to Atticus* 13.24
      2. Horace 2.3.2
      3. Martial, *Epigrams* 14.7
      4. Quintilian (ad c. 35-c. 100) “even preferred to write on wax tablets rather than on parchment.” (Diringer 192)
4. **Christianity**: **triumph of parchment over papyrus**
   1. Despite parchment’s “advantages, the natural conservatism of the ancient world, as well as the traditions of the book trade, especi­ally among the non-Christians, were only gradually overcome.” (Diringer 194)
   2. Parchment competed with wax tablets rather than papyrus. (Diringer 194)
      1. In codex form, “it was used for account books,” wills, and notes. (Diringer 194)
   3. Parchment was used for first drafts. (Diringer 194)
      1. Horace mentions (*Sat*. 2.3.2) a *membrana* “used for the rough copy of poems to be altered and published later . . .” (Diringer 194)
      2. Juvenal (7.24) says “the same purpose was served by the parchment in a diptych stained yellow . . .” (Diringer 194)
   4. “Parchment was the heavier and more vulgar material; [it] clearly was considered inferior to papyrus.” (Diringer 194)
      1. Martial (14.183-96) says that “Gifts of books written in *pugillaribus membranis* or *in* [*sic*] *membranis* are presents of a cheaper sort . . .” (Diringer 194)
      2. “. . . all the references in Roman literature until the end of the first century of the Christian era are plainly to papyrus . . .” (Diringer 194)
      3. Pliny calls papyrus “the principal and essential organ of human civilization and history.” (Qtd. in Diringer 194)
      4. “Till long after the Augustine period, *charta*, meaning “papyrus”, was used for literary publications generally.” (Diringer 194)
      5. Kenyon: “we find Augustine apologizing for using vellum for a letter, in place of either papyrus or his private tablets, which he has dis­patched elsewhere.” (Qtd. in Diringer 194)
   5. Christianity and parchment
      1. “. . . the growth of the Christian community brought parchment into prominence . . .” (Diringer 194)
      2. “. . . the Christian Church, in­fluenced no doubt by Jewish practice, chose parchment to write their sacred books upon.” (Diringer 203)
      3. “The final victory of parchment over papyrus . . . is due to [that] fact . . .” (Diringer 203)
      4. ad 300-50: “vellum or parchment definitely superseded papyrus as the material used for the best books.” (Diringer 194)
         1. “It happened that at about the same time the Emperor Constantine the Great proclaimed Christianity as the State religion of the Roman Empire.” (Diringer 194)
         2. “. . . the earliest preserved Greek Bibles written on vellum codices belong precisely to this period” (e.g., Codex Sinaiticus and Codex Vaticanus). (Diringer 195)
      5. Constantine’s 50 Bibles
         1. 324: Constantine founds Constantinople. (Harris 285)
         2. Constantine “wrote to Eusebius to order fifty parchment volumes (*somatia*) of scripture for the churches of the new capital.” (Harris 285)
         3. 332: Eusebius (c. 264-c. 349, *Life of Constantine* 4.36): he ordered “fifty copies of the [194] Sacred Scriptures . . . to be written on prepared parchment in a legible manner, and in a convenient, portable form . . . [This order was] followed by the immediate execution of the work itself, which we sent him in magnificent and elaborately bound volumes of a three-fold and four-fold form.” (I.e., three and four columns per page.) (Qtd. in Diringer 194-95)
         4. “. . . the emperor’s letter hints at the continuity of ancient conditions, for he ordered books which the faithful would for the most part hear read aloud, and he expected that fifty volumes would cater for the spiritual needs of the capital city.” (Harris 285)
      6. c. 350: Jerome (d. 420) says that, “when the Christian library of Origen (186-*c*. 254) and of the martyr Pamphilus had fallen into decay, its damaged papyrus rolls were replaced by copies written on vellum.” (Diringer 195)
      7. 372: “an edict of Valentinian mentions the employment in libraries of scribes appointed to produce codices.” (Diringer 195)
   6. “A great destruction of vellum manuscripts of the early centuries of our era must have followed the fall of the Roman empire . . .” (Diringer 218)

## Codex

1. “**codex**”
   1. Latin *caudex* or *codex* meant “tree trunk.” (Diringer 34)
      1. Then “anything made of wood . . .” (Diringer 34)
      2. Then “wooden tablets” (Diringer 35)
      3. Then a hinged set of wooden tablets (Diringer 35)
   2. When papyrus or parchment “substituted for wood,” *codex* was “synonymous with *liber* . . .” (Diringer 35)
      1. *Codex* was especially “an account book, or ledger . . .” (Diringer 35)
   3. Christians used *codex* “For literary compositions . . ., beginning with the “codices” of the sacred writings.” (Diringer 35)
      1. c. 300: non-Christian writers occasionally use the term (Diringer 35)
      2. 400s: *codex* becomes popular, because the codex form of “book” is established. (Diringer 35)
   4. Later *codex* was used for a “collection of laws or constitutions of the emperors, such as *Codex Theodosianus* or *Codex* *Iustinianeus*.” (Diringer 35)
   5. In modern languages, “codex” means “a biblical or classical text in manuscript.” (Diringer 35-36)
   6. English derivatives
      1. “codify”
      2. “codicil”
      3. “code” (Diringer 36)
2. **advantages of codex over roll**
   1. It has “greater convenience for continuous reading . . .” (Diringer 203)
   2. It especially has “greater convenience . . . for reference . . .” (Diringer 203)
   3. “. . . its size could be increased at will . . .” (Diringer 203)
   4. The codex “certainly made it possible to encompass a longer text within a single physical “book”—an entire *Iliad* or *Aeneid*, for instance, which previously required a number of rolls each.” (Harris 296)
   5. The most important advantage of the codex was surely “the greater ease with which a particular passage can be found in a codex.” (Harris 296)
   6. “. . . one can put markers between the pages of a codex.” (Diringer 297 n. 44)

## Wooden Tablets

1. **Egypt**
   1. “. . . plain wooden tablets were used in Egypt . . .” (Diringer 27)
   2. “. . . simple flat boards [were] used in Egypt for exercises and other texts . . .” (Wiseman 34)
   3. “Only a few examples of wooden writing-boards have been discovered . . .” (Wiseman 34)
2. **1200-587**: **iron-age Mesopotamia**
   1. The Akkadian word *lē*´*u* “is used of the rectangular writing-boards made of ivory and wood. [Unlike Egyptian writing-boards,] they have a recess to hold an inlay of wax mixed with some coloured and granulated substance, carbon-black or yellow sulphide of arsenic, to take the impression of a stylus.” (Wiseman 34)
   2. “Since the [wax] surface did not harden like the more cumbrous clay tablet, additions and alterations could be made at any time.”
   3. “Boards of this type were used also by the Hittites and Etruscans and in Babylonia could have been used to write either the cuneiform script or the Aramaic alphabet.” (Wiseman 35)
   4. “Wooden writing material [existed] in ancient Mesopotamia” (mentioned by G.R. Driver, *Semitic Writing* p. 16).
3. **Israel**
   1. Hebrew “tablet” (*lûaḥ*) may mean clay tablet; but it is related to Akkadian *lē*´*u*, “rectangular writing-board”
   2. No wooden boards “have been discovered [in] Palestine,” since wood is perishable.
   3. But wooden boards may have been the “tablet” used by Isaiah (30:8) or Habakkuk (2:2).”
      1. Isa 30:8, God to Isaiah, “Go now, write it [an oracle of doom] before them on a tablet, and inscribe it in a book”
      2. Hab 2:2, “the Lord answered me and said: Write the vision; make it plain on tablets . . .”
4. **Greece**: **wooden tablets**
   1. c. 750 bc: *Iliad* (6.168-70)
      * 1. Lattimore trans. (6.168-69), Proitos the king “sent [Bellerophontes] away to Lykia, and handed him . . . symbols, which he inscribed in a folding tablet . . .”
        2. This “plainly refers to a wooden tablet.” (Diringer 29)
   2. c. 450 bc: Herodotus (7.239) says wooden tablets were used for “keeping of accounts, and the writing of models for schoolboys to copy . . .” (Diringer 29)
   3. small tablets
      1. “Small tablets were [used for] school exercises, letters and business documents.” (Herodotus 7.239) (Harris 194; Diringer 29)
      2. “They allowed one to write up to about fifty words a side . . .” (Harris 194)
   4. “Writing-tablets are often mentioned by the tragic dramatists, and they had evidently become quite commonplace objects. That does not demonstrate that they were easily accessible to everyone.” (Harris 95)
   5. Since wax tablets were “reusable, they may have been inexpensive.” (Harris 95)
5. **Rome**
   1. c. 100-1 bc: wooden tablets become common (Diringer 29)
   2. ad 53 and 55: earliest extant Roman tablets (from Pompeii) (Diringer 33)
   3. *tabula*: “board,” “wooden tablet” (Diringer 29)
      1. derivative: “tablet” (Diringer 29)
   4. *pugillar*: “wood-tablet notebook,” literally “handbook” (Diringer 29)
      1. from Greek *puklon*, *puklion* (Wiener)
      2. “. . . this stem pug-, puk- . . . produced Goth. bôka . . .” (Wiener)
      3. pre-500 bc: “Far more often [than *libellus*, early Latins used] *pugillar* . . . to express “document” . . .” (Wiener)
      4. Probably small size allowed holding in one “fist” (*pugnus*, *pugillus*). (Diringer 29)
      5. derivatives
         1. “pugilist”
         2. “pugnacious”
         3. “pug”
6. **making wooden tablets**
   1. At first writing was on “bare wood, which was cut into thin tablets, and finely planed and polished.” (Diringer 29)
      1. from common wood: beech, fir, box, etc. (Diringer 29)
      2. or from expensive wood: cedarwood, etc. (Diringer 29)
   2. Later, wood tablets received a thin coat of wax, usually black. (Diringer 29)
   3. Sometimes they received a thin coat of “gesso, which was polished.” (Diringer 29)
      1. “Gesso” (from *gypsum*): “plaster of Paris and glue used as a base for low relief or as a surface for painting.” (*American Heritage Dictionary of the English Language*. 3rd ed. New York: Houghton Mifflin, 1996.)
   4. Outside cases (wood or ivory) held the inside tablets that were written on.
   5. inside tablets:
      1. had “raised margins” (Diringer 35)
      2. had squares near the center, to keep the tablets from rubbing together (Diringer 35)
7. **size of wooden tablets**
   1. majority: c. 5½ x 4½ inches (Diringer 29)
   2. up to: c. 11 x 9 inches (Diringer 29)
8. **writing on wooden tablets**
   1. stylus
      1. “The writing was incised in the wax by means of a pointed implement . . .” (Diringer 29)
      2. Called a *stilus*, *graphium*, [29] or *ferrum*. (Diringer 31)
   2. erasure
      1. “. . . by smoothing the wax” new matter could be written. (Diringer 29)
      2. Gesso tablets were washed off. (Diringer 29)
9. **uses**
   1. “. . . suitable for ephemeral notes, accounts, memoranda, lists of names . . .” (Diringer 29)
   2. They were used “for letters, the replies being written on the re-spread wax . . .” (Diringer 31)
   3. They were especially used by schoolboys [29], like modern slates. (Diringer 29, 31)
   4. They were especially used “for judicial and administrative purposes.” (Diringer 31)
10. **examples**
    1. early
       1. ad 53 and 55: the earliest extant Roman tablets are from Pompeii (Diringer 33)
       2. ad 169: a dated tablet from the gold mines in Dacia (Transylvania)
    2. late
       1. 1400s ad: Luebeck has preserved some wax tablets of the 1400s (Diringer 33)
       2. “. . . in outlying regions they were used for making occasional notes or accounts down to our own times.” (Diringer 33)

## Wooden Codex

1. **1200-587**: **Mesopotamia**
   1. “The boards were hinged together to form a continuous folding ‘book’ and thus had the advantage that any length of writing surface could be supplied. The Assyrian sculptures show scribes holding a diptych or polyptych while they make inventories of spoil.” (Wiseman 35)
   2. “The examples found at Calah in Assyria were made in 711 b.c. to take a total of more than 5,000 lines of minute cuneiform script in two columns on each side of [34] 16 boards ([4.9 x 12⅓ in.] 12.5 x 31.3 cm).” (Wiseman 34-35)
2. **Graeco-Roman wooden codex**
   1. Single tablets were used [29], or 2-10 were bound together. (Diringer 29, 35; Harris 194)
      1. *diptych* (“double-folding” [wax tablets]): 2 hinged tablets (Diringer 29)
      2. *triptych*: 3 hinged tablets (Diringer 29)
      3. *poly­ptych*: 4-10 hinged tablets (Diringer 29)
   2. One side is pierced so a thread or wire can lace the tablets together. (Diringer 33)
   3. Greeks and Romans used “*pugillares* long after the use of papyrus (or even parchment) became common, because they were so convenient for correcting extemporary compositions.” (Diringer 31)
      1. Ovid (*Metamorphoses* 2.522-25):
         1. “In her right hand she holds her stilus, in her left an empty waxen tablet.
         2. She begins, then hesitates; writes on and hates what she has written.
         3. Writes and erases; changes and condemns and approves.
         4. By turns she lays her tablets down and takes them up again.” (Diringer 31)
      2. “From the *pugillares* [Romans] transcribed the final text on to papyrus rolls (or parchment) . . .” (Diringer 31)
   4. outside tablets (which hold the inside tablets that are written on)
      1. “Originally the diptych cases were small, unornamented, and usually made of wood, but from the second century a.d. onwards they became larger and were mainly made of ivory. . . . Ivory diptychs, elaborately carved, were in later times used for “Byzantine” bookbindings . . .” (Diringer 31)
   5. “From the *pugillares* they transcribed the final text on to papyrus rolls (or parchment) . . .” (Diringer 31)
   6. Later, codex wooden leaves were replaced by codex papyrus leaves. (Diringer 161)

## Papyrus Codex: History of its Use

1. **pre-Christian use**
   1. “How early the codex form of papyrus books was in use we cannot say . . .” (Diringer 161)
   2. The codex may go back to the first century bc. (Diringer 161)
      1. c. 100-50 bc: “An inscription found at Priene [mentions] *codices* (*teúkhē*) both of papyrus and of parchment, in which the public acts of the city had been transcribed . . .” (Diringer 161)
      2. 52 bc: at Rome “the *codices librariorum* formed part of the pyre which an angry mob kindled under the corpse of Clodius.” (Diringer 161)
   3. c. ad 75-100: Martial (14.186) “mentions a text of Virgil, which was probably a codex . . .” (Diringer 161)
2. **Christian use**
   1. “The Christians . . . soon diverged from the Jews in respect of the form of the “book” . . . [and] favoured the codex . . .” (Diringer 203)
      1. “. . . many Christians felt no conscious attachment at all to the old written culture and may for this reason have been especially willing to jettison the old kind of book.” (Harris 296)
   2. ad 100-50: a fragment of John (18:31-33) (Diringer 161)
      1. “the earliest fragment extant of the N.T.” (Diringer 245)
      2. Found in southern Egypt.
   3. 100-50: “two leaves of an unknown Gospel” (Diringer 161)
   4. 100-50: “a fragmentary codex of *Numbers* and *Deuteronomy*” (Diringer 161)
   5. c. 150: “earliest extant papyrus codex” (part of the Old Testament) (Diringer 162)
   6. 200s: “a papyrus leaf from Egypt of . . . the *Sayings of Jesus*” (Diringer 161)
   7. “. . . if the codex form of the papyrus book was not actually a Christian invention, it was most promptly employed by the Christian community, and it was the growth of this community which [162] brought it into prominence.” (Diringer 162-63)
      1. 118 papyrus fragmentary works (as of 2008-02-08)
         1. 30-200: 2 (P52, John 18:31-33) (P75, ad 175‑225, Luke and John)
         2. 200s: 7
         3. 300s: 40
         4. 400s: 27
         5. 500s: 11
         6. 600s: 12
         7. 700s: 17
         8. 800s: 2
3. **ad 100s-200s**
   1. “. . . the majority of Christian works were already in codex form.” (Diringer 163)
   2. “. . . the roll continued to be commonly used for works of pagan literature . . .” (Diringer 163)
4. **last stage of employment of papyrus**
   1. “The papyrus codex does not seem to have enjoyed great popularity. The relative fragility of [papyrus] and its tendency to crack when folded, precluded it from being widely used in codex form.” (Diringer 165)
   2. 200s-500s ad
      1. Four “forms of books were employed . . .”
         1. papyrus roll
         2. papyrus codex
         3. vellum codex
         4. parchment roll (“rarely”) (Diringer 165)
      2. by 300: “the papyrus roll was superseded by the parchment codex as the main form of book, especially as far as it concerns Christian literature.” (Diringer 165)
   3. “The following table [surveys] papyri and vellum codices recovered in Egypt and dealing with secular or pagan subjects . . .” (Diringer 165)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ad | number  of MSS | papyrus | | vellum  codices |
| rolls | codices |
| 200s | 304 | 275 | 26 | 3 |
| 300s | 83 | 39 | 34 | 10 |
| 400s | 78 | 23 | 43 | 12 |
| 500s | 29 | 15 | 10 | 4 |
| 600s | 13 | 2 | 5 | 6 [166] |

* + 1. 300s: “the decline of papyrus is definitely [165] to be dated from the fourth century . . .” (Diringer 165-66)
    2. c. 950: “The manufacture of papyrus would seem to have ceased . . .” (Diringer 165-66)
  1. by 300: “papyrus had ceased to be used as the main writing material for books, its use lingered on in Europe for documents of daily life until the eleventh century. In the Papal chancery, following the usage of the Byzantine imperial court, papyrus was employed until the second half of the eleventh century; its last recorded use is in 1057, under Pope Victor II.” (Diringer 166)

## Parchment Codex: A History of Its Use

1. **history of parchment codex**
   1. 100 bc?-ad 68: “among the Dead Sea Scrolls, a “folded-up” book has been discovered . . .” (Diringer 203)
   2. “The increasing use of parchment instead of papyrus . . . may be partly attributable to growing difficulties in obtaining papyrus supplies.” (Harris 297 n. 47)
   3. 300s: “The parchment [codex] achieved its triumph in the fourth century . . .” (Diringer 203)
      1. ad 300-50: the Bible in codex form “was quite common amongst them [Christians] in the first half of the fourth century.” (Diringer 203)
   4. “The Christians soon extended its use to their theological literature, and then to literature in general.” (Diringer 203)
   5. 300s-1300s
      1. “The parchment [codex] . . . remained the chief writing material for books for over a millennium, *i*.*e*. until the establishment of paper in general use in the fourteenth century, and until the Renaissance.” (Diringer 203)
      2. “This period of the dominance of the vellum book . . . corresponds almost exactly with the dominance of Christian religion and Christian thought . . . (Kenyon).” (Diringer 203)
2. **earliest biblical vellum codices in Greek**
   1. “About 5,000 Greek vellum codices of the Bible are extant.” (Diringer 195)
   2. five “great Greek Uncials . . . in order of importance” (Robinson 117-18)
      1. 300-350: *Codex Vaticanus* (B)
         1. provenance: probably Egypt (especially Alexandria) (Diringer 197)
         2. in the Vatican Library “at least since 1481 . . .” (Diringer 198)
         3. c. 820 original leaves; now 759 (Diringer 197)
         4. 10½ x 10 inches (Diringer 197)
         5. three columns per page (Diringer 197)
            1. Codex Vaticanus and Codex Sinaiticus, “having relatively narrow columns, show that they were copied from rolls rather than from codices.” (Diringer 211)
         6. “. . . the most valuable of all the manuscripts of the Greek Bible.” (Diringer 195)
      2. c. 350: *Codex Sinaiticus* (א)
         1. provenance: probably Egypt (especially Alexandria) (Diringer 197)
         2. 1844: found at “the monastery of St. Catherine at the foot of Mount Sinai . . .” (Diringer 195)
         3. 1933: the British Museum buys it from the Soviet Union for £100,000. (Diringer 195)
         4. c. 730 original 730 leaves; now 390 (Diringer 195)
            1. 242 contain most of the OT (Diringer 195)
            2. 148 contain the whole NT “with some other Christian writings.” (Diringer 195)
         5. 15 x 13½ inches (Diringer 197)
         6. 4 columns per page (“two in the poetical books”); 48 lines per column (Diringer 197)
         7. “The words are written continuously without separation . . .” (Diringer 197)
         8. punctuation: high point, middle point, and colon (Diringer 197)
         9. “There are no accents or breathings.” (Diringer 197)
      3. c. 400-450: *Codex Alexandrinus* (A)
         1. Cyril Lucar, Patriarch of Alexandria, brought Alexandrinus with him when he became Patriarch of Constantinople. (Diringer 198)
         2. 1627: Cyril Lucar presents Alexandrinus to Charles I of England. (Diringer 198)
         3. 2 columns per page (Diringer 198)
         4. 12¾ x 10¼ inches (Diringer 198)
      4. 400s: *Codex Ephraemi Rescriptus* (C) (palimpsest: re-used for 38 sermons by St Eph­raem)
      5. 400s: *Codex Bezae* (D) (New Testament only)
         1. provenance: N. Africa? (Diringer 198)
         2. 800s: used at Lyons by Ado and Florus (Diringer 198)
         3. 1562: Theodore Beza (Théodore de Bèze, Calvin’s successor at Geneva, 1519-1605) acquires it “from the loot of the Lyons church [198] of St. Irenaeus . . .” (E.A. Lowe, qtd. in Diringer 198, 201)
         4. 1581: Beza presents it to the Cambridge University Library. (Diringer 198)
         5. 1 column per page (Diringer 198)
         6. 10 x 8 inches (Diringer 198)
         7. bilingual: Greek on the left page, Latin on the right. (Diringer 198)
         8. text type: “the chief representative of the Western text” of the NT (Diringer 198)
   3. those next most important (not in order of importance) (Diringer 198)
      1. 400s: *Cotton Genesis* or *Codex D* (Old Testament)
      2. 400s: *Codex Ambrosianus* (F) (Old Testament)
      3. 400s: *Codex Sarravianus* (G) (Diringer 202)
      4. 500s: *Codex Petropolitanus* (H) (palimp­sest)
      5. 400s-500s: *Vienna Genesis* (L) (silver letters on purple vellum; beautiful illuminations)
      6. 500s: *Codex Laudianus* (provenance: probably Sardinia)
      7. 500s: *Codex Marchalianus* (Q) (provenance: Egypt) (prophets only)
      8. 500s: *Codex Washing­tonianus I* (in the Freer Collection)
      9. 500s-600s: *Codex Washing­tonianus II* (in the Freer Collection)
      10. 600s: *Codex Tischendorfianus* (K) (palimp­sest: re-used in 800s for an Arabic text)
3. **earliest biblical vellum codices in Latin**
   1. 300s ad: “the earliest preserved Latin vellum codices . . .” (Diringer 195)
   2. example: the *Vercelli Gospels* (Diringer 195)
4. **earliest secular vellum codices**
   1. “The earliest extant secular works written on vellum codices are . . . contemporary with the earliest [biblical] codices.” (Diringer 202)
   2. Greek
      1. probably 300s ad: *Iliad*
   3. Latin
      1. probably 300s ad: “a group of Virgil codices” (Diringer 202)
         1. “Virgil was, in a certain way, to the Romans what Homer was to the Greeks. Both Homer and Virgil formed the basis of school education.” (Diringer 259)
         2. Hence Virgil codices are “amongst the earliest Latin codices . . .” (Diringer 259)
      2. probably 300s ad: a “palimpsest of *De Republica* by Cicero . . .” (Diringer 202)

## Parchment Codex In General

1. **parchment codices**
   1. introduction
      1. “. . . a large sheet of vellum was usually folded in both directions, vertically and horizontally, and thus formed quires of two, four, eight or sixteen leaves . . .” (Diringer 163)
      2. Fig. V-10 C “Folding of parchment codices: *a*, folio; *b*, quarto (quaternion); *c*, octavo; *d*, four quaternions stitched together. Drawing by Ella Margules.” (Diringer 193)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *number of folds* *\** | *no*. *of leaves* | *number of pages* | *name* | *medieval size* | *modern cover size* |
| once | 2 | 4 | folio | c. 10 x 18 (h x w) | c. 15 in. high |
| twice | 4 | 8 | quarto \*\* |  | c. 9½ x 12 |
| thrice | 8 | 16 | octavo |  | c. 5x8 to 6x9½ |
| four times | 16 | 32 | sextodecimo |  | c. 6 in. high |

In medieval times, number of sheets: a stack of, e.g., four was folded once (8 leaves, 16 pages). Four sheets: Greek *tetrádion*, Latin *quaternus* or *quaternio* (whence French *cahier*, English “quire”). Five sheets: Latin *quinternion* or *quinternio* (10 leaves, 20 pages)

* + 1. “Since parchment has two distinct sides, care was generally taken in putting together the sheets for the quire (see pp. 163 and 215) to [208] . . . lay them in such a way that hair side faced hair side, and flesh side faced flesh side. Thus, when the book was opened, the two pages before the reader had the same appearance, either flesh side or hair side.” (Diringer 208, 210)
    2. In “Greek codices, with little exception, the first page of the quire was the flesh side . . .” (Diringer 210)
    3. In “Latin codices, it was the hair side.” (Diringer 210)
    4. “A great number of books being left unbound, many scribes usually left blank the first leaf; or at least the recto of the first leaf; the blank page or leaf was intended to give some protection against tear and wear.” (Diringer 210)
  1. “The arrangement of the leaves of ancient parchment or vellum books was essentially the same as that of modern books.” (Diringer 215)
  2. Early parchment books “consisted of sheets, each forming two leaves—hence the term *folio* (from Latin, meaning “sheet”) . . .” (Diringer 215)
  3. “. . . but normally the parch­ment book was composed of a series of quires fastened together.” (Diringer 215)
  4. Quires of (?) folded sheets (6 leaves) are uncommon. (Diringer 215)
  5. quarto quire: 4 folded sheets (8 leaves, 16 pages)
     1. Greek *tetrádion*, Latin *quaternus* or *quaternio*, French *cahier*, English “quire.” (Diringer 215)
     2. A quarto had “four sheets of vellum or parchment (about 10 inches high and 18 inches wide), folded down the middle and placed one inside the other; thus giving eight leaves or sixteen pages.” (Diringer 215)
     3. “They were fastened, or rather threaded together by the means of a string, thread or fibre, passing down the middle of the crease of the innermost sheet of the quire, and running from the innermost fold right through to the outermost, thus holding the leaves firmly together.” (Diringer 215)
  6. quinternion (*quinternio*): a quire of 5 sheets (10 leaves, 20 pages) (Diringer 215)
  7. 6 sheets (12 leaves, 24 pages) (Diringer 215)
  8. “The quires fastened together to form a book were marked (so that their order might not be lost), and sent to the scribe or copyist to write on, and were eventually bound.” (Diringer 215)
  9. Lowe: “not all writing centres followed the same method in the manufacture of a book. . . . different schools had different practices.” (Diringer 215)
     1. Lowe: “some centre or centres in North-East France, easily recognizable by certain script peculiarities, had a special way of ruling and arranging the leaves.” (Qtd. in Diringer 215)
     2. Lowe: “. . . Insular [Irish and Anglo-Saxon] scribes had a tendency to rule the membranes after the bifolia were folded into a gathering, with the direct impression on the recto side of folios, now on each recto, now on alternate rectos, and occasionally, when the lines seemed too faint, even on the verso.” (Qtd. in Diringer 215)
     3. Lowe: different practices “may have a bearing on the question of the manuscript’s home.” (Qtd. in Diringer 215)

1. **palimpsests**
   1. “Palimpsest” is from Greek παλίμψηστος (*palimpsestos*), “scraped again.” (Diringer 217)
   2. “. . . in Latin they were also called *codices rescripti* . . .” (Diringer 218)
   3. “. . . one of the main advantages of parchment was that writing could be washed or scraped off, so that the parchment could be used again. This practice was due to the [215] . . . scarcity and high cost of writing material.” (Diringer 215, 217)
   4. Papyrus “ink could be washed off, but not scraped or rubbed . . .” (Diringer 217)
      1. Yet some Latin writers use “palimpsest” for papyri. (Diringer 217)
         1. Catullus (84-54 bc), *Carm*. 22.5
         2. Cicero (106-43 bc), *Ad Fam*. 12.18.
         3. Plutarch (ad 46-120), *Cum princip*. *Philosoph*. ad fin.
      2. So “palimpsest” “must have been applied originally . . . to material strong enough to bear such treatment as parchment or waxen tablets.” (Diringer 217)
      3. Or “the term became so commonly used as to have passed beyond its strict meaning.” (Diringer 218)
   5. ad 476 on: with the fall of the Roman empire, “political and social changes interfered with the market, and writing material would thus become scarce, and might well have been supplied from manuscripts which had become useless and were considered mere encumbrances of the shelves.” (Diringer 218)
   6. “In the case of Greek manuscripts, so great was their clearance that a synodal decree of the year 691 for­bade the destruction of manuscripts of the Scriptures or of the Fathers, imperfect or injured volumes excepted.” (Diringer 218)
   7. “. . . no entire work has been found in the original text of a palimpsest; . . . only portions of different manuscripts were taken to make up a volume for a second text.” (Diringer 218)
   8. 600s-800s: palimpsests were “most common between the seventh and ninth centuries—indeed, the most valuable Latin texts are found in the volumes which were re-written in this period . . .” (Diringer 219)
   9. But palimpsests were used “even down to the sixteenth century.” (Diringer 219)
      1. “In the earlier cen­turies the works of classical writers were obliterated to make room for patristic literature or grammatical works . . .” (Diringer 219)
      2. “. . . in the later centuries classical works were written over Biblical manuscripts.” (Diringer 219)
   10. procedure for writing a palimpsest
       1. “. . . the old writing was scraped off with a scraping knife or razor, or with pumice . . .” (Diringer 219)
       2. “. . . a mixture of cheese, milk, and lime was used to soften the vellum.” (Diringer 219)
   11. procedure for recovering underlying text
       1. “If the first writing were thoroughly removed, none of it, of course, could ever be recovered. But, in point of fact, it was often very imperfectly effaced; the ink of the old writing had penetrated so deeply into the vellum that even severe scraping could not remove all traces of the text. Even if, to all appearances, the parchment was restored to the original condition of an unwritten surface, yet” the text is still there. (Diringer 219)
       2. “. . . even the action of the atmosphere might intensify the old ink, and make the former text legible.” (Diringer 219)
       3. chemical treatment
          1. “. . . when the manuscript is soaked in certain chemicals, the blue or red outlines of the old writ­ing appear again . . .” (Diringer 219)
          2. Chemical treatment is “primarily with acid obtained from oak gall [“Oak bark has traditionally been the primary source of tannery tannin” (“Tannin,” *Wikipedia*, 6 Feb. 2007).] . . . [But] the manuscript became so dim that it was impossible to read it.” (Diringer 219)
          3. “More recently, sub­stances such as hydrosulphide of ammonia were used; these brought out the old writing for a short time, and while the text was thus visible, photographs were taken; then the chemicals were washed out.” (Diringer 219)
       4. infra-red or ultra­violet photography
          1. “Nowadays, photographs of the old writing can be taken without any chemical treatment, simply by employing infra-red or ultra­violet photography, or fluorescence. Many valuable manuscripts which had been lost . . . have thus been recovered from palimpsests.” (Diringer 219)
       5. the ultra-violet method
          1. Leonard V. Dodds (*Antiquity*): ultra-violet rays “are generated by a lamp of the familiar mercury vapour type. In this instrument a direct current of electricity is passed through the vapour of molten mercury contained in a quartz generator, and electrons in the form of ultra­violet energy are driven off similarly to X-rays. The burner is housed in a box-like structure with suitable arrangements for observation and insertion of the camera lens, and all rays emitted by the lamp other than the ultra-violet are screened from the subject examined by the provision of a special filter which is permeable to this group only. Consequently the manuscript is illuminated by a beam of invisible ultra-violet rays only. In some lamps a solution of copper­sulphate and a deep orange-dye, nitrosodimethylanaline, is used to make the filter, and this is contained between sheets of uviol blue glass, but in the Hanovia apparatus, one of the most widely used, this type of filter has been superseded entirely by a new glass, almost black in colour, which transmits the ultra-violet rays only.” (Qtd. in Diringer 222)
          2. “When an old manuscript is examined in this way, the tints and dyes left in the parchment from the earlier writings fluoresce dis­tinctly from those of the visible text and from the parchment itself, and the palimpsest can easily be distinguished. By using a special filter the later writings may be eliminated and a photograph taken of the earlier script only, but it is of probably greater interest to see the two texts on one print. The visible writings appear as if in outline type, that is white letters with a narrow black edge, and underneath, or often transversally, may be seen the dark grey letter­ing of the original text. Slight imperfections due to the varying action of the cleaning process are to be expected, but it is seldom that any difficulties in deciphering occur which are due to visibility.” (Qtd. in Diringer 223)
   12. “Sometimes the palimpsests are bilingual, the old writing being Greek and the new writing Latin; or the old, Syriac and the new, Arabic; or Hebrew and Latin.” (Diringer 219)
   13. “There are even, though rare, in­stances of double palimpsests, *i*.*e*. in which there appear three successive writings.”
       1. In a British Museum manuscript “from the great collection of manuscripts of [219] . . . the Nitrian Desert in Egypt . . . a Syriac translation of St. Chrysostom’s *Homilies*, of the ninth or tenth century, covers a Latin grammatical treatise, written in cursive minuscule of the sixth century, which again displaced the *Annales* of the Latin historian C. Granius Licinianus (who lived in the first half of the second century a.d.) written in uncials of the fifth century.” (Diringer 219, 221)
       2. Another palimpsest from the Nitrian Desert collection “is a work of Severus of Antioch of the early ninth century, written on leaves taken from manuscripts of the *Iliad* and the *Gospel of St*. *Luke* of the sixth century, and of the *Elements* of Euclid of the seventh or eighth century.” (Diringer 221)
   14. some famous palimpsests
       1. *Codex Ephraemi*
          1. “. . . Biblical text (portions of the Old and New Testaments in Greek, of the fifth century) [underlies] the works of St. Ephraem of Syria, written in a hand which may be assigned to the twelfth century.” (Diringer 221)
          2. It was “brought from the East to Italy early in the sixteenth century, and taken to Paris by Queen Catherine de’Medici . . .” It is “now in the National Library in Paris . . .” (Diringer 221)
          3. late 1600s: “The idea of using palimpsest manuscripts for the recovery of earlier works was first taken up at the end of the seventeenth century, when attention was called to the . . . *Codex Ephraemi* . . .” (Diringer 221)
       2. Cicero’s *De Republica*
          1. “One of the most important palimpsests [contains] portions of Cicero’s *De Republica*, of the fourth century, written under the work of St. Augustine on the Psalms, of the seventh century . . .” It is in the a Vatican Museum. (Diringer 221)
          2. E. Maunde Thompson: the Cicero text, written “in a large and massive style . . . must have formed a large volume which . . . was presumably an edition de luxe on a scale which could not often have been repeated.” (Qtd. in Diringer 221)
       3. *Codex Ambrosianus*
          1. “Cardinal Angelo Mai published in 1814-15 the *Codex Ambrosianus* (Ambrosian Library, at Milan . . .) of Plautus, written in rustic capitals of the fourth or fifth century under a Biblical text of the ninth century.” (Diringer 221)
       4. A famous Verona palimpsest—discovered in 1816 by Niebuhr—contains the only extant fragment of the *Institutions* (being an Introduction to Roman Jurisprudence) of the eminent jurist Gaius (a.d. *c*. 110-*c*. 184), and the *Fasti Consulares* of the years a.d. 487-94; the former is written in an interesting literary hand of mixed uncial and minuscule letters ascribed to the fifth century, while the latter is written in the half-uncial literary hand.” (Diringer 221)
       5. At the Ambrosian Library, at Milan . . . a portion of Virgil (140 folios are extant), in semi-uncial of the fifth or sixth century a.d., “all rewritten, some more than once”; the upper script is Arabic of *c*. 1100 (it is a copy of a [221] Christian work); “the lower scripts include Hebrew, Syriac, Greek, Coptic and Latin; the Latin apparently much the oldest” (Lowe).” (Diringer 221-22)
       6. A Vatican codex is “a fragmentary copy of the Old Testament, written (probably at Lorsch) mainly in eighth-century uncials, a small portion being in ninth-century minuscule . . .” (Diringer 222)
          1. It “consists partly of palimpsest leaves and partly of non-palimpsest leaves . . .” (Diringer 222)
          2. Lowe thinks they are “a restoration of a portion of older palimpsest leaves.” (Diringer 222)
          3. “The earlier scripts of the preserved palimpsest leaves show portions of the following works or authors:
             1. “Seneca (written in fifth-century uncials),
             2. “Lucan (Rustic capitals, fourth or fifth century),
             3. “Hyginus (uncials, fifth century),
             4. “a Greek medical fragment (Greek sloping uncial, fifth century),
             5. “Fronto (Rustic capitals, fourth or fifth century),
             6. “an oratorical fragment (quarter uncial, fifth or sixth century),
             7. “Livy (Rustic capitals, fourth century),
             8. “Aulus Gellius (Rustic capitals, fourth century),
             9. “Cicero, *Pro Rabirio* and *pro* [*sic*] *Roscio Comoedo* (uncials, fifth century).” (Diringer 222)
       7. “Another curious palimpsest . . . codex” (Diringer 222)
          1. “The upper text (*Acta Synodi I Chalcedonensis*) was written in Bobbio in the seventh century.” (Diringer 222)
          2. Under it are “the *Mesogothic Commentary*, . . . Cicero, Fronto, Symmachus, Pliny, Juvenal, Persius, and *Tractatus Arianorum*. They are written in Latin rustic capitals, uncials and half-uncials of the fifth or sixth century.” (Diringer 222)

## Hebrew Parchment Codices: The “Model Codices”

1. **introduction**
   1. pointings
      1. 500s-600s: adding vowel symbols apparently arose in Syria.
      2. Symbols were added to the Syriac Bible and Qur’an.
      3. This was imitated by Jewish scholars (Masoretes) in Babylonia and Palestine.
   2. “model”: Heb *keter*, “crown”: full Old Testaments for study of the ben-Asher text and apparatus
2. **Cairo Prophets Codex** (ad 895)
   * 1. both former prophets (Jos, Jgs, Sm, Kgs) and latter prophets (21 books)
     2. Moses ben Asher added vowel points in ad 895.
     3. the oldest dated Hebrew Old Testament manuscript
     4. history
        1. given to Karaite Jewish community in Jerusalem
        2. seized during First Crusade (1096-99); King Baldwin releases to Karaites of Cairo; still there today
3. **Aleppo Codex** (c. ad 930)
   1. c. 930: Aaron ben Moses ben Asher adds vowel points and accents (guides to the phrasing and inflection in recital).
   2. history
      1. Given to Karaite Jewish community in Jerusalem.
      2. Endorsed by Maimonides (d. 1204) as a reliable guide to certain features of the standard text.
      3. 1478: presence in Aleppo is first attested
      4. 1947: anti-Jewish rioting in Aleppo. The codex is thought destroyed.
      5. 1958: in damaged form it reaches Israel. Portions lost are:
         1. Gen-Deut 28:17 Qoh
         2. parts of 2 Kgs Sgs 3:11-end (8:14)
         3. parts of 2 Chr Jer
         4. Ezra-Neh Lam
         5. Est Dan
         6. Pss 15:1-25:2 minor prophets
   3. Aleppo codex and the autographs
      1. The Aleppo Codex was copied about 1800 years after the oldest OT book (Genesis, largely 900s bc). (VanderKam 123)
      2. The Aleppo Codex was copied about 1100 years after the most recent OT book in the Hebrew Bible (Daniel, c. 165 bc). (VanderKam 123)
      3. “In an age of hand copying, much could happen to a text in so many centuries—all of it bad.” (VanderKam 123)
4. **Leningrad Codex** (ad 1009)
   1. Brought from the Crimea in 1839.
   2. Vowels and apparatus are from mss corrected and annotated by Aaron ben Moses ben Asher.

## Medieval Vellum Codices

1. **introduction**
   1. “manuscript”: *codices* (or *libri*) *manuscripti* (“hand written”)
   2. From the triumph of the parchment over papyrus (c. ad 300) to the invention of printing (c. ad 1450), the handwritten parchment codex dominates, for a millennium. (Diringer 205)
   3. Manuscripts were usually on vellum. (Diringer 203)
2. **scriptorium**
   1. “In the most important abbeys and monasteries a “writing room” or scriptorium was assigned to the scribes, who were constantly employed in transcribing, not only service-books for the choir and the church, but also books for the library and the monastery school, and even lay books.” (Diringer 206)
   2. “The scriptor­ium was often built in the form of a series of separate little partitions or studies.” (Diringer 207)
   3. The *armarius* was in charge, providing “desks, parchment, pens, ink, penknives, awls (to give guiding marks for ruling lines), rulers, metal *stili* (to draw the lines), pumice-stone (to smooth the surface of the parchment), reading frames (to hold the book to be copied), and weights (to keep down the pages of the codices) . . .” (Diringer 207)
   4. “The scriptorium . . . had special rules . . .” (Diringer 207)
      1. “To guard against ir­reparable loss by fire . . ., [candles and lamps were] entirely forbidden, so all work had to be done during daylight: the monastic scribe worked about six hours daily.” (Diringer 207)
      2. “To prevent interruption and distraction, . . . absolute silence was required.” (Diringer 207)
         1. “. . . if a scribe wanted to consult a book, he extended his hands and made a movement as of turning over pages . . .” (Diringer 207)
         2. “. . . if the book required was a psalter, he made the general sign, and then placed his hands on his head in shape of a crown (alluding to King David) . . .” (Diringer 207)
         3. “. . . if a pagan book was needed, the general sign was followed by scratching the ear in the manner of a dog.” (Diringer 208)
   5. “. . . as a rule, the scribe *copied* his book, and did not write from dictation.” (Diringer 208)
   6. “When no scriptorium was available, separate little rooms were assigned to book copying; they were situated in such a way that each scribe had to himself a window open to the cloister walk. Only in special cases were private rooms or cells assigned.” (Diringer 208)
3. **expense of vellum**
   1. pre-587 bc on: in Israel, probably “leather was the regular material for important or official documents as well as for formal copies, while the much cheaper papyrus [and] ostraca . . . were employed for more or less private and merely ephemeral matters . . .” (Diringer 176)
   2. “By 1424, Cambridge University library owned only 122 books—each of which had a value equal to a farm or vineyard.” (Meggs, Philip B. *A History of Graphic Design*. New York: John Wiley and Sons, 1998. 58-69. Qtd. in “Printing Press”)
   3. 1450: invention of the printing press. (“Printing Press”)
   4. 1455 or 1456: the Gutenberg Bible
      1. “. . . about 150 copies were printed on paper and about 35 on vellum.” (Metzger 263)
      2. “Only twelve parchment and thirty-six paper copies . . . exist worldwide; four of the parchment copies are complete, as are seventeen of the paper copies.” (Metzger 263)
      3. How many calves were needed for the 35 parchment copies?
         1. The 1282 pages are 15½ x 11⅛ in. (Metzger 263)
         2. So “340 sheets of four pages each were needed.” (Metzger 263)
         3. “. . . one calfskin provided only two good sheets of this size . . .” (Metzger 263)
         4. So “almost 6,000 calves were needed . . . for the 35 parchment copies . . .” (Metzger 263)
         5. That is 172 calves per Bible.

## Paper

“Kraft Process.” *Wikipedia*. 9 Feb. 2008.

Laumer, John. “Rock Paper: For Tree-Less Photo Printing.” *Treehugger*. 14 Feb. 2006. 9 Feb. 2008. <http://www.treehugger.com/files/2006/02/rock\_paperwater.php>.

“Paper.” *Wikipedia*. 9 Feb. 2008.

“Pulpwood.” *Wikipedia*. 9 Feb. 2008.

1. “**paper**”
   1. A writing and packaging material made of “vegetable fibers composed of cellulose . . .” (“Paper”)
   2. Most fibers are from pulpwood trees. (“Paper”)
   3. Fibers from “cotton, hemp, linen, and rice are also used.” (“Paper”)
2. **pulpwood trees**
   1. “. . . better trees are usually used for sawlogs for lumber production . . .” (“Pulpwood”)
   2. “Pulpwood . . . in a mixed logging operation” derives from (“Pulpwood”)
      1. “. . . open-grown trees, that are heavily branched low on the trunk, and so make poor sawlogs.” (“Pulpwood”)
      2. “. . . dead or diseased trees.” (“Pulpwood”)
      3. “. . . tops cut from trees harvested for sawlogs . . .” (“Pulpwood”)
         1. (“. . . branches are rarely used since they contain little useable wood after the bark has removed.”) (“Pulpwood”)
      4. “. . . trees too small to harvest for sawlogs.” (“Pulpwood”)
   3. “Salvage cuts after forest fires, tornadoes, hurricanes, or other natural disasters are often also for pulpwood. An alternative source of wood for use in kraft pulping [“a technology for conversion of wood into wood pulp consisting of almost pure cellulose fibers,” “Kraft Process”] is recovered lumber from demolition, industrial processing of wood and wooden pallets.” (“Pulpwood”)
3. **China**
   1. writing paper
      1. 100s bc: “true paper without writing has been excavated [that was used for] wrapping or padding protection . . .” (“Paper”)
      2. 8 bc: archaeologists in 2006 discovered paper “specimens bearing written Chinese characters at north-east China’s Gansu province [that] was in use by the ancient Chinese military more than 100 years before Cai . . .” (“Paper”)
      3. ad 105: tradition says “the Han Dynasty Chinese court official Cai Lun [invented] papermaking (inspired from wasps and bees) from wood pulp . . .” (“Paper”)
   2. toilet paper
      1. 500s ad: “Toilet paper was used in China by at least the 6th century ad.” (“Paper”)
      2. ad 1393: “the Bureau of Imperial Supplies . . . manufactured 720,000 sheets of toilet paper for the entire court (produced of the cheap rice-straw paper).” (“Paper”)
   3. ad 618-907 (Tang Dynasty)
      1. Tea-bags are invented. (“Paper”)
      2. Napkins are invented. (“Paper”)
      3. Paper cups are invented. (“Paper”)
   4. ad 960-1279 (Song Dynasty)
      1. Paper money is invented. (“Paper”)
   5. The Chinese tried to keep paper-making a secret. (“Paper”)
      1. ad 604: the secret escapes to Korea. (“Paper”)
      2. ad 610: the secret escapes to Japan, where mulberry trees are used. (“Paper”)
4. **Middle East**
   1. ad 751: Arabs defeat the Chinese at the Battle of Talas and learn how to make paper. (“Paper”)
5. **Europe**
   1. 1096 (first crusade): Europeans discover paper manufacturing at Damascus. (“Paper”)
   2. 1120: first paper mill in Europe (Valencia, Spain). (“Paper”)
   3. 1000s: “The oldest known paper document in the West is the *Mozarab Missal of Silos* . . ., probably written in the Islamic part of Spain.” (“Paper”)
   4. 1200s: Fabriano, Italy, manufactures paper from hemp and linen rags. (“Paper”)
   5. by 1400: paper is manufactured in Italy and Germany, “about the time when the woodcut printmaking technique was transferred from fabric to paper . . .” (“Paper”)
   6. “Paper remained expensive, at least in book-sized quantities, through the centuries . . .” (“Paper”)
   7. 1800s
      1. “. . . steam-driven papermaking machines . . . could make paper with fibres from wood pulp.” Paper became cheap. (“Paper”)
      2. concurrent inventions
         1. “the practical fountain pen” (“Paper”)
         2. “the mass produced pencil” (“Paper”)
         3. “the steam-driven rotary printing press” (“Paper”)
      3. With the concurrent inventions, “wood-based paper caused a major transformation of the 19th century economy and society in industrialized countries.” (“Paper”)
         1. by 1850: “the clerk, or writer, ceased to be a high-status job.” (“Paper”)
         2. “. . . schoolbooks, fiction, non-fiction, and newspapers became gradually available by 1900 . . .” (“Paper”)
   8. Paper is now used:
      1. “To represent a value: paper money, bank note, cheque, security, voucher, . . . ticket” (“Paper”)
      2. “For entertainment: book, magazine, newspaper, art . . .” (“Paper”)
      3. “For packaging: corrugated box, paper bag, envelope, wrapping tissue, . . . wallpaper,” wax paper (“Paper”)
      4. “For cleaning: toilet paper, handkerchiefs, paper towels, facial tissue . . . cat litter,” filters
      5. “For construction: papier-mâché, origami, . . . a core material in composite materials, . . . construction paper and clothing” (“Paper”)
      6. “Other uses: emery paper, sandpaper, blotting paper, litmus paper” (“Paper”)
6. **printing paper**
   1. “. . . a ream of 20 lb, 8½ x 11” paper weighs 5 pounds . . .” (“Paper”)
      1. It is called “20 lb” “because it has been cut from a larger sheet into four pieces.” (“Paper”)
   2. In the United States:
      1. “printing paper is 20 lb, 24 lb, or 32 lb” (“Paper”)
      2. cover stock is 68 lb (“Paper”)
      3. card stock is 110 lb or more (“Paper”)
7. **Rock Paper™**
   1. made of powdered limestone (Laumer)
   2. “. . . printing papers for magazines and photography are coated with finely divided calcium carbonate: billions of tiny rock bits are impregnated . . .” (Laumer)
   3. “Very durable . . .” (Laumer)
   4. “. . . tear resistant . . .” (Laumer)
   5. “After two hours in a pan of water the image printed on . . . paper got quite blurry; colors bled and changed; and the coating resin turned slippery. On drying, it’s edges curled up severely.” (Laumer)
   6. With the Rock Paper sample, there was “No blurring or resin dissolution at all. Upon drying it returned to being flat and looked almost identical to an unwet copy of the print.” (Laumer)

## Lost Writings

1. “. . . the first biblical texts, were written on scrolls (Jeremiah 36) perhaps made of papyrus . . .” (Mazar 515)
2. “The Hebrew inscriptions known from the period of the Monarchy . . . represent only a small portion of the written texts in Israel, which were mostly taken down on papyrus (brought from Egypt) or on parchment, both of which are [514] perishable.” (Mazar 514-15)
3. “Throughout Palestine the most common [writing material] may well have been papyrus . . . The loss of original or early manuscripts of the Old Testament books is almost certainly due to the use of perishable writing materials.” (Wiseman 30)

## Scribal Errors

1. **unintentional**: **faulty eyesight**
   1. resemblance of Greek uncial (capital) letters
      1. δ and λ (delta and lambda)
      2. ε, θ, ο, Ϲ (epsilon, theta, omicron, lunar sigma)
      3. γ, π, τ (gamma, pi, tau)
      4. λλ are like μ (two lambdas are like mu)
   2. *homoeoteleu­ton*: similar endings of line­s caused the eye to wander from the first to the second ending, omit­ting lines in be­tween
   3. *haplography* (*haplo*, “single”): omitting letters or lines that should be repeated
      1. 1 Cor 9:1 and 9:2 end with, “You are in the Lord”; 9:1 is left out in MS. A.
      2. Haplography is a form of parablepsis (errors that result from looking to the side).
   4. *dittography*: accidentally repeating a word or phrase
      1. Acts 19:34 has “Great is Artemis of the Ephesians!” once.
      2. Only Codex Vaticanus has it twice.
      3. The eye returns to the next phrase, but an oc­currence of it previously in the text; so a passage became homynyms. Omicron became long “o,” like omega (\_קoלוv and \_קשלוv); the diphthong בי became short ו (-ףטבי and ‑ףטו); ח, י, ץ, and וי, oי, and ץי all became long ו (as in “feet”; cf. per­sonal pronouns: \_לוע/\_לוע, etc.).
   5. Rough breathing is lost (cf. \_יע and \_יע, \_ך ףoץ and \_ק o\_).
2. **unintentional**: **faults of the mind**
   1. substitution of synonyms
   2. varying the sequence of words
   3. varying the sequence of letters
   4. assimilation to parallels in the synoptics, or in Colossians and Ephesians
3. **unintentional**: **errors of judgment**
   1. inclusion of marginalia, of ἐῖπεν ὁ (*eipen ho*, “he said”), etc.
4. **intentional** “**im­provements**”
   1. improving spelling or grammar
   2. assimilation to parallels in the synoptics, or in Colossians and Ephesians
      1. e.g., Luke’s Lord’s Prayer; Paul’s con­versions
   3. assimilation to parallels within a book
      1. e.g., “scribes” becomes “scribes and Pharisees”
   4. clarifying historical and geographical problems
      1. e.g., Mark 1:2, “As it is written in Isaiah,” becomes a quotation that includes Mal 3:1
   5. conflating variant readings
   6. doctrinal alterations (some eliminate or alter, others include monks’ added references to toasting in 1 Cor 7)
   7. addition of curious details
      1. e.g., Jesus’ genealogy enlarged, or the members of “the household of Onesiphorus”
      2. titles of books expanded

## Variant Readings

1. **Old Testament**
   1. In the Old Testament, “variant readings . . . run into the hundreds of thousands.” (Akerson 528)
   2. The Great Isaiah Scroll, from the Dead Sea Scrolls, is 90% the same as as the Massoretic Text, 10% different.
2. **New Testament**
   1. In the New Testament, “there are perhaps 300,000 variant readings.” (Akerson 528)
   2. Of our present Greek text, 95% is certainly original. (Metzger, *The Text of the New Testament*)
3. **conclusion**
   1. “Overwhelmingly [the variants] are minor—matters of a sin­gle letter . . .” (Akerson 528)

## Archaeological Periods of Palestine

(NEOLITHIC TO IRON AGE)

Mazar, Amihai. *Archaeology of the Land of the Bible 10*,*000-586 bc*. Anchor Bible Reference Library. New York: Doubleday, 1990. 30 (unless stated otherwise).

1. Pre-Pottery Neolithic A ca. 8500-7500 bce
2. Pre-Pottery Neolithic B 7500-6000 bce
3. Pottery Neolithic A 6000-5000 bce
4. Pottery Neolithic B 5000-4300 bce
5. Chalcolithic 4300-3300 bce
6. Early Bronze I 3300-3050 bce
7. Early Bronze II-III 3050-2300 bce
8. Early Bronze IV/Middle Bronze I 2300-2000 bce
9. Middle Bronze IIA 2000-1800/1750 bce
10. Middle Bronze IIB-C 1800/1750-1550 bce
11. Late Bronze I 1550-1400 bce

a. Late Bronze IA 1550-1470 [238]

b. Late Bronze IB 1470-1400 [238]

1. Late Bronze II 1400-1200 bce

a. Late Bronze IIA 1400-1300 [238]

b. Late Bronze IIB 1300-1200 [238]

1. Iron IA 1200-1150 bce
2. Iron IB 1150-1000 bce
3. Iron IIA 1000-925 bce
4. Iron IIB 925-720 bce
5. Iron IIC 720-586 bce [30, 238]

## Bibliography

Brown, Raymond E., SS. “Apocrypha; Dead Sea Scrolls; Other Jewish Literature.” In Brown, Raymond E., Joseph Fitzmyer, and Roland E. Murphy, eds. *Jerome Biblical Commentary*. Englewood Cliffs: Prentice-Hall, 1968.

“Chronology [of Egyptian History].” University College of London. 19 Nov. 2005. <http://www.­digitalegypt.ucl.ac.uk//chronology/index.html>.

de Vaux, Roland, OP. *The History of Early Israel*. Trans. David Smith. London: Darton, Longman and Todd; Philadelphia: Westminster, 1978. (French: Vol. 1. *Histoire ancienne d*’*Israël*: *Des Origines à l*’*Installation en Canaan*. 1971. Vol 2. *Histoire ancienne d*’*Israël*: *La Période des Juges*. 1973.)

Diringer, David. *The Book Before Printing*: *Ancient*, *Medieval and Oriental*. London: Hutchin­son’s Scientific and Technical Publications, 1953. Rpt. New York: Dover, 1982.

“Egyptian Hieroglyphics.” *Wiki­pedia*. 9 Feb. 2008. 13 Feb. 2008. Web.

Goodspeed, E.J., and I.A. Sparks. “Papyrus.” In Bromiley, George, ed. *The International Standard Bible Encyclopedia*. Rev. ed. 4 vols. Grand Rapids: Eerdmans, 1986. 3.651-55.

Harris, William V. *Ancient Literacy*. Cambridge: Harvard UP, 1989.

“Hieratic.” *Wiki­pedia*. 7 Dec. 2017. 26 Dec. 2017. Web.

Mallory, J.P. *In Search of the Indo-Europeans*: *Language*, *Archaeology and Myth*. London: Thames and Hudson, 1989.

Mazar, Amihai. *Archaeology of the Land of the Bible 10*,*000-586 bc*. Anchor Bible Reference Library. New York: Doubleday, 1990.

Metzger, Bruce M. “Gutenberg, Johannes Gensfleisch zum.” In Metzger, Bruce M., and Michael D. Coogan, eds. *The Oxford Companion to the Bible*. New York: OUP, 1993. 263-64.

Niditch, Susan. *Oral World and Written Word*: *Ancient Israelite Literature*. Library of Ancient Israel. Louisville: Westminster John Knox, 1996. 52.

“Printing Press.” *Wikipedia*. 14 Feb. 2008. 20 Feb. 2008. Web.

Reynolds, Nigel. “Tiny Tablet Provides Proof for Old Testament.” (London) *Telegraph*. 7 July 2007. 7 Feb. 2008. <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2007/07/

11/ntablet111.xml>.

Robinson, George L. *Where Did We Get Our Bible*? Garden City: Doubleday, Doran, 1929.

Tov, Emanuel. “Textual Criticism—Old Testament.” In *The Anchor Bible Dictionary*, ed. David Noel Freedman. New York: Doubleday, 1992 (CD-ROM: 1997).

Wiener, Leo. *Commentary to the Germanic Laws and Mediaeval Documents*. Cambridge: Harvard UP, 1915. *Northvegr Foundation*. 2007. 9 Feb. 2008. <http://www.northvegr.org/lore/­germaniclaw/index.php>.

Wiseman, D.J. “Books in the Ancient Near East and in the Old Testament.” In Ackroyd, Peter R., and C.F. Evans, eds. *The Cambridge History of the Bible*. Vol. 1, *From the Beginnings to Jerome*. Cambridge: CUP, 1970. 30-48.