

THE ROMANCE OF BIBLE CHRONOLOGY

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An Exposition of the Meaning, and a Demonstration
of the Truth, of Every Chronological Statement
Contained in the Hebrew Text of the Old Testament

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DEDICATION

To my dear Friend

Rev. G. Campbell Morgan, D.D.

to whose inspiring Lectures on

"The Divine Library in Human History"

I trace the inception of these pages, and whose intimate knowledge and unrivalled exposition
of the Written Word makes audible in human ears the Living Voice of the Living God,

I dedicate this book.

The Author

October 3rd, 1913

FOREWORD

BY REV. G. CAMPBELL MORGAN, D. D.

It is with pleasure, and yet with reluctance, that I have consented to preface this book with any words
of mine.

The reluctance is due to the fact that the work is so lucidly done, that any setting forth of the method
or purpose by way of introduction would be a work of supererogation.

The pleasure results from the fact that the book is the outcome of our survey of the Historic move-

ment in the redeeming activity of God as seen in the Old Testament, in the Westminster Bible School. While I was giving lectures on that subject, it was my good fortune to have the co—operation of Mr. Martin Anstey, in a series of lectures on these dates. My work was that of sweeping over large areas, and largely ignoring dates. He gave his attention to these, and the result is the present volume, which is invaluable to the Bible Teacher, on account of its completeness and detailed accuracy.

Bible study is the study of the Bible. There are many methods and departments; none is without value; all of them, when done thoroughly rather than superficially, tend to the deepening of conviction as to the accuracy of the records.

In no case is this more marked than in departments which are incidental than essential.

If, in such a matter as that of dates—which seems to be purely incidental, and is of such a general nature that few have taken the trouble to pay particular attention to it—the method of careful study shows that these apparently incidental references are nevertheless accurate and harmonious, then a testimony full of value is borne to the integrity of the writings.

To this work Mr. Anstey has given himself, with great care, and much scholarship. The results are full of fascination, and are almost startling in their revelation of the harmony of the Biblical scheme.

The method has been that of independent study of the writings themselves with an open mind, and determination to hide nothing, and to explain nothing away.

The careful and patient student is the only person who will be able to appreciate the value of this work; and all such will come to its study with thankfulness to the Author; and having minds equally open and honest, will be able to verify or correct. In this process I venture to affirm that corrections will be few, and the verification constant.

WESTMINSTER CHAPEL,
BUCKINGHAM GATE, S.W.,

October 11th, 1913.

ὁ τολμοῦν τι παραλασσεῖν τῶν γεγραμμένων ἀπ' ἀργεῶς, οὐκ ἐν ἡδῶ ἀλεετηρίας
ἠισταταί.

He who attempts to alter any part of the Scriptures, from indolence or incapacity, stands not in the path of Truth.

Epiphanius Against Heresies, Book I.

PREFACE BY THE AUTHOR

THE Studies embodied in the following pages have been undertaken with a view to ascertaining and exhibiting the exact chronological relation of every dated event recorded in the Old Testament. The object of the writer is the production of a Standard Chronology, which shall accurately represent the exact date at which each event took place, so far as this can be ascertained from the statements contained in the text itself.

No other dates are given. All merely approximate or estimated dates are omitted as inexact. All merely probable or conjectural dates, inferred from speculative reconstructions of the historical situation, and not guaranteed by the words of the text, are rejected as unverifiable. All dates certainly known, but derived from other sources—such as profane history and modern discovery are excluded from the Chapters on the Chronology of the Old Testament. They appear only in the Chapters on Comparative Chronology and in the Chronological Tables (Vol. II). The Chronology adopted in these pages is supported by Josephus, but does not lean upon him. It is, to some extent, confirmed by the results of modern discovery, as tabulated in the Guides to the Babylonian, Assyrian, and Egyptian Antiquities published by the Authorities of the British Museum, but it stands upon its own foundation, and is dependent upon none of them.

Chronology is a branch of History. As such it is governed by the laws which determine the validity of the results reached by the process of scientific investigation and historical enquiry. It is also a branch of Applied Mathematics, and Mathematics is an exact Science. In a truly scientific Chronology there is no room for any date which is not demonstrably true. This view of the limits of the subject accounts for the absence of the note of interrogation (?) after any date in the Chronological Tables, and for the somewhat dogmatic or Euclidian tone in which the conclusions reached by this method are expressed. Like Mathematics, Chronology has its axioms, its postulates, and its definitions, of which the most important and the most fundamental is the trustworthiness of the testimony of honest, capable, and contemporary witnesses, like that of the men whose testimony is preserved in the Records of the Old Testament.

CHAPTER 1: SCOPE, METHOD, STANDPOINT AND SOURCES

THE purpose of the present work is to construct a Standard Chronology of the period covered by the writings of the Old Testament.

In addition to the Hebrew Massoretic Text of the Old Testament, there are many other sources affording data for the construction of a Chronology of this period, of which the principal may be classified as follows:

1. Other Texts and Versions such as (1) the Septuagint (LXX) or Greek Version of the Old Testament, and (2) the Samaritan Pentateuch.
2. Ancient Literary Remains, such as those fragments of Sanchoniathon of Phoenicia, Berosus of Chaldea, and Manetho of Egypt, which have come down to us; the national traditions of Persian History preserved in the writings of the Persian poet, Firdusi; the books of the Old Testament Apocrypha; the works of the Jewish Historian Josephus, and the Talmudic Tract, Sedar Olam.
3. Ancient Monumental Inscriptions upon Rocks, Temples, Palaces, Cylinders, Bricks, Steles and Tablets, and writings upon Papyrus Rolls, brought to light by modern discoveries in recent times.
4. The Classic Literature of Greece and Rome.
5. Astronomical Observations and Calculations, especially eclipses of the Sun, eclipses of the Moon and the risings of Sirius, the dogstar, with the Sun.
6. The works of Ancient and Modern Chronologers.

The results obtained from any one of these several sources must, if true, be consistent with the results obtained from each of the other sources.

The aim of the present work is to make an exhaustive critical examination of the data contained in the first of these several sources only, and to develop and construct therefrom a Standard Chronology of the events of the Old Testament, so far as this can be obtained from the chronological data which lie embedded in the Hebrew Massoretic Text of the Old Testament, and independently of any help which may be derived from any other source.

The results thus obtained will be compared at every stage with those obtained from the data afforded by the other sources named above, but whilst the data afforded by the Hebrew Text of the Old Testament are made the subject of an exhaustive critical examination, every step in the series being scientifically investigated and rigorously established in accordance with the recognized laws of historical evidence, the data afforded by these other sources are not thus dealt with, but are left over for investigation by other workers in these several branches of chronological enquiry and research.

The establishment of a Standard Chronology of the Hebrew Text of the Old Testament is a first requisite for the correct interpretation of the results obtained from other departments of chronological study, as, without this, no true and sure comparison can be made between the dates given in the Old Testament and those obtained from other sources.

The Method adopted is that of accurate observation and scientific historical induction. Each recorded fact is accepted on the authority of the text which contains it. Each book in the Old Testament is carefully examined, and every chronological statement contained therein is carefully noted down. After thus collecting all the relevant statements of the text, and making a complete induction of all the facts, a chronological scheme is constructed, in which every dated event in the Old Testament is duly charted down in its proper place. There is no selecting of certain facts to the exclusion of certain other facts. There is no attempt to reconcile apparently discrepant statements by conjectural emendations of the text. The scheme is not bent to meet the exigencies of any particular theory, but all the statements that bear upon the subject of Chronology are brought together and interpreted in relation to each other in such a way as to form one complete harmonious table of events in which the whole of the relevant facts contained in the Old Testament are exhibited and explained in the light of the time relations which obtain between them.

An attempt is made to exhibit the results thus obtained to the eye, by means of Diagrams, Charts, Tables and other forms of graphic representation, clearness of apprehension being regarded as equally important with accuracy and precision of statement, in any adequate and satisfactory presentation of this somewhat intricate and difficult subject. In this way an endeavour is made to secure a result which shall be at once both Scriptural and scholarly, and at the same time easy to understand.

The present essay deals only with the Hebrew Text of the Old Testament in the form in which it has reached us from the hands of the Massorettes. That Text has an origin and a history, and our view of its

origin may perhaps influence us in our estimate of its value and its authority. Into the question of the authorship, the date, and the composition of the various books of the Old Testament, the integrity of the Text, and the various sources from which it has been derived, the present author does not now enter. In like manner, all questions relating to the preservation and transmission of the Text are left untouched, the sole aim of the writer being to ascertain and to elicit from the Text as it stands the chronological scheme which lies embodied therein. The authenticity of the records, and the accuracy of the Text in its present state of preservation, is taken for granted. The results obtained from this study will be authoritative within the limits of the authority accorded to the text itself. The materials afforded by the Text are dealt with in accordance with the requirements of modern scientific method. Care has been taken to secure for each step in the Chronology the value of historic proof or demonstration, so that each subsequent induction may proceed upon an assured scientific foundation.

The authority to be accorded to the results obtained from the six other sources named above is that of corroborating or conflicting witnesses, not that of the verdict of a jury, and not that of the pronouncement of a Judge.

The results obtained from the testimony of these other witnesses may be compared with those obtained from the Old Testament Record, but they must not be erected into a Standard of established Truth, and used to correct the testimony of the principal witness.

1. Other Texts and Versions

1. The **Septuagint (LXX)** is a translation of the Hebrew Scriptures of the Old Testament into Hellenistic Greek. It was made at Alexandria in Egypt, a portion at a time, the Pentateuch being the portion translated first. The translation of the entire work occupied some 70 years (BC 250–180). It was commenced in the reign of Ptolemy II, Philadelphus, King of Egypt (BC 284–247). It was translated by Alexandrian, not Palestinian Jews, and was the work of a number of independent translators, or groups of translators, separated from each other by considerable intervals of time. It was the work of a number of men who had none of that almost superstitious veneration for the letter of Scripture, which characterized the Jews of Palestine. A Palestinian Jew would never dare to add to, to take from, or to alter a single letter of the Original. The translators of the LXX, on the contrary, are notorious for their Hellenizing, or their modernizing tendencies, their desire to simplify and to clear up difficulties, their practice of altering the text in order to remove what they regarded as apparent contradictions, and, generally, their endeavour to adapt their version to the prevailing notions of the age, in such a way as to commend it to the learning and the culture of the time. Hence the centenary additions to the lives of the Patriarchs in order to bring the Chronology into closer accord with the notions of antiquity that prevailed in Egypt at that time. Like the modern critic, the LXX translator did not hesitate to “correct” the record, and to “emend” the Text, in order to make it speak what he thought it ought to say.
2. The **Samaritan Pentateuch** is a venerable document written in the very ancient pointed Hebrew Script, which appears to have been in use (1) in the time of the Moabite Stone which dates from the 9th Century BC (2) in the time of the Siloam Inscription, which dates from the 7th Century BC, and (3) in the time of the Maccabees, i.e., in the 2nd Century BC. The Manuscript, which is of great age, is preserved in the Sanctuary of the Samaritan Community at Nablous (Shechem). It modifies the Hebrew Text in accordance with the notions prevailing amongst the descendants of the mixed population introduced into Samaria by the Kings of Assyria, from Sargon (2 Kings 17:24) in the 8th Century BC to “the great and noble Asnapper” (Ezra 4:10) probably Ashurbanipal, in the 7th Century BC. It alters “Ebal” to “Gerizim” in Deuteronomy 27:4, bears traces of a narrowing, rather than a broadening outlook, and represents the tendencies that prevailed amongst the Samaritans in the 9th to the 2nd Centuries BC. If it is not so old as the LXX, the constructor of the Text may have had before him both the Hebrew Original and the Greek LXX Version, and may have picked his own way, selecting now from the one, and now from the other, in accordance with his own predilections and his own point of view. But it is more than probable that the Samaritan Pentateuch is much older than the LXX, and that it was translated from Hebrew into Samaritan about the time of Hezekiah in the 8th Century BC (See *The Samaritan Pentateuch and Modern Criticism*, by J. Iverach Munro, MA, 1911).

The tendency of the modern mind, which is imbued with Greek rather than with Hebrew ideals, is to over-estimate the authority of the LXX as compared with the Hebrew. Many scholars look upon it as a translation of a different Hebrew Text from that Preserved in our Hebrew Bibles, but the variations are all easily accounted for as adaptations of the Original Hebrew to meet the views of the Hellenized Jews of Alexandria. The differences in the order of the books, the various omissions and the many additions, show that the point of view has been changed, and though the framework and the main substance of the LXX is the same as that of the Hebrew, the modifications are sufficient to indicate that we are reading a translation of the same original produced in the new world of Greek culture rather than the translation of a different original produced in the old world of He-

brew religion. The patriarchal Chronology of the LXX can be explained from the Hebrew on the principle that the translators of the LXX desired to lengthen the Chronology and to graduate the length of the lives of those who lived after the Flood, so as to make the shortening of human life gradual and continuous, instead of sudden and abrupt. The Samaritan patriarchal Chronology can be explained from the Hebrew. The constructor of the scheme lengthens the Chronology of the Patriarchs after the Flood, and graduates the length of the lives of the patriarchs throughout the entire list, both before and after the Flood, with this curious result, that with the exception of (1) Enoch, (2) Cainan, whose life exceeds that of his father by only five years, and (3) Reu, whose age at death is the same as that of his father, every one of the Patriarchs, from Adam to Abraham, is made to die a few years younger than his father. This explains why the Chronology of the years before the Flood is reduced by 349 years. Could anything be more manifestly artificial? The LXX and the Samaritan Pentateuch may take their place in the witness box, but there is no room for them on the bench.

2. Ancient Literary Remains

Of ancient literary remains outside the classical literature of Greece and Rome, but little has been preserved. A collection of these, known as Cory's Ancient Fragments, was made and published by Isaac Preston Cory in 1832.

1. **Sanchoniathon** is said to have written a History of Phoenicia, and to have flourished in the reign of Semiramis, the Queen of Assyria, the wife of Ninus, and, with him, the mythical founder of Nineveh. She lived BC 2000, or according to others, BC 1200. Sanchoniathon was quoted by Porphyry (b. AD 233) the opponent of Christianity, in his attack on the writings of Moses. Porphyry says, Sanchoniathon was a contemporary of Gideon, BC 1339. His writings were translated into Greek by Philo Byblius in the reign of Hadrian (AD 76–130). Philo was a native of Byblos, a maritime city on the coast of Phoenicia. He had a considerable reputation for honesty, but some scholars believe his work to be a forgery; others believe that he was himself deceived by a forger. According to Philo Byblius, Sanchoniathon was a native of Berytus in Phoenicia. His Phoenician History may be regarded as one of the most authentic memorials of the events which took place before the Flood, to be met with in heathen literature. It begins with a legendary cosmogony. It relates how the first two mortals were begotten by the Wind (Spirit) and his wife Baau (Darkness). It refers to the Fall, the production of fire, the invention of huts and clothing, the origin of the arts of agriculture, hunting, fishing and navigation, and the beginnings of human civilization. Sanchoniathon gives a curious account of the descendants of the line of Cain. His history of the descendants of the line of Seth reads like an idolatrous version of the record in Genesis. The whole system of Sanchoniathon is a confused, unintelligible jargon, culled from (1) the mythologies of Egypt and Greece, and (2) a corrupt tradition of the narrative in Genesis. It may well have been forged by Porphyry, or by Philo Byblius, in order to prop the sinking cause of Paganism, and to retard the rapid spread of Christianity in the 2nd and 3rd Centuries of the Christian Era. Sanchoniathon is said to have written, also, a history of the Serpent, to which he attributed a Divine nature. These fragments of Sanchoniathon, or Philo Byblius, or whoever the author was, have been preserved to us in the writings of Eusebius.
2. **Berosus** was a Chaldean priest of Belus, at Babylon. He lived in the time of Alexander the Great (BC 356–323). About BC 268, he wrote in the Greek language a history of Babylonia from the creation, down to his own time. Only fragments of his work remain. These have been preserved to us in the pages of Apollodorus (BC 144), Polyhistor (BC 88), Abydenus (BC 60), Josephus (AD 37–103), Africanus (AD 220), and Eusebius (AD 265–340), who give varying accounts of those parts of Berosus' work which they quote. Berosus obtained the materials for his history from the archives of the temple of Belus at Babylon. His story of the creation of the world, of the ten generations before the Flood, and the ten generations after it, correspond somewhat with the Mosaic narrative in Genesis. The first man, Alorus, was a Babylonian. The tenth, Xisuthrus, corresponds to Noah, in whose reign Berosus places the great Deluge. The ten Kings before the Flood occupy a period of 120 Sari (Hebrew *eser* = ten, a decad) or 1,200 years, each containing 360 days, a total therefore of 432,000 days, which the Chaldeans in after years magnified into 432,000 years in order to enhance their antiquity. In the reign of the first King, Alorus, an intelligent animal called Oannes came out of the Red Sea, and appeared near Babylonia in the form of a fish with a man's head under the fish's head, and a man's feet which came out of the fish's tail. This is Berosus' account of Noah, who appears again under the name of Xisuthrus, whilst Alorus, the Nimrod of Genesis and the founder of Babylon, is placed at the top of the Dynasty of ten Kings, of which Xisuthrus, or Noah, is the tenth. Xisuthrus builds a vessel, takes into it his family, and all kinds of animals and birds, and when the waters are abated, birds are sent out from the vessel three times, quite after the manner of the Biblical Noah. Mankind starts from Armenia, and journeys toward the plain of Shinar, following the course of the Euphrates. There, Nimrod, aspiring to the universal

sovereignty of the world, builds the Tower and the City of Babel. The builders are dispersed, and the Tower is destroyed. There is a reference to Abraham, and a detailed account of the reigns of the Kings of Babylon from Nabopolassar, who overthrew the Empire of Assyria, to Nebuchadnezzar and his destruction of the Temple at Jerusalem. Berosus also mentions Evil Merodachus, Neriglissorus, Laborosarchodus, and Nabonnedus, in the 17th year of whose reign, at the end of the Seventy Years during which Jerusalem was in a state of desolation, Cyrus came out of Persia with a great army and took Babylon.

3. Manetho, of Sebennytus in Egypt, was a learned Egyptian priest. At the request of Ptolemy Philadelphus, King of Egypt (BC 284–247), he wrote, in the Greek language, about the year BC 258, a work on Egyptian Antiquities, deriving his materials from ancient records in the possession of the Egyptian priests. The work itself is lost, but portions of it are preserved in Josephus, Africanus, and Eusebius. It contains a list of the 31 dynasties of the Kings of Egypt, from Menes, the first King, with whom the civilization of Egypt takes its rise, to the conquest of Egypt by Cambyses (BC 529–521). Its value for historical and chronological purposes is problematical, for (1) the accounts of the work handed down to us by Africanus and Eusebius contain contradictions in almost every dynasty, (2) the lists are incomplete, and (3) we have no means of ascertaining which of the dynasties are consecutive, or successive, and which are co-existent, or contemporary.
4. The Persian Epic Poet, Firdusi (AD 931–1020) was born at Khorassan. He wrote the history of Persia in verse, from the earliest times down to AD 632. This is not Chronology. It is not even history. It is a poetic rendering of the legendary national traditions of Persia. The uncritical nature of the poet, and the unhistorical character of his work, may be gathered from the fact that the reigns of the first four Kings of the second, or Kaianian dynasty, are reckoned as follows:
 1. Kai Kobad 120 years
 2. Kai Kaoos 150
 3. Kai Khoosroo 60
 4. Lohrasp 120

The unique value of Firdusi's poem arises from the fact that it gathers up and preserves the national Persian tradition of the Chronology of the period between Darius Hystaspes and Alexander the Great (BC 485–331), just as the Talmudic Tract, Sedar Olam gathers up and preserves the national Jewish tradition of the chronology of the same period.

The Chronology of this period has never yet been accurately determined. The received Chronology, though universally accepted, is dependent on the list of the Kings, and the number of years assigned to them in Ptolemy's Canon. **Ptolemy** (AD 70–161) was a great constructive genius. He was the author of the Ptolemaic System of Astronomy. He was one of the founders of the Science of Geography. But in Chronology he was only a late compiler and contriver, not an original witness, and not a contemporary historian, for he lived in the 2nd Century after Christ. He is the only authority for the Chronology of this period. He is not corroborated. He is contradicted, both by the Persian National Traditions preserved in Firdusi, by the Jewish National Traditions preserved in the Sedar Olam, and by the writings of Josephus.

It has always been held to be unsafe to differ from Ptolemy, and for this reason. His Canon, or *List of Reigns*, is the only thread by which the last year of Darius Hystaspes, BC 485, is connected with the first year of Alexander the Great, thus:

Persian Kings As Given in Ptolemy's Canon			
Persian Kings	Reigns Nabonnassarian Era	BC Connumerary	BC Julian
Cyrus	Reigned 9 years from 210	538	538
Cambyses	Reigned 8 years from 219	529	529
Darius I Hystaspes	Reigned 36 years from 227	521	521
Xerxes	Reigned 21 years from 263	485	486
Artaxerxes I Longimanus	Reigned 41 years from 284	464	465
Darius II Nothus	Reigned 19 years from 325	423	424

Artaxerxes II Mnemon	Reigned 46 years from 344	404	405
Artaxerxes III Ochus	Reigned 21 years from 390	358	359
Arogus or Arses	Reigned 2 years from 411	377	338
Darius III Codomannus	Reigned 4 years from 413	335	336
Alexander the Great	Reigned — years from 417	331	332
[TOTAL] 207			

From these 207 years of the Medo-Persian Empire, we must deduct the first two years of the Co-Rexship of Cyrus with Darius the Mede. This leaves seven years to Cyrus as sole King, the first of which, BC 536, is “the first year of Cyrus, King of Persia” (2 Chron. 36:22), in which he made his proclamation giving the Jews liberty to return to Jerusalem. That leaves 205 years for the duration of the Persian Empire proper.

In Ptolemy’s Table of the Persian Kings, all the Julian years from Xerxes to Alexander the Great inclusive are connumerary. Therefore each requires to be raised a unit higher to give the Julian years in which their reigns began. Ptolemy reckons by the vague Egyptian year of 365 days. The Julian year is exactly 365 1/4 days. Had Ptolemy never written, profane Chronology must have remained to this day in a state of ambiguity and confusion, utterly unintelligible and useless, nor would it have been possible to have ascertained from the writings of the Greeks or from any other source, except from Scripture itself, the true connection between sacred Chronology and profane, in any one single instance, before the dissolution of the Persian Empire in the 1st year of Alexander the Great. Ptolemy had no means of accurately determining the Chronology of this period, so he made the best use of the materials he had, and contrived to make a Chronology. He was a great astronomer, a great astrologer, a great geographer, and a great constructor of synthetic systems. But he did not possess sufficient data to enable him to fill the gaps, or to fix the dates of the Chronology of this period, so he had to resort to the calculation of eclipses. In this way then, not by historical evidence or testimony, but by the method of astronomical calculation, and the conjectural identification of recorded with calculated eclipses, the Chronology of this period of the world’s history has been fixed by Ptolemy, since when, through Eusebius and Jerome, it has won its way to universal acceptance. It is contradicted (1) by the national traditions of Persia, (2) by the national traditions of the Jews, (3) by the testimony of Josephus, and (4) by the conflicting evidence of such well-authenticated events as the Conference of Solon with Croesus, and the flight of Themistocles to the court of Artaxerxes Longimanus, which make the accepted Chronology impossible. But the human mind cannot rest in a state of perpetual doubt. There was this one system elaborated by Ptolemy. There was no other except that given in the prophecies of Daniel. Hence, whilst the Ptolemaic astronomy was overthrown by Copernicus in the 16th Century, the reign of the Ptolemaic Chronology remains to this day. There is one, and only one alternative. The prophecy of Daniel 9:24–27 fixes the period between the going forth of the commandment to return and to build Jerusalem (in the first year of Cyrus) to the cutting off of the Messiah (in the year AD 30) as a period of 483 years. If this be the true Chronology of the period from the 1st year of Cyrus to the Crucifixion, it leaves only 123 years instead of the 205 given in Ptolemy’s Canon, for the duration of the Persian Empire.

	Daniel	Ptolemy
Persian Empire (Cyrus to Alexander the Great)	123 years	205 years
Greek Empire (Alexander the Great to AD 1)	331 years	331 years
TOTAL	454 years	536 years
AD1 to the Crucifixion, AD30	29 years	29 years
TOTAL	483 years	565 years
a difference of 82 years		

Consequently the received or Ptolemaic Chronology, now universally accepted, must be abridged by these 82 years. The error of Ptolemy has probably been made through his having assigned too

many years, and perhaps too many Kings, to the latter part of the period of the Persian Empire, in the scheme which he made out from various conflicting data.

We have to choose between the Heathen Astrologer and the Hebrew Prophet.

Other interpretations have been given of the date of “the going forth of the commandment to return and to build Jerusalem” (Dan. 9:25).

Bishop Lloyd, the author of the Bible Dates in the margin of the Authorized Version, reckons the 483 years from the leave given to Nehemiah to rebuild the walls of Jerusalem in the 20th year of Artaxerxes, whom he identifies with Artaxerxes Longimanus (Neh. 2:1), and to make the fulfilment fit the prophecy on the erroneous Ptolemaic reckoning of the Chronology he has to curtail the interval by reckoning in years of 360 days each.

Dr. Prideaux reckons the 483 years from the date of Ezra’s return in the 7th year of Artaxerxes (Longimanus), Ezra 7:1–28.

Scaliger reckoned the 70 weeks of Daniel as commencing in the 4th year of Darius Nothus, BC 420, and ending at the destruction of Jerusalem, AD 70.

Others have reckoned the 483 years from the going forth of the commandment in the 2nd year of Darius Hystaspes (BC 519) to build the Temple (Ezra 4:24, 5:1–6:15).

But the true point of departure for the 70 weeks, and therefore for the 483 years also, is unquestionably the 1st year of Cyrus (Dan. 9, 2 Chron. 36:20–23, Ezra 1:1–4, Isa. 44:28, 45:1–4, 13), and no other epoch would ever have been suggested but for the fact that the count of the years was lost, and wrongly restored from Ptolemy’s conjectural astronomical calculations.

It would be far better to abandon the Ptolemaic Chronology and fit the events into the 483 years of the Hebrew prophecy.

The one great fundamental fact to be remembered is the fact that modern Chronology rests upon the calculations of Ptolemy as published in his Canon or List of Reigns. And since the foundation of Greek Conjectural Computation Chronology, upon which Ptolemy’s Canon rests, is unstable, the superstructure is likewise insecure. Ptolemy may be called as a witness. He cannot be allowed to arbitrate as a Judge. He cannot take the place of a Court of Final Appeal. He cannot be erected into a standard by which to correct the Chronology of the text of the Old Testament.

5. The Books of the Old Testament Apocrypha are useful as showing the interpretation put upon the books of the Old Testament in later times, but they are not authoritative. The 1st Book of Esdras is useful as showing how the writer interpreted the narrative of Ezra. Sir Isaac Newton says “I take the Book of Esdras to be the best interpreter of the Book of Ezra.” The view which makes the succession of the Kings of Persia mentioned after Cyrus in Ezra 4, (1) Darius Hystaspes, (2) Ahasuerus (= Xerxes), (3) Artaxerxes (= Longimanus) is the view now held by many modern Biblical scholars.

In Esdras 3:1–2, 2:30, cp. Ezra 4:5, the Ahasuerus of Esther is identified with Darius Hystaspes. This identification is adopted by Archbishop Ussher and by Bishop Lloyd (Esther 1:1 A.V. Margin), the date there given (BC 521) being that of the accession of Darius Hystaspes. See Ussher’s Annals, sub anno mundi 3484. Ussher identifies the Ahasuerus of Esther with the Artaxerxes of Ezra 7:1–Neh. 13:6, and also with Darius Hystaspes, Ezra 6:14 (translate Darius even Artaxerxes). There is every reason to believe that this double identification is correct.

The 2nd Book of Esdras is of no value for chronological purposes. In the book of Tobit, Cyaxeres the Mede, who with Nebuchadnezzar’s father (also called Nebuchodonossor) took Nineveh, is identified with Ahasuerus. In Bel and the Dragon, Darius the Mede, the predecessor of Cyrus, is identified with Astyages.

There is great confusion between the use of the names Cyaxeres and Astyages. As Sir Isaac Newton says: “Herodotus hath inverted the order of the Kings Astyages and Cyaxeres, making Cyaxeres to be the son and successor of Phraortes, and the father and predecessor of Astyages, whereas according to Xenophon the order of succession of the Kings of Media is (1) Phraortes, (2) Astyages, (3) Cyaxeres, (4) Darius the Mede, after which comes (5) Cyrus the Great, the founder of the Persian Empire.” The testimony of these various authorities is perplexing and confusing. They must all be called as witnesses, but in no case can they be looked upon as authorities to be accepted in preference to the text of the Old Testament.

6. **Flavius Josephus** (AD 37–103), the famous historian of the Jews, was a cultured Jew, a Pharisee, and a man of good family. He went to Rome, AD 63, and when the Jewish war broke out he led the Jews of Galilee against the Romans. Eventually he surrendered. His life was spared, but he was

put in chains for three years. He gained the favour of Vespasian, and later on that of Titus, to whom he urged his countrymen to surrender. After the fall of Jerusalem he lived as a Roman prisoner till his death, AD 103. His three great standard works are (1) *The Antiquities of the Jews* (published AD 93), a history of the Jewish people from the Creation to the time of Nero, without exception the most valuable record of ancient history next to that of the Old Testament, on which it is almost entirely dependent as far as the history related in the Old Testament goes. (2) *The Wars of the Jews* (published AD 75), the story of the destruction of Jerusalem by Titus, AD 70. (3) *Contra Apion* (written AD 93), an appendix to his Antiquities, and a defence of his statements in that work respecting the very great antiquity of the Jewish nation.

These three great works contain most valuable chronological materials, but the figures given are not reliable. They are not always self-consistent, in some cases they have been carelessly copied, and in others they have been "corrected" by his Hellenistic editors in order to bring them into accord with those of the LXX. Apart from this it must be admitted that Chronology was not a strong point with Josephus, and Chronology being but a secondary object with him, he was not always over careful in his calculations. His original figure for the years from Adam to the Flood was probably 1656, the same as in the Hebrew Text, but his Hellenistic editors have (1) "corrected" his ages of the Patriarchs, making the six centenary additions in accordance with the figures of the LXX, and then (2) "corrected" the total by turning the one thousand of the number 1656 into a figure 2, thus making it 2656, whereas the correct addition of the figures as altered would be 2256. For the period from Shem to Terah's 70th year the number given is 292 years, the same as the Hebrew Text, but the numbers assigned to the Patriarchs have again been "corrected" by his editors by means of the centenary additions of the LXX, and consequently when totalled up they amount to 993 instead of 292. The consequence is that the Chronology of Josephus in its present state is a mass of confusion. Nevertheless, his history is that of a historian of the first rank, and since his account of the closing years of the Persian Empire agrees with that of the National Persian Traditions incorporated in the poem of Firdusi, and that of the National Jewish Traditions preserved in the Sedar Olam, he stands as a witness against the longer Persian Chronology of Ptolemy, now universally accepted, and for the shorter Chronology of the Prophet Daniel. Josephus' account of the monarchs of the Persian Empire is as follows:

1. Cyrus.
2. Cambyses = Artaxerxes of Ezra 4:7-23.
3. Darius Hystaspes. 2nd year, Temple foundation laid.
9th year, Temple finished.
4. Xerxes = Artaxerxes of Ezra 7:1-8:36
25th year, Nehemiah came to Jerusalem
28th year, Walls of Jerusalem finished.
5. Cyrus (son of Xerxes), called by the Greeks Artaxerxes, and identified with the Ahasuerus of Esther.
6. Darius the last King, a contemporary of Jaddua and Alexander the Great.

Altogether Josephus gives only six monarchs instead of Ptolemy's ten, of which six monarchs the last is contemporary with Jaddua, the son of Johannan, the son of Joiada. So that Jaddua was contemporary with Alexander the Great, and Jaddua's father (or his uncle), the son of Joiada, was contemporary with Nehemiah, who chased him (Neh. 13:28). Consequently from Nehemiah and the son of Joiada, whom he chased, to Alexander the Great, is only one generation. But Ptolemy makes it 100 years, or, if the Artaxerxes of Nehemiah is correctly identified with Darius Hystaspes, 150 years.

We may reject the Chronology of Josephus, but his succession of the High Priests, and the Kings of Persia is good evidence against the list given by Ptolemy, and in favour of the shorter Chronology of the prophet Daniel, and the Book of Nehemiah.

7. The **Sedar Olam Rabbah**, i.e., "**The Large Chronicle of the World**," commonly called the "Larger Chronicon," is a Jewish Talmudic Tract, containing the Chronology of the world as reckoned by the Jews. It treats of Scripture times, and is continued down to the reign of Hadrian (AD 76-138). The author is said to have been Rabbi Jose ben Chaliptha, who flourished a little after the beginning of the 2nd Century after Christ, and was Master to Rabbi Judah Hakkodesh, who composed the Mishna. Others say it dates from AD 832, and that it was certainly written after the Babylonian Talmud, as it contains many fables taken from thence.

The **Sedar Olam Zeutah**, i.e., “**Small Chronicle of the World**,” commonly called the “Lesser Chronicle,” is said to have been written AD 1123. It is a short chronicle of the events of history from the beginning of the world to the year AD 522.

Both contain the Jewish tradition respecting the duration of the Persian Empire. This tradition is that in the last year of Darius Hystaspes, the prophets Haggai, Zechariah and Malachi died, that thereon the spirit of prophecy ceased from among the Children of Israel, and that this was the obsignation or sealing up of vision and prophecy spoken of by the prophet Daniel (Dan. 9:24). The same tradition tells us that the Kingdom of the Persians ceased also the same year, for they will have it that this was the Darius whom Alexander the Great conquered, and that the whole continuance of the Persian Empire was only 52 years, which they reckon thus:

Darius the Median reigned 1 year

Cyrus 3 years

Cambyses (whom they identify with the Ahasuerus who married Esther) 16 years

Darius (whom they will have to be the son of Esther) 32 years

Total 52 years

This last Darius, they say, was the Artaxerxes who sent Ezra and Nehemiah to Jerusalem to restore the state of the Jews, for they tell us that Artaxerxes among the Persians was the common name for their Kings, as that of Pharaoh was among the Egyptians."

Now we may say with Dr. Prideaux in his *Historical Connection of the Old and New Testaments*, published in 1858, from which the above extract is taken, that “this shows how ill they have been acquainted with the affairs of the Persian Empire,” and that “their countryman, Josephus, in the account which he gives of those times, seems to have been but very little better informed concerning them,” or, we may draw the contrary conclusion, that Josephus knew the history of his own country better than Ptolemy.

How long did the Persian Empire last? We may ask the Persians themselves, and if we do they will tell us that they have no records of the period, these having been all swept away by the Greek and Mohammedan Invasions. But they have certain vague, floating, national traditions, cast into an epic poem by Firdusi, and from these we learn that the succession of the Persian Monarchs was as follows (1) Darius Hystaspes, (2) Artaxerxes Longimanus, (3) Queen Hemai the mother of Darius Nothus, (4) Darius Nothus the bastard son of Artaxerxes Longimanus, and (5) Darius, who was conquered by Alexander the Great. All the Kings between these two Dariuses they omit.

Or again we may ask the Jews, and if we do they will tell us that the Persian Empire lasted only 52 years, from the first of Cyrus to the first of Alexander the Great. We may go to Ptolemy, and if we do he will determine the length of the period and make out a list of kings for us by means of astronomical calculations and conjectural identifications of recorded with calculated eclipses, and then we shall get a Persian Empire lasting 205 years. But if we take the account given in Nehemiah, and the years specified by the prophet Daniel, we shall find that the Persian Empire continued for a period of 123 years.

The Jews shortened it to 52 years. “Some of them,” says Sir Isaac Newton, “took Herod for the Messiah, and were thence called Herodians. They seem to have grounded their opinion on the 70 weeks, which they reckoned from the first year of Cyrus. But afterwards, in applying the prophecy to Theudas and Judas of Galilee, and at length to Bar Cochab, they seem to have shortened the reign of the Kingdom of Persia.” This explains why the Jews underestimated the duration of the Persian Empire, and it shows that originally they reckoned about 123 years. Now,

From 1st year Cyrus, to 1st year Alexander the Great 123 years

From 1st year Alexander the Great to Herod (BC 331–4) 327 years

From 1st year Cyrus, to the birth of Christ 450 years

If, then, the wise men from the East had heard of Daniel’s prophecy, and had kept an accurate account of the years, and if the Jews of Palestine were also expecting the Messiah at the very time when He was born (BC 4) on the ground that it was then within 33 years of the 483 predicted in Daniel for His appearance, and therefore now time for Him to be born, this would indicate that they reckoned the time between the 1st year of Cyrus and the birth of Christ as a period of 450 years. And since the 327 years (BC 331 to BC 4) from Alexander the Great to the birth of Christ were in all probability accurately computed by the Greeks, for they began their reckoning by Olympiads within 60 years of Alexander’s death, it leaves exactly these 123 years for the duration

of the Persian Empire, and abridges the accepted Ptolemaic Chronology by 82 years, for $205 - 123 = 82$, which is the exact year expressed for these events in the Chronology of the Old Testament, as developed in these pages, for Cyrus' 1st year is shown to be the year AN. HOM. 3589, whence $3589 + 483 = 4071$ (inclusive reckoning), for the Crucifixion, and as Christ was about 30 years of age when He began His ministry, and His ministry lasted three years, He was born AN. HOM. 4038, or exactly 450 years after the 1st year of Cyrus, Christ having been born four years before the commencement of the Christian Era. But 450 years before the actual date of the birth of Christ is BC 454. The true date of the 1st year of Cyrus is therefore BC 454, not B. C. 536, which makes the Chronology of this period 82 years too long.

It may be objected that in the Battle of Marathon, which was fought BC 490, Darius Hystaspes was defeated by the Greeks, and that the Greek Chronology, which was reckoned by Olympiads from BC 776 onward, cannot be at fault to the extent of 82 years. But that is just the very point in dispute. The Greeks did not make a single calculation in Olympiads, nor had they any accurate chronological records till sixty years after the death of Alexander the Great. All that goes before that is guess work, and computation by generations, and other contrivances, not the testimony of contemporary records.

The Sedar Olam, therefore, may be called as a witness, and it is not to be ruled out of court by any objections raised by the Greeks, but it must be called as a witness only, not as arbitrator or Judge.

3. Ancient Monumental Inscriptions

Ancient Monumental Inscriptions upon rocks, temples palaces, cylinders, bricks, steles, and tablets, and writings upon papyrus rolls, brought to light by modern discovery in recent times, constitute one of the most valuable sources affording data, not for the correction of Biblical data, but for the construction of a Chronology of their own, for the period covered by the writings of the Old Testament. The witnesses are exceedingly numerous, and when they are rightly interpreted, they may be regarded as authentic, though of course errors may be graven upon the rock, or written upon ancient papyrus rolls, quite as readily as upon Hebrew manuscripts. In no case can it be allowed that recent discoveries either have made, or can make good a claim to the infallibility which modern scholarship denies to Pope and Bible alike. The Monuments themselves may, and do, sometimes err. They may, and sometimes they do, chronicle the lying vanities of ambitious tyrants. They may be incorrectly deciphered, incorrectly interpreted, or incorrectly construed, in relation to other events.

It is a matter of fundamental importance, and it cannot be too emphatically pointed out, that the interpretation at present put upon the Chronology of the monuments is predetermined by the assumption on the part of the interpreter of the validity of the accepted Ptolemaic Chronology.

Should it be proved that that Chronology is overstated by 82 years, the monuments would bear exactly the same witness to the truth of the revised Chronology as they now bear to the truth of the Ptolemaic dates. The Ptolemaic Chronology is assumed by the interpreter of the testimony of the Monuments as one of his premises. It is therefore bound to come out in his conclusion, but it is not thereby proved to be true.

An illustration will make the matter clear. The Sayce-Cowley Aramaic Papyri discovered at Assuan in 1904, and published in 1906 by Robert Mond, are dated quite confidently and quite absolutely from 471 or 470 to 411. Papyrus A bears date "the 14th (15?) year of Xerxes." This is interpreted as meaning, and is quite definitely declared to be, the year BC 471 or 470. Now in Ptolemy's Canon the date of Xerxes is given as the equivalent of BC 485. His 14th year will therefore be BC 471, and his 15th BC 470.

Again in the *Drei Aramaische Papyrus Urkunden aus Elephantine (Three Aramaic Papyrus Documents from Elephantine)*, published by Prof. Sachau, of Berlin, in 1907, the date given in the original is "the month of Marcheschwan in the 17th year of Darius." This is interpreted as referring to Darius Nothus, whose date is given in Ptolemy's Canon (allowing for the fact that Ptolemy's year is one of 365 days only) as BC 424. His 17th year will therefore be 408 or possibly 407. With this interpretation, derived solely from Ptolemy's Canon, the document is forthwith dated BC 408-407.

In both cases the interpreters have assumed that the Chronology of Ptolemy's Canon is the truth, and they are ready, without more ado, to interpret or to correct the dates given in Nehemiah in the light of these "modern discoveries." For Prof. Sachau proceeds at once to draw chronological inferences from the fact that "Delajah and Schelemjah, the sons of Sanaballat, the Pekah of Samaria" are mentioned in lines 29, 30, and, in his comment on these lines, he exclaims, "Have then the Jews of Elephantine' obtained no knowledge whatever of Nehemiah and his great national work? Or had so much grass grown over the contention with Sanballat since the return of Nehemiah to Babylon somewhere about the year BC 433, that the Jewish community at Elephantine' believed themselves able to disregard these things?"

The assumption of the truth of Ptolemy's Canon is of course perfectly legitimate, so long as it is remembered that it is an assumption, and not a conclusion. But if any attempt is made to fix the date of

Nehemiah from references to the sons of Sanballat in the Sachau documents, the argument is invalid. It moves in a circle. It first assumes the truth of the Ptolemaic, Chronology, and then uses a deduction from that assumption to prove the truth of it. It is correcting the Hebrew Text of Nehemiah by Ptolemy using the testimony of one witness (Ptolemy) to adjudicate against the testimony of the other (the Hebrew Text of Nehemiah), when the whole point at issue is which of these two witnesses is to be believed. It is not therefore correct to say that the date of Nehemiah is fixed by these modern discoveries at Assuan, apart altogether from the question raised by Prof. Margoliouth as to whether they may not be forgeries. All the facts contained in the Assuan documents can be fitted into the revised Chronology necessitated by the Hebrew Text, as easily as, if not indeed more easily than, they have been fitted into the received Chronology of Ptolemy. It is of primary importance to remember that the whole point in dispute is as to the truth of one or the other of two conflicting witnesses, the Hebrew Old Testament and Ptolemy. It is absurd to attempt to adjudicate upon the matter by first assuming the truth of one witness, and then on the basis of that assumption pronouncing judgement against the other.

Similarly the dates assigned by modern scholars to the Monuments of Egypt go back far beyond the year of the creation of Adam as fixed by the Hebrew Text of the Old Testament, 4038 years before the actual birth of Christ, i.e., in the year BC 4042. These Monumental dates rest upon a basis of hypothesis and conjecture, and involve the assumption of the truth of the testimony of the witness Manetho. But since one witness cannot be used to correct another, Manetho and the dates derived from the assumption of the truth of his testimony cannot be used to prove the incorrectness of the chronological statements of the Old Testament.

All sources must be used, and all witnesses must be heard, but it must be remembered that the witness of the Old Testament is not confuted by an interpretation of the testimony of Monumental Inscriptions which depends for its validity on the truth of the conflicting testimony of Manetho.

Moreover the whole trend of the results of recent discovery in the realm of Biblical Archaeology has been toward the establishment of the Text of the Old Testament as an unimpeachable witness to the truth. The Stele of Khammurabi, the Tel-El-Amarna Tablets, the Moabite Stone, the Behistun Inscription, Babylonian and Assyrian and Egyptian Monumental Records, The Assyrian Eponym Canon, the discoveries of Layard, George Smith, and Sir H. Rawlinson, and all the more recent discoveries of our own time, when rightly interpreted, point in the same direction.

4. Classic Literature of Greece and Rome

The Classic Literature of Greece and Rome is the prime source of our information respecting the Chronology of the civilized world.

Of the principal Greek and Roman Historians, who may be regarded as authentic witnesses to the facts of contemporary history, as distinguished from mere Chronologers or Compilers of dates, whose writings stand on an entirely different footing, the following are worthy of special mention:

I. Greek Historians

1. **Herodotus**, the "Father of History" (BC 484–424), born at Halicarnassus, author of the world-famous "history" of the Persian War of Invasion from the first expedition of Mardonius, son-in-law and General of Darius Hystaspes, to the discomfiture of the vast fleet and army of Xerxes. Translated by George Rawlinson.
2. **Thucydides** (BC 471–401 or 396), author of the History of the Peloponnesian War, one of the greatest monuments of antiquity. Translated by Benjamin Jowett.
3. **Xenophon** (BC 430–c.357), the essayist, historian, and military leader who was appointed General of the 10,000 Greeks, who joined the expedition of the Persian Prince Cyrus the younger against his brother Artaxerxes Mnemon, and were defeated at Cunaxa (BC 401). Xenophon was the author of (1) the Anabasis, an account of this expedition, (2) the Cyropaedia, a historical romance of the education and training of Cyrus the Great, (3) the Hellenica, a history of contemporary events in Greece, and (4) the Memorabilia or Reminiscences of Socrates.
4. **Polybius** (BC 204–122), one of the 1,000 hostages carried off by the Romans after the Conquest of Macedonia, BC 168. He became acquainted with Scipio Africanus, and wrote a history of Greece and Rome for the period (BC 220–146).
5. **Dionysius** of Halicarnassus (BC 70–6), essayist, critic and historian. He lived at Rome for 20 years (BC 30–10), where he amassed materials for his *Romaike Archaialogia*, a history of Rome from the early times down to the first Punic War.
6. **Strabo** (BC 63–AD 21), the world-famous geographer, born at Amasia in Pontus, Asia Minor. He was educated at Rome. He travelled from Armenia to Etruria, and from the shores of the Euxine to the borders of Ethiopia. The fourth book of his celebrated Geography is devoted to Gaul, Britain

and Ireland. He also wrote Historical Memoirs and a Continuation of Polybius, but these are both lost.

7. **Diodorus Siculus** (fl. AD 8), a native of Sicily. Hence his name Siculus. A historian of the time of Julius Caesar and Augustus. He travelled widely in Asia and Europe, and devoted 30 years to the writing of a Universal History of the World down to Caesar's Gallic Wars. Only 15 of his 40 books, with some fragments, have survived.
8. **Plutarch** (AD 50–120), the most attractive and the most widely read of all the Greek writers. He lectured at Rome during the reign of Domitian. His famous Parallel Lives of Greek and Roman Writers, 46 in all, are universally known and admired. His essays and his biographies breathe a fine moral tone. They inspired some of Shakespeare's greatest plays, and much of the noblest literature of modern times.
9. **Arrian** (2nd Century AD), served in the Roman army under Hadrian, and was Prefect of Cappadocia, AD 135. He sat at the feet of Epictetus, and composed a treatise on moral philosophy. His most important works are (1) his History of Alexander the Great, (2) an account of India, and (3) a description of the coasts of the Euxine. He also wrote on military subjects and on the chase.
10. **Lucian** (AD 120–200), a humorous writer, born at Samosata on the Euphrates, in Syria. He practised as an advocate at Antioch, travelled through Greece, Italy and Gaul, and was appointed Procurator of part of Greece. He ridicules the religion and the philosophy of the age, and gives a graphic account of contemporary social life. He wrote the Dialogues of the Gods, the Sale of Philosophers, Timon, and other works. His famous Dialogues of the Dead are intended to show the emptiness of all that seems most precious to mankind.
11. **Dion Cassius** (b. AD 155), the "last of the old historians" who knew the laws of historic writing. He was born at Nicea, and was the son of a Roman Senator, but his mother was a Greek. Dion Cassius himself became a Roman Senator, and was appointed Governor of Pergamos and Smyrna. He composed a history of Rome from the time of Aeneas to his own day.
12. **Appian** (2nd Century AD), a Greek of Alexandria. He wrote in Greek a valuable history of Rome. He was contemporary with Trajan, Hadrian and Antoninus Pius. He deals with the history of each of the nations that was conquered by Rome, and of the civil war which preceded the downfall of the Republic. He preserves the statements of earlier authors whose works are now lost.

II. Roman Historians

1. **Cicero** (BC 106–43), orator, statesman, philosopher, and man of letters. He was Consul, BC 63. He foiled the Catiline conspiracy. He was exiled and recalled. He supported Pompey against Caesar. After the overthrow of Pompey, Caesar received him as a friend. He then lived in literary retirement and wrote his great works. After Caesar's death he delivered his philippics against Antony, and was proscribed and put to death by Antony's soldiers. His *De Amicitia*, *De Officiis*, and *De Senectute* awaken thought and form pleasant reading.
2. **Julius Caesar** (BC 100–44), general, triumvir, dictator, and man of letters. In nine years (BC 58–49) he proved his great military genius by subduing Gaul, Germany, Britain, and most of Western Europe to the Roman yoke. In BC 55 and again in BC 52 he invaded Britain, from which he retired, virtually discomfited. Caesar espoused the cause of Democracy, Pompey that of Aristocracy. In January, BC 49, Caesar crossed the Rubicon. He drove Pompey out of Italy, and in BC 48 he defeated him at Pharsalia, and was appointed dictator. Coins were struck bearing his effigy, and the title Imperator was made a permanent addition to his name. With the assistance of the Greek Astronomer Sosigenes, he reformed the Calendar, and introduced the Julian year, which began on January 1st (A.U.C. 709 = BC 45), the first year of the Julian Era. The Julian year consisted of exactly 365 1/4 days; the first three years contained 365 days, and another day, making 366, was added for every fourth year. The Julian year remained in use till December 22nd, 1582, when the year was again reformed by Pope Gregory XIII, assisted by the mathematician Clavius, and for the Roman World that day became January 1st, 1583. The Gregorian year was not introduced into England till September 3rd, 1752, which day became September 14th by Act of Parliament. The Gregorian year drops the additional leap year day every century (AD 1700, 1800, 1900, etc.), except when it is divisible by four (AD 2000). Julius Caesar was about to embark on a great career of statesmanlike economic and political reorganization when he was assassinated by Brutus on the Ides of March, A.U.C. 710 = BC 44.
3. **Sallust** (BC 86–34), a member of the Roman Senate. Expelled for immorality. An adherent of Julius Caesar. Appointed Governor of Numidia. He wrote the history of the Catiline Conspiracy, and the War with Jugurtha.

4. **Livy** (BC 59–AD 17), lived at Rome at the Court of his patron and friend Augustus. He wrote 142 books of *Annales*, a history of Rome, of which, however, only 35 remain.
5. **Cornelius Nepos** (1st Century BC), a native of Verona, and a friend of Cicero. He wrote *De Viris Illustribus*. Only a fragment of it remains, and the authorship of this is disputed.
6. **Tacitus** (AD 54–117), an eminent Roman historian. Appointed quaestor, tribune, praetor, and consul suffectus. His *De Situ Moribus et Populis Germaniae* is our earliest source of information respecting the Teutons. His *Historiae*, covering the period AD 68–96, and his *Annales* covering the period AD 14–68, are historic works of first rate importance. They give a terrible picture of the decay of imperial Rome.
7. **Suetonius** (born c. AD 70), a Roman advocate, and private secretary to the Emperor Hadrian. His *Lives of the Twelve Caesars* is valuable for its anecdotes, which illustrate the character of the Emperors.

It is through the Greeks that we have received our knowledge of the history of the great Empires and civilizations of the East. Even Sanchoniathon and Berosus and Manetho, have all come to us through the Greeks. It was the Greeks who created the framework of the Chronology of the civilized ages of the past, and fitted into it all the facts of history, which have reached us through them. Apart from the Bible, the vague floating national traditions of the Persians and the later Jews, and the direct results of modern exploration, all our chronological knowledge reaches us through Greek spectacles. Here as everywhere else it is “thy sons O Zion against thy sons, O Greece” (Zech. 9:13). It is Nehemiah and Daniel against Ptolemy and Eratosthenes. It is Hebraic Chronology against Hellenic Chronology. And here the Greek has stolen a march upon the Hebrew, for he has stolen his Old Testament and forced his own Greek Chronology into the Hebrew record, Hellenizing the ages of the Hebrew Patriarchs in the Greek LXX.

Are we then to accept the testimony of the Greek as correcting or antiquating the testimony of the Hebrew? By no means. Let the Greek be heard as a witness, but let him not presume to pronounce sentence as a Judge. Clinton’s *Fasti Hellenici* is perhaps the most valuable treatise on Chronology ever produced. But it is not infallible. Clinton’s standard is Ptolemy’s Canon; Sayce’s standard is the Monuments. But neither of these sources is competent to correct the Hebrew Old Testament, which must be placed in the witness-box alongside of them, not in the dock, to be sentenced by them.

To begin at the beginning, the point of departure for Greek Chronology, the 1st Olympiad, BC 776, upon which everything else depends, rests upon no firmer foundation than that of tradition and computation by Conjecture.

The opening sentence of Clinton’s *Tables* reveals the basis upon which he builds. He says: “The first Olympiad is placed by Censorinus in the 1014th year before the Consulship of Ulpius and Pontianus, AD 238 = BC 776. Solinus attests that the 207th Olympiad fell within the Consulship of Gallus and Verannius. These were Consuls AD 49, and if the 207th Games were celebrated in July, AD 49, 206 Olympiads, or 824 years had elapsed, and the first games were celebrated in July 776.”

But Censorinus wrote his *De Die Natali*, AD 238, and Solinus also belongs to the 3rd Century AD. They are not, therefore, contemporary witnesses and we do not know how far their computations were derived from hypothesis and conjecture, or how far they rest upon a basis of objective fact. Nevertheless, this point has been made the first link in the chain of the centuries, a chain flung out to float in the air, or attached, not to the solid staple of fixed fact, but only to the rotten ring of computation and conjecture. The Canon of Ptolemy rests upon this calculation. Eusebius (AD 264–349) adopted it, and set the example of making Scripture dates fit into the years of the Greek Era. Eusebius is based upon Manetho (3rd Century BC), Berosus (3rd Century BC), Abydenus (2nd Century BC), Polyhistor (1st Century BC), Josephus (AD 37–103), Cephalion (1st Century AD), Africanus (3rd Century BC), and other sources now lost. Eusebius’ Chronology was contained in his “Chronicon.” This was translated by Jerome, and has been followed by all subsequent writers down to the present day.

The one infallible connecting link between sacred and profane Chronology is given in Jeremiah 25:1. “The fourth year of Jehoiakim, which was the first year of Nebuchadnezzar.” If the events of history had been numbered forward from this point to the birth of Christ, or back from Christ to it, we should have had a perfectly complete and satisfactory Chronology. But they were not. The distance between the 1st year of Nebuchadnezzar and the birth of Christ was not known. It has been fixed by conjecture, with the assistance of Ptolemy. Clinton fixes it at BC 606, Sayce at BC 604, and from this date, thus fixed, Chronologers reckon back to Adam and on to Christ. The distance between the 1st year of Nebuchadnezzar and the birth of Christ has not been measured by the annals or chronicles of any well-attested dated events. It was originally fixed by Ptolemy, by means of computation and conjecture, and recorded events have been fitted into the interval by computing Chronologers as far as the fictitious framework would allow.

The opening sentence of Sir Isaac Newton’s Introduction to his *Short Chronicle* from the first memory of things in Europe to the Conquest of Persia by Alexander the Great, shows how entirely fluid and

indeterminate were those first years of Grecian history.

“The Greek Antiquities,” says Newton, “are full of poetic fictions, because the Greeks wrote nothing in prose before the conquest of Asia by Cyrus the Persian.”

The uncertainty as to the epoch of the foundation of Rome and the Era which dates from that event, is just as great as the uncertainty as to the beginnings of the history of Greece. The following is a list of the dates that have been sanctioned by various writers:

BC

Varro, Tacitus, Plutarch, Dion, Aulus Gellius, Censorinus, etc. **753**

Cato, Dionysius of Halicarnassus, Solinus, Eusebius, etc. **752**

Livy, Cicero, Pliny and Velleius Paterculus **753** or **752**

Polybius **751**

Fabius Pictor and Diodorus Siculus **747**

L. Cincius **728**

A margin of **25** years.

These uncertainties in Greek and Roman Chronology, and the late and purely conjectural character of the foundation upon which they rest, show how impossible it is for us to erect the Chronology of the classic literature of Greece and Rome into a standard by which to correct the Chronology of the Hebrew Old Testament.

Nearly all the great Empires of the East seem to have thrown the origin of their dated history back into the 8th Century.

BC

Babylon (Nabonassarean Era) **747**

Greece (1st Olympiad) **776**

Rome (Foundation of the City) **753**

Lydia **716**

China **781**

Media **711**

It may be of interest to add the following remarks respecting the origin of the Vulgar Christian Era:

It was not until the year AD 532 that the Christian Era was invented by Dionysius Exiguus, a Scythian by birth, and a Roman Abbot. He flourished in the reign of Justinian (AD 527–565). He was unwilling to connect his cycles of dates with the era of the impious tyrant and persecutor Diocletian, which began with the year AD 284, but chose rather to date the times of the years from the incarnation of our Lord Jesus Christ “to the end that the commencement of our hope might be better known to us and that the cause of man’s restoration, namely, our Redeemer’s passion, might appear with clearer evidence.” The year following that in which Dionysius Exiguus wrote these words to Bishop Petronius was the year 248 of the Diocletian Era. Hence the new Era of the Incarnation as it was then reckoned was $284 + 248 = \text{AD } 532$. Dionysius abhorred the memory of Diocletian with good reason, for in the 1st year of his reign, from which the Diocletian Era begins, he caused a number of Christians who were celebrating Holy Communion in a cave to be buried alive there. The Diocletian Era was, from this fact, sometimes called the Era of the Martyrs.

Dionysius reckoned the year of our Lord’s birth to be the year A.U.C. 753, according to Varro’s computation, i.e., the year 45 of the Julian Era. Dionysius obtained this date from Luke’s statements that “John the Baptist began his ministry in the 15th year of the reign of Tiberius,” and that “Jesus was beginning to be about 30 years of age” (Luke 3:1–23). Tiberius succeeded Augustus, August 19th, A.U.C. 767. Therefore his 15th year was A.U.C. 782. Subtract the assumed year of the Nativity, 753, and the remainder is 29 years complete, or 30 current.

But according to Matthew, Christ was born before the death of Herod, that is, according to the computation of the Chronologers, before 749. Hence the year of the Incarnation, the year AD 1, was fixed four years too late, and to remedy this we have to express the true date of our Lord’s birth by saying that He was born BC 4. It was subsequently discovered that the source of the error lay, not with the Evangelists, Matthew or Luke, but in the fact that Tiberius began to reign as colleague or partner with Augustus some years before Augustus died, and that the length of his reign after Augustus’ death was not 26 years, but 22. In this way the difficulties were cleared up. The

Era of the Incarnation was allowed to remain and the birth of Christ was set down as having occurred in the year BC 4.

5. Astronomical Observations and Calculations

Astronomical Observations and Calculations are regarded by many Chronologers as the surest and most unerring data for fixing the dates of various events. Eclipses can be calculated both backward and forward. They are distinguished from each other by the time when, and the place where, they can be seen, the duration of the eclipse, and the quantity or number of digits eclipsed. They have therefore been regarded as a means of correcting and determining the dates of the events at which they have occurred, and the results thus obtained have been invested with a kind of quasi-infallibility. The date of our Lord's birth is fixed by means of an eclipse of the moon recorded by Josephus as having occurred shortly before Herod's death.

Tables of eclipses have been furnished by Chronologers and Astronomers from BC 753 to AD 70, and a list of 44 of the most remarkable of these (25 eclipses of the sun, and 19 eclipses of the moon) is given in Hales' *New Analysis of Chronology*. The most celebrated of these eclipses is that known as the "Eclipse of Thales," from the fact that Thales foretold the year in—which it would happen. It has been used by Chronologers to adjust the various Eras and the Chronologies of Assyria, Babylon, Media, Lydia, Scythia and Greece. But it has proved an apple of discord. Five several eclipses, occurring at as many different dates, have been identified by different astronomers as the one in question. The eclipse is described by Herodotus as occurring in the sixth year of the war between the Medes and the Lydians, on the river Halys, when during an obstinate battle the day suddenly became night. Both armies ceased fighting, a treaty of peace was arranged, and confirmed by a marriage compact.

This "Eclipse of Thales" thus described by Herodotus has been identified with the following five distinct astronomically calculated eclipses of the sun

1. On July 30, BC 607 by Calvisius.
2. On May 17, BC 603 by Costard, Montucla and Kennedy.
3. On Sept 19, BC 601 by Ussher.
4. On July 9, BC 597 by Petavius, Marsham, Bouhier and Larcher.
5. On May 28, BC 585 by Pliny, Scaliger, Newton, Ferguson, Vignoles and Jackson.

It will be seen from the above that there are many sources of error which must be allowed for, before attaching to the chronological result arrived at the infallibility which belongs to a mathematical calculation.

There may be errors of observation on the part of the historian, errors of calculation on the part of the astronomer, and errors of identification on the part of the Chronologer, who may wrongly conclude that the dated eclipse calculated by the astronomer is one and the same with the eclipse described by the historian. The mistake of investing these astronomically determined chronological dates with the infallibility of a mathematical calculation is that of assuming that the strength of the chain is that of its strongest link, instead of that of its weakest link. The astronomical calculations may be infallibly correct, and demonstrably accurate to the tick of the clock, but that only fixes the infallibility of one link in the chain, the strength and security of which cannot be transferred to the other links, or to the result as a whole. We cannot, therefore, obtain from Astronomical Observations and Calculations the material we need to enable us to use them as a standard by which to test the truth of the Chronological Statements of the Old Testament. Like the testimony of the Monuments, and all the other witnesses, the testimony of Astronomy must be heard and adjudged upon; it must not presume to adjudge upon the testimony of other witnesses.

6. Ancient and Modern Chronologers

The works of ancient and modern Chronologers are of great help in enabling us to correlate the testimony derived from all the various sources from which evidence can be secured.

But Chronologers are not infallible; sometimes they arrive at differing and contradictory conclusions, sometimes they follow each other like a flock of sheep, each adopting the conclusions reached by his predecessor; sometimes they are dominated by a scheme or plan into which they endeavour to fit the facts, and in this endeavour the facts are sometimes distorted. The millenary schemes of Ussher (that prince of Chronologers), and of the early Christian fathers, the septenary scheme of R. G. Faussett, developed in his most excellent and valuable work on the *Symmetry of Time*, the hypothetical Chronology of modern Assyriologists and Egyptologists, constructed in such a way that it can be made to fit in with their interpretation of the testimony of the Monuments, the determination of dates by Ptolemy's method of fitting the facts into his scheme of calculated eclipses, are all instances of the danger of bending the facts in order to make them fit the theory of the constructor. The only safe and true method of Chronology is to

take into consideration the whole of the facts, weigh them one and all as evidence is weighed in a Court of Law, and to draw only such conclusions as may be warranted by the laws of evidence or testimony, or historic proof.

A brief notice of the principal works of some of the more important Chronologers will serve as a fitting introduction to our own investigations. They may be classified as follows: (1) Early Greek and Latin Chronologers, (2) Early Christian Chronologers, (3) Byzantine Chronologers, (4) The Great Armenian Chronologer, Abul-Faragus, (5) Modern Chronologers.

I. Early Greek and Latin Chronologers, from the 5th Century BC to the Christian Era

1. **Hellanicus** (b. BC 496), a Greek logographer. He drew up a chronological list of the priestesses of Juno at Argos. He constructed his Chronology on the principle of allowing so many years to each priestess, or so many priestesses to a century.
2. **Ephorus** (4th Century BC), was a disciple of Isocrates (BC 436–338). He was the first Greek who attempted the composition of a universal history. He begins with the return of the Heraclidae into Peloponnesus (BC 1103) and ends with the 20th year of Philip of Macedon, the father of Alexander the Great.
3. **Timaeus Siculus** (BC 260) wrote a history of Sicily, his native country. He was the first to use the Greek Olympiads as the basis of Chronology. As he wrote in the 129th Olympiad, BC 260, the preceding 128 Olympiads are not contemporary chronicles, but chronological computations. Timaeus instituted a comparison between the number of successive Ephors and Kings at Sparta, Archons at Athens, and Priestesses at Argos, arranging them into his chronological scheme of Olympiads. He brought the history down to his own time, and where he left off Polybius (BC 204–122) began.
4. **Eratosthenes** (b. BC 276) has been called the “Father of Chronology,” and it is worth noting that his method was the method of conjecture, not the method of testimony. He was a native of Cyrene, a man of letters under the Ptolemies of Egypt, and keeper of the famous library at Alexandria in the reign of Ptolemy IV. Euergetes (BC 246–221). He discovered the obliquity of the ecliptic, and wrote some important works on mathematical geography and on the constellations. He made the first scientific measurement of the earth, but his result was one sixth too large. He made the parallel of Rhodes, in ancient astronomy what the meridian of Greenwich is to us. His Chronographia is an exact scheme of general Chronology. He wrote about 100 years after Alexander the Great, and arrived at his chronological conclusions by reckoning about 30 or 40 years to each generation or succession of Kings, Ephors or Priestesses, and thus greatly exaggerated the antiquity of the events of Greek history.
5. **Apollodorus** (2nd Century BC) followed the lines laid down by Eratosthenes. He wrote a metrical chronicle of events from the fall of Troy to his own day.
6. **Ptolemy**, the author of Ptolemy’s Canon (or Claudius Ptolemaeus to give him his full name), deserves a more extended notice. He was the originator of the Ptolemaic System of Astronomy, so called because it was collected from his works. The main idea of this system or theory of the Universe was that the earth was stationary, and that all the heavenly bodies rotated round it in circles at a uniform rate. It was displaced by the Copernican system in the 16th Century.

Ptolemy flourished in Egypt in the 2nd Century AD, during the reigns of Hadrian and Antoninus Pius. He was an astronomer and a geographer. His Geographia, a work in eight books, was illustrated by a map of the world, and 26 other maps. He was the first to attempt to reduce the study of geography to a scientific basis. He took Ferro in the Canaries as the westernmost part of the world, placed it nearly 7 degrees too far east, and calculated his longitudes from it, whilst his latitudes were reckoned from Rhodes.

Ptolemy was born at Pelusium in Egypt. The date of his birth is generally given as AD 70, and he survived Antoninus Pius, who died AD 161. This would make him 91 years of age. But the Arabians say he died at the age of 78, in which case he must have been born later than AD 70. He recorded observations at Alexandria between AD 125 and 140. The authentic details of the circumstances of his life are extremely few. The following particulars are gleaned from Ptolemy’s Tebrabiblos or Quadripartite, being four books on the influence of the Stars, by J. M. Ashmand (pubd. 1822). Ptolemy was looked upon by the Greeks as being a man most wise and most divine on account of his great learning. He was a man of truly regal mind. He corrected Hipparchus’ Catalogue of the fixed stars, and formed tables for the calculation and regulation of the motions of the sun, moon and planets. He collected the scattered and detached observations of Aristotle, Hipparchus, Posidonius and others on the economy of the world, and digested them into a system which he set forth in his Megaly Suntaxis, the Great System, or Great Construction, a work divided into thirteen books, and called after him the Ptolemaic system. All his astronomical works are founded

on the hypothesis that the earth is at rest in the centre of the universe. Round the earth the heavenly bodies, stars and planets move in solid orbs, whose motions are all directed by one primum mobile, or first mover, of which he discourses at large in the Great System. He also treats in the same work of the motions of the sun, moon and planets, gives tables for finding their situations, latitude, longitude, and motions. He treats of eclipses, and the method of computing them. He discourses of the fixed stars, of which he furnishes a catalogue with their magnitudes, latitudes, and longitudes.

Ptolemy's Order, false as it was, enabled observers to give a plausible account of the motions of the sun and moon, to foretell eclipses, and to improve geography. It represented the actual phenomena of the heavens, as they really appear to a spectator on the earth.

In the year AD 827, the Great System was translated by the Arabians into their own language, and by them its contents were made known to Europe. Through them it came to be known as the "*Al Magest*" (The Great Work). In Latin it became "*Magna Constructio*" and in English "*The Great System*," "*The Ptolemaic System*," or "*The Great Construction*."

Ptolemy was not so much an author as a practical astronomer. His Geographia is not a treatise on Geography, but an exposition of principles and directions for the construction of a map. Ptolemy's Canon is simply a Canon or List of Kings, with the years of their reigns. It is not accompanied by any explanatory treatise. It is generally regarded as the most precious Monument of ancient Chronology. In it he uses the Egyptian Vague or Calendar year, of exactly 365 days. By this means, his New Year's Day works back, and occurs one day earlier every four years, and the year BC 521 (the Julian year of 365¼ days) contained the New Year's Day of two of the Egyptian Vague, or Calendar years of Ptolemy's Canon, one on January 1st, and the other on December 31st. They are the years 227 and 228 of Ptolemy's Nabonassarean Era. Ptolemy gives to each king the whole of the year in which his predecessor dies. This year is his first year. Cyrus died, and Cambyses began to reign in the year BC 529. But the whole of that year is given to Cambyses and is reckoned as his first year. In the same way Ptolemy took no account of the short reigns of less than a year. These odd months were included in the year of the preceding or the following king.

Ptolemy terminates his Canon at the reign of Antoninus Pius, in which he lived. It was continued by Theon, his successor in the chair of astronomy in Alexandria, and later on by other writers. Ptolemy's fixed point of departure is the New Moon on the 1st day of the 1st month (Thoth) of the first year of the Era of Nabonassar.

In view of the incomparable importance of Ptolemy's Canon as the basis upon which alone the determination of the date of the commencement of our own universally accepted Vulgar Era, the Common Christian Era, depends, the list is here reproduced entire. It is taken from the British Museum Copy of the Tables Chronologiques des Regnes de C. Ptolemaeus, Theon, etc., par M. L'Abbe' Halma (published in Paris, 1819).

Ptolemy's Canon

Table of Reigns

Years of the Reigns Before Alexander Including His Own	King Years of Reign Accumulation
Nabonassar	14
Nadius	16
Chinzar and Poros	21
Iloulaius	26
Mardocepad	38
Arcean	43
First Interregnum	45
Bilib	48
Aparanad	54
Rhegebel	55

Mesesimordae	4	59
Second Interregnum	8	67
Asaridin	13	80
Saosdouchin	20	100
Cinilanadan	22	122
Nabopollassar	21	143
Nabocolassar	43	186
Iloaroudam	2	188
Nericasolassar	4	192
Nabonad	17	209

Persian Kings		Reign Accumulation
Cyrus	9	218
Cambyses	8	226
Darius I	36	262
Xerxes	21	283
Artaxerxes I	41	324
Darius II	19	343
Artaxerxes II	46	389
Ochus	21	410
Arogus	2	412
Darius III	4	416
Alexander of Macedon	8	424

Years of the Macedonian Kings after Alexander's Death		
King		Reign Accumulation
Philip	7	7
Alexander II	12	19
Ptolemy Lagus	20	39
Ptolemy Philadelphus	38	77
Ptolemy Euergetes	25	102
Ptolemy Philopator	17	119
Ptolemy Epiphanes	24	143
Ptolemy Philometor	35	178

Ptolemy Euergetes	29	207
Ptolemy Soter	36	243
Dionysius the Younger	29	272
Cleopatra	22	294

Roman Emperors		
Emperor		Reign Accumulation
Augustus	43	337
Tiberius	22	359
Caius	4	363
Claudius	14	377
Nero	14	391
Vespasian	10	401
Titus	3	404
Domitian	15	419
Nerva	1	420
Trajan	19	439
Adrian	21	460
Aelius Antoninus	23	483

The following is the list of Ptolemy's works:

1. *Hee Megalee Suntaxis = Magna Constructio = Almagest = The Great System of Astronomy.* This was his great masterpiece. It is a treatise on Astronomy, containing all the principles of the Ptolemaic system.
2. *Tetrabiblos = Quadripartite.* A treatise in four books on the influence of the stars. A thoroughly pagan treatise on Astrology.
3. *Karpos or Centiloquy, or Book of a hundred aphorisms;* a fifth book containing the fruit of the former four, and a kind of supplement to them. As an example of the aphorisms, we may quote the following, "Love and hatred lessen the most important, as they magnify the most trivial things."
4. *A Treatise on the Signification of the Fixed Stars.* A daily calendar of the risings and settings of the stars, and the weather produced thereby.
5. *The Geographia.*
6. *The Canon or Table of Reigns* given above.

Ptolemy's Canon is described in the article on "Chronology," in the Encyclopaedia Britannica, 11th Edition, as "the only authentic source of the history of Assyria and Babylonia before the recent discoveries at Nineveh." This expresses the view now held by most modern scholars, but we must not overlook the fact that the authenticity here ascribed to it belongs equally to the Biblical Record. It is frequently said that the Assyrian List of Eponyms confirms the Assyrian part of the Canon of Ptolemy, and that this ought to give us confidence in the rest of the Canon. True, but wherever the Assyrian List of Eponyms confirms the Assyrian part of the Canon of Ptolemy, it confirms also the Assyrian part of the Biblical Record of the Old Testament. It is strange that scholars do not see this. Still more strange that since the Canon of Ptolemy agrees with the Assyrian Epo-

nym list in those parts in which the Biblical Record also agrees with it, they should regard this as proof of the authenticity of the Canon of Ptolemy, but not as proof of the authenticity of the Biblical Record, which they immediately proceed to correct by the Canon of Ptolemy, in those later parts, in which there is no Assyrian Record, and by the Assyrian Eponym List, in those earlier parts of which there is no record in the Canon of Ptolemy. If agreement with the Assyrian Records authenticates Ptolemy's Canon it authenticates the Biblical Record also. The three records are in agreement wherever they all meet together. The Biblical Record does not positively disagree with the Assyrian Record, but there is a period for which there are no Assyrian Records, for the contemporary Assyrian records, from the 14th year of Amaziah (BC 833) to the 35th of Uzziah (BC 772), are a blank. According to Willis J. Beecher this is a period of 61 years, during which the only Assyrian Records are those of the 10 years' reign of Shalmanezer III (IV), a net blank of 51 years between the two Assyrian Kings, Ramman-nirari III and Asshur-daan III. The Assyrian Records omit these 51 years, consequently we must either omit 51 years of the history contained in the Biblical Record, or else add 51 years to the Assyrian Record, for the events of the Biblical and the Assyrian Records synchronize both before and after.

As Ptolemy's Canon does not begin till BC 747, or 25 years after the close of this period of 51 years, it is illegitimate to say that the agreement between the Assyrian Eponym Canon and Ptolemy's Canon at a later period must lead us to pass sentence in favour of the Assyrian Records and against the Biblical Records, at an earlier period, for at that later period there is the same agreement between the Assyrian Eponym Canon and the Biblical Records that there is between the Assyrian Eponym Canon and Ptolemy's Canon.

The real explanation of the difference between the Assyrian Records and the Biblical Records is probably this: Assyria was overtaken by some disaster, and the 51 names were either lost by accident, or destroyed by design. The longer Chronology of the Biblical Records is supported (1) by the Biblical accounts of the events which took place during these 51 years, (2) by the long numbers given in Josephus, (3) by the synchronism of the Egyptian date of the Invasion of Shishak, in Rehoboam's time, with the Biblical date BC 978, and not with the Assyrian date BC 927, and (4) by the explanation given by Georgius Syncellus (c. AD 800), in his *Historia Chronographia*, of the reason why Ptolemy commenced his Canon in the year BC 747, and did not include in it the earlier period in which the discrepancy of 51 years occurs, viz., that the Assyrian Records for that period had been tampered with. He says: "Nabonassar, King of Babylon, having collected the acts of his predecessors, destroyed them in order that the computation of the reigns of the Assyrian Kings might be made from himself." It is most probable that Assyria was overtaken by some unknown disaster just after the time of the powerful monarch Ramman-nirari III, at the beginning of the blank period of 51 years. For in his time we find the Assyrians taking tribute from the whole region of the Mediterranean, Judah alone excepted, whilst at the end of the blank period, in the reign of Asshur-daan III, we find that their power over this region had been lost, and that they were now engaged in a desperate struggle to regain it.

The fact is (1) the Biblical, the Assyrian and the Ptolemaic Records are all agreed with regard to a certain central period; (2) the Biblical and the Assyrian Records do not agree at an earlier period unless we admit a break of 51 years, but there the Ptolemaic Record has not begun. On the other hand (3) the Biblical Record (as interpreted by the present writer) and the Ptolemaic Record do not agree with regard to a later period, but there the Assyrian Record has ceased. Any conclusion drawn from these premises to the effect that since the chronological data of Ptolemy are confirmed by the Assyrian Chronology our verdict must be pronounced against the Scriptural System is absolutely unwarranted. The authenticity of the Canon of Ptolemy is established, by its agreement with the Assyrian Eponym Canon, just so far as the authenticity of the Biblical Record is established by its agreement with the Assyrian Eponym Canon, but no further. The point in dispute between Ptolemy's Canon and the Biblical Record lies, not in the Assyrian but in the Persian Period.

One other fact must be borne in mind. Ptolemy is not like the Greek and Latin historians, such as Herodotus and Tacitus, bearing witness to the truth of contemporary events. He belongs to the 2nd Century AD, and the point in dispute refers to his figures for the period of the Persian Empire some 500 years before. He writes no history. He merely gives a list of names and figures. He is not a historian vouching for the truth of facts of which he has personal knowledge, but the contriver of a scheme filling up gaps in the history he has received, and dating events by means of astronomical computations. Such testimony cannot for one moment be compared with the continuous records of contemporary witnesses like Ezra, Nehemiah and Daniel. To the list of these six early Greek authors must be added the name of the Latin writer Censorinus.

7. **Censorinus** (AD 238) wrote his work *De die Natali* in the year AD 238. Like Ptolemy he was a compiler of dates and a calculator of Eras. He fixed the date of the last Sothic period before his own time, as that covered by the years BC 1321–AD 139. This calculation is used by Egyptologists in

dating the reign of Merenptah, the Pharaoh of the Exodus. The passage is one of first rate importance. It is therefore given in full. Censorinus says:

“The Egyptians in the formation of their great year had no regard to the moon. In Greece the Egyptian year is called ‘cynical’ (doglike), in Latin ‘canicular’ because it commences with the rising of the Canicular or dogstar (Sirius), to which is fixed the first day of the month which the Egyptians call Thoth. Their civil year had but 365 days without any intercalation. Thus with the Egyptians the space of four years is shorter by one day than the space of four natural years, and a complete synchronism is only established at the end of 1461 years” (Chapter XVIII).

“But of these Eras the beginnings always take place on the first day of the month which is called Thoth among the Egyptians, a day which this present year (AD 238) corresponds to the VIIth day of the Kalends of July (June 25), whilst 100 years ago this same day corresponded to the XIIth day of the Kalends of August (July 21) at which time the dogstar is wont to rise in Egypt” (Chapter XXI).

This information is used by Egyptologers in translating the Egyptian Vague year of 365 days into the Julian year of 365 1/4 days. Taking together the somewhat doubtful testimony of Manetho and the calculations of modern Astronomers, based on the information given by Censorinus, they are able to arrive at a date for the reign of Merenptah, the Pharaoh of the Exodus. But the validity of the result obtained is dependent upon the truth of a considerable number of assumptions, and cannot be regarded as anything but hypothetical or tentative.

Another calculation by Censorinus of still more fundamental importance is his determination of the date of the 1st Olympiad. This he places in the 1014th year before the consulship of Ulpian and Pontianus, AD 238. Of these 1014 years, 238 belong to the present Era AD This leaves 776 for the number of years before the Commencement of the present era, and accordingly the 1st Olympiad is dated BC 776.

The fragment is here given in full. It is taken from Cory’s Ancient Fragments.

“I will not treat of that interval of time which Varro calls historic; for he divides the times into three parts. The first from the beginning of mankind to the former cataclysm. The second, which extends to the 1st Olympiad, is denominated Mythic, because in it the fabulous achievements are said to have happened. The third, which extends from the 1st Olympiad to ourselves, is called historic, because the actions which have been performed in it are related in authentic history.

“The first period, whether it had a beginning, or whether it always was, certainly it is impossible to know the number of its years. Neither is the second period accurately determined, yet it is believed to contain about 1600 years, but from the former Cataclysm, which they call that of Ogyges, to the reign of Inachus, about 400 years, and from thence to the 1st Olympiad, something more than 400; of which alone, inasmuch as they are the last years of the Mythic period, and next within memory, certain writers have attempted more accurately to determine the number. Thus Sosibius writes that they were 395; Eratosthenes 407; Timaeus 417; Orestes 164. Many others also have different opinions, the very discrepancy of which shows the uncertainty in which it is involved.

“Concerning the third interval, there was also some disagreement among different writers, though it is confined within a period of only six or seven years. Varro has, however, examined the obscurity in which it is involved, and comparing with his usual sagacity the chronicles and annals of different states, calculating the intervals wanted, or to be added by reckoning them backwards, has at length arrived at the truth, and brought it to light. So that not only a determinate number of years, but even of days can be set forth.

“According to which calculations, unless I am greatly deceived, the present year, whose name and title is that of the consulships of Ulpian and Pontianus, is from the 1st Olympiad the 1014th, reckoning from the summer, at which time of the year the Olympic games are celebrated; but from the foundation of Rome it is the 991st; but this is from the Palatia (April 21st), from which the years, ab urbe condita, are reckoned. But of those years which are called the Julian years, it is the 283rd, reckoning from the Kalends of January, from which day of the year Julius Caesar ordered the beginning of the year to be reckoned. But of those years which are called the Augustan it is the 265th, reckoning also from the Kalends of January of that year, in which, upon the 16th of the Kalends of February (Feb. 15th) the son of the Divine Julius Caesar was saluted Emperor and Augustus, on the motion of Numatius Plautus, by the Senate and the rest of the citizens in the consulship of himself for the 7th time, and M. Vipsanius Agrippa.

“But the Egyptians, who two years before had been reduced under the dominion of the Roman people, reckon 268 Augustan years; for by the Egyptians in like manner as by ourselves, certain years are recorded, and they call their era the Era of Nabonnagarius, and their years are calculated from the first year of his reign, of which years the present is the 986th.

“The Philippic years also are used among them, and are calculated from the death of Alexander the Great, and from thence to the present time 562 years have elapsed. But the beginning of these years are always reckoned from the first day of that month which is called by the Egyptians Thoth, which happened this year upon the 7th of the Kalends of July (25th of June), for a hundred years ago from the present year of the consulship of Ulpian and Brutian the same fell upon the 12th of the Kalends of August (21st July), on which day Canicula regularly rises in Egypt. Whence we know that of this great year which was before mentioned under the name of Solar Canicular or Trieteris, by which it is commonly called, the present current year must be the 100th.

“I have been careful in pointing out the commencement of all these years, lest anyone should not be aware of the customs in this respect, which are not less various than the opinions of the philosophers. It is commenced by some with the New Sun, that is at the Winter Solstice, by many at the Summer Solstice; others again reckon from the Vernal, or from the Autumnal Equinox. Some also begin the year from the rising or the setting of Vergilia (Pleiades), but many from the rising of the Dogstar.”

Hence the year BC 776, thus determined by Censorinus, has been made the pivot upon which Chronology has been made to depend. The scheme or framework being determined beforehand, all that remained was to make the facts fit into the space allotted to them, and all dates, both sacred and profane, have been made to conform to the requirements of the scheme.

Eusebius accepted this basis, and adapted the Chronology of the Old Testament to it, and he and Jerome, who translated his work into Latin, are followed by all subsequent writers. They all adopt the principle, though they differ somewhat in their application of it. Eusebius identifies the year BC 776 with the 49th of Uzziah. Elsewhere he Copies Julius Africanus and identifies it with the 1st year of Ahaz. Syncellus identifies it with the 45th year of Uzziah. Clinton says it was in reality the 33rd year of Uzziah. But the method adopted is the same, and through Eusebius the Era has passed into the works of all subsequent writers, and thus the space of time between the first of Cyrus as Sole Rex and the year of our Lord AD 1, has been fixed beforehand, as a space of 536 years instead of 454, as it is by Daniel. The important thing to note is that this fixing of the dates is not based on contemporary testimony like that of Jeremiah 25:1, in which we are distinctly told that the 4th year of Jehoiakim was the 1st year of Nebuchadnezzar, but is arrived at by a process of computation worked out 1,000 years after the event, and resting ultimately upon the shadowy calculations of Eratosthenes and Timaeus, who obtain their data by multiplying the number of Ephors, Kings, Archons or Priestesses by the number of years which they imagined each of these various officers would be likely to have occupied these several posts.

II. The Early Christian Chronologers

1. **Theophilus of Antioch** (3rd Century AD) was one of the great luminaries of the Early Christian Church, and the founder of the historical school of Antiochian Theology, which was opposed to the allegorical school of Clement and Origen of Alexandria. According to Abulfaragi, he reckoned 5197 years from the Creation to the Era of the Seleucidae, BC 312, which gives the date of Creation as BC 5509, in accordance with the longer reckoning of the LXX. But he reckons 330 years from the Creation of Adam to the birth of Seth, and he omits the two years after the Flood.
2. **Julius Africanus** (c. AD 220–230), ambassador to Elagabalus, AD 218. He rebuilt his native town, Emmaus, AD 222, and died in. 232. He was the author of *Pentabiblos*, a system of Chronology beginning with the Creation of Adam, which he dated BC 5500, in accordance with the reckoning of the LXX. He omits the two years after the Flood, a very common error, and he calculates the death of Peleg, whose name he interprets as signifying a great fundamental division of time, at precisely 3,000 years from the Creation. Other millenary systems usually make it 3,000 years to the 130th year of Peleg, his age at the birth of his son Reu, according to the figures of the LXX.
3. **Clement of Alexandria** (3rd Century AD) was a disciple of Pantaenus, the founder of the famous catechetical school at Alexandria, and the teacher of Origen. He was a widely-read scholar, familiar with the whole body of classic literature, and with the books of the Old and New Testaments. He was the founder of the allegorical school of Biblical Interpretation, and the author of some able defences of Christianity against the absurdities and immoralities of pagan theology. The four works of his that have come down to us are (1) *An Admonition to the Gentiles*, (2) *The Paedagogue*, (3) *Stromata*, and (4) *Who is the rich man that is saved?* Amongst his lost works the most important, known to us only through fragmentary paraphrases in other authors, was his great work entitled *Hypotyposes* i.e., *Types or Adumbrations*.
4. **Eusebius** (AD 265–340) was the Father of Ecclesiastical history, and the most learned man of his age. In his *Ecclesiastical History* he traces the history of the Christian Church from the birth of Christ to the year 324. His *Preparatio Evangelica* and his *Demonstratio Evangelica* still exist in an

imperfect form. Of his *Chronicon*, the treatise in which he elaborates his Chronology, we have fragments in Greek, and a translation into Latin by Jerome. The name of Eusebius is one of first rate importance in the history of Chronology. It was Eusebius who first adopted the hypothetical Era of the Greek Olympiads, and assuming its truth, equated the years there given to the annals of the Old Testament, thus creating an error of 82 years according to the present writer's interpretation of the Hebrew Records, by placing the 1st Olympiad 82 years higher than the truth, and adapting the events of history to the Chronology thus framed, instead of adapting the framework of the Chronology to the events. The importance of Eusebius lies in the fact that the example which he set, and the figures which he gave, have been followed ever since.

5. **Epiphanius** (AD 310–402) was born in Palestine. He became Bishop of Constantia, in the Island of Cyprus, in the year AD 367. He was a good theologian, an accurate scholar, and a great linguist. His *Refutation of all Heresies* was a standard defence of Christianity against all forms of Pagan, Gnostic and Arian error. It is from the first book of his work *Against Heresies* that the motto of the present work has been taken, as an indication of the writer's belief that any departure from the methods of exact science, and any alteration of the Massoretic Text, or any variation from the words of the Hebrew Verity can only lead us away from the Truth. Epiphanius accused Aquila, first a Pagan, then a Christian, and finally a renegade Jew, of wresting Scripture in his translation of the Old Testament into Greek (published AD 128) in order to invalidate its testimonies concerning Christ.
6. **Ephraem Syrus** (AD 325–378), a Syrian theologian, born at Nisibis. He retired to Edessa, where he lived in retirement. He wrote in Syriac, but his works have been translated into Greek and Latin. He adopted the Chronology of the LXX and accused the Jews of having subtracted 600 years from the generations of Adam, Seth, etc., in order that their own books might not convict them of the fact that Christ had already come, He having been predicted to appear for the deliverance of mankind after 5,500 years. In this Ephraem was wrong, for it was the Greek Translators of the LXX text who added the six centuries to the Chronology of the Hebrew Text, and not vice versa. The "prediction" alluded to was the almost universal tradition of the Jews that the world would last for 7,000 years, and as man was made on the sixth day, and fell by sin, so the Messiah would come to redeem the world in the sixth millennium, AN. HOM. 5000 to 6000, and the date of the Creation according to the LXX was BC 5508.
7. **Jerome** (AD 340–420), called in Greek Hieronymus, was one of the most learned scholars of the Early Christian Church. He studied Hebrew, and spent some years in a cave at Bethlehem, where he lived a celibate life, and devoted himself to the work of translating the Old Testament into Latin, his version, the Latin Vulgate (AD 397), being regarded as authoritative, or Canonical in the Roman Catholic Church ever since the Council of Trent, AD 1545–1563. His other writings included his *De Viris Illustribus*, and his *Dialogi contra Pelagianos* and his translation into Latin of Eusebius' *Chronicon*, which thus determined the Chronology of Western Europe, till the time of Bede, Eusebius being followed by all sorts of authors right down to the present day.

III. Byzantine Chronologers

These are contained in the *Corpus Scriptorum Historiae Byzantinae*, a collection of works by various authors, the three principal of which are the works of Georgius Syncellus, and Johannes Malalas, and the *Chronicon Paschale*.

1. **Georgius Syncellus** (AD 792), Monk and Historian. His *Chronographia* contains a most valuable account of the Chronology of the Byzantine School of learning in the Centuries between the Early Christian Fathers and the Revival of Learning in modern times, led, in the department of Chronology, by Scaliger. Syncellus has given us two very valuable Canons, or lists of Kings, (1) The *Astronomical Canon* which he entitles "The Years from Nabonassar—according to the astronomical Canon." This is precisely Ptolemy's Canon from the first year of Nabonassar to the last year of Alexander the Great. (2) The *Ecclesiastical Canon*, which he entitles "The years from Salmonasar, who is also Nabonassar according to the Ecclesiastical reckoning, up to Cyrus, and thence to Alexander of Macedon."
2. Johannes Malalas or Malelas (9th Century AD), another Byzantine historian, writes another *Chronographia*.
3. The *Chronicon Paschale* also belongs to this group.

IV. The Great Armenian Chronologer—Abulfaragus, Abulfaragi, Abul-Faraj, Gregory or Bar-Hebraeus (AD 1226–1266).

This celebrated historian, whose real name was Gregorius Bar-Hebraeus, wrote a *Compendium of Universal History* from the Creation of the World to AD 1273, entitled *The History of the Dynasties*.

Abulfaragus was an Armenian Jew. He was brought up as a physician. After his conversion he settled in Tripoli, and became the first Bishop of Guba (1246) and afterwards Bishop of Aleppo. Although he was a leader of the Jacobite sect of Christians in Syria, he was much admired by Mohammedan, Jewish and Christian writers. He was at once the most learned, the most accurate, and the most faithful historian of all the Syrian writers. His history of the world contains valuable information respecting the Saracens, the Tartar Mongols, and the Conquest of Ghenghis-Khan. Around his name there has sprung up an extensive literature, the titles of which occupy many pages in the Catalogue of the British Museum. To Abulfaragi we owe the most correct adjustment of the Saracen Dynasty.

V. Modern Chronologers

Of these the number is legion. We select only a few of the more important. Most of them are mentioned in the article on "Chronology" in the Encyclopaedia Britannica (11th edition).

1. **Joseph Scaliger** (AD 1540–1609) was born at Agen in France. He studied at the University of Paris, and was a man of exceptional genius, and consummate scholarship. He was converted to Protestantism, and lectured at Geneva. His writings mark the rise of a new era in historical criticism. His monumental work *De Emendatione Temporum* (published AD 1596) laid the foundations of the science of modern Chronology. He was distinguished by the brilliancy of his genius and the extent of his erudition. He invented the Julian period of 7980 years from BC 4714 to AD 3266, formed by the multiplication of the cycles of the Sun 28 years, the moon 19 years, and the indiction 15 years. In its first year the cycle of the sun was 1, of the moon 1, and of the indiction 1. The three cycles will not so correspond again till the end of the cycle. The Julian period has no relation to the Julian year or the Julian Era, both of which take their names from Julius Caesar. The Julian period is named after the family name of Scaliger, his father's name being Julius Caesar Scaliger. Joseph Scaliger discovered the cause of the precession of the Equinoxes. He interpreted the prophecy of Daniel's 70 weeks as ending at the destruction of Jerusalem, AD 70, and consequently as commencing BC 420 in the 4th year of Darius Nothus. He inserted the 5 years omitted by the Jews, to make up the 430 years from Abraham's migration into Canaan to the Exodus.
2. **Sethus Calvisius** (AD 1603) was the author of an important work which he called the *Opus Chronologicum*.
3. **Dionysius Petavius** (Denis Petau, b. AD 1583) was a Chronologer of the first rank. He was born at Orleans, and published in 1627 his great work *De doctrina temporum*, in 1630 a continuation of the same, and in 1633–4 an abridgment of it, entitled *Rationarum Temporum*. Petavius was a Catholic, and his system is used principally in the Romish Church. He was learned in languages, deeply read in universal history, a capable mathematician, an astronomer equal to the calculation of eclipses, a man of indefatigable industry and patience, and a consummate Chronologer. He exposed the errors of the ingenious and fanciful scheme of his rival Scaliger. He adhered to the Hebrew Verity and reprobated any and every "emendation" of, or departure from, the Massoretic Text. He entered the following useful caveat against the substitution of chronological hypotheses and unverifiable conjectures for the patient unravelling of the meaning of the Text, in which alone is to be found the testimony of the ancients, the only true basis of scientific Chronology. "As nothing is more easy, so nothing is less tolerable, than to transfer to the most ancient writers the fault of our own error and unskilfulness; on the contrary, nothing is more prudent and more desirable than to attribute very much to the authority and fidelity of the ancients; and not to recede therefrom, except where we are admonished and convinced by the clearest and plainly necessary indications of truth."
4. **James Ussher** (AD 1581–1656), Archbishop of Armagh, was born at Dublin, and educated at Trinity College. He took holy orders in 1601, and soon acquired a reputation as a powerful preacher, both in Dublin and London. In 1607 he became Professor of Divinity at Trinity College, Dublin. He rose by his transcendent merits, and became in 1625 Archbishop of Armagh, and in 1634 Primate of all Ireland. His greatest work is the *Annales Veteris et Novi Testamenti* (1650–1654), translated in 1658 as *The Annals of the world... to the beginning of the Emperor Vespasian's Reign*. Ussher was a profound scholar, and one of the brightest luminaries of the Church of Ireland. He was a munificent patron of Oriental Literature. To him we owe the publication of the Samaritan Pentateuch. He always admitted the liability of both the Old Testament and the New to the errors of copyists, but he adhered very closely to the Massoretic Text of the Old Testament, and was enabled thereby to construct a system of Chronology which has held its own to this day. His dates were revised by Wm. Lloyd, Bishop of St. Asaph (subsequently Bishop of Worcester), and published by him in the margin of his Holy Bible with Chronological Dates and Index. "Lloyd's Bible" (published 1701) is thus the first Bible published with marginal dates.

The principal improvement of Ussher is the correction of the age of Terah at the birth of Abraham, from 70 years to 130. He dates the creation of the world in the year BC 4004, a remarkable astro-

nomical epoch which La Place described as “one in which the great axis of the earth’s orbit coincided with the line of the equinoxes, and consequently when the true and mean equinoxes were united.” His principal errors were his misinterpretation of “the 480th year” in I Kings 6:1, and his misdating of the accession of Uzziah in the 15th instead of in the 27th year of Jeroboam II. His system has prevailed principally in the British Empire, and amongst the Reformed Churches of the Continent, as that of Petavius has prevailed amongst divines of the Church of Rome. Ussher is not infallible, but he thoroughly deserved the universal esteem which his chronological achievements secured for him.

5. **Philippe Lobbe** (fl. 1651) is the author of a treatise entitled *Regia Epitome Historiae Sacrae et profanae*.
6. **Beveridge** (fl. 1669) was a mathematical genius. In his *Institutionum Chronologicarum libri duo*, he gives rules for adjusting the Julian Period and the Mohammedan Hegeira to the Christian Era.
7. **Sir John Marsham** (fl. 1672), was the author of the *Chronicus Canon Egyptiacus Ebraicus et Graecus*, a learned, acute, and ingenious, but unsuccessful attempt to reconcile the comparative Chronologies of Egyptian, Hebrew, Phoenician, and Greek antiquities. He steers a middle course between Petavius and Ussher. He followed Josephus, and was himself followed by Sir Isaac Newton in identifying the famous Egyptian King Sesostris with the Sesac, or Shishak, who plundered the Temple in the reign of Rehoboam.
8. **Paul Pezron** (fl. 1687), is the author of a chronological work entitled *L’Antiquite’ des temps re’tablie’ et de’fendu*, published in 1687. Four years later he published a *De’fense* of the same.
9. **Henry Dodwell** (fl. 1701) wrote a treatise on technical Chronology entitled *De Veteribus Graicorum Romanorumque cyclis*.
10. **Sir Isaac Newton** (1642–1727), the illustrious natural philosopher, was born at Woolstrophe Manor in Lincolnshire. He was the greatest mathematician of modern times. He discovered the binomial theorem, and the method of fluxions, and in 1666 the contemplation of the fall of an apple led to his greatest discovery of all, that of the law of gravitation. The following year he discovered the composite nature of light. He held the Chair of Mathematics at Cambridge for 33 years. In 1699 he became Master of the Mint. He represented his University in Parliament, and was elected President of the Royal Society, a post which he occupied for 24 years. He was knighted in 1705. He lived to his eightieth year, and was buried in Westminster Abbey. Bishop Burnet described him as the “whitest soul he ever knew.” Sir Isaac Newton made a hobby of Chronology, and became an ardent student of the subject during the last 30 years of his life. He read widely, and thought deeply on the problems of early Chronology, and came to the conclusion that the Greeks and the Latins, no less than the Babylonians, the Assyrians and the Egyptians, had greatly exaggerated their antiquity, from motives of national vanity. In his great work *The Chronology of Ancient Kingdoms Amended*, which was published posthumously in 1728, the year after his death, he endeavoured to construct a system on new bases, independent of the Greek Chronologers, whose unsatisfactory method of reckoning by generations, reigns and successions he exposed, laying bare the foundations on which their Chronology rested, and thereby overthrowing the elementary dates of Greek, Latin and Egyptian Chronology. He reduced the date of the taking of Troy from BC 1183 to 904. He followed Sir John Marshall in identifying Sesostris with Shishak, whose date he thus reduced from BC 1300 to 965. Newton cites Thucydides and Socrates, the musician Terpander, and the Olympic disk of Lycurgus, he uses his calculation of the precession of the equinoxes since the time of Hipparcus, and he substitutes a reckoning of 20 years each instead of 33 for the succession of the Kings of Sparta. Newton cannot be said to have established his point, but he has certainly destroyed the possibility of regarding the Chronology of the Greeks as a stable foundation for any system of Chronology that can be used as a standard by which to judge, and correct, the testimony of the Old Testament. Yet this conjectural Chronology of the Greeks is the foundation upon which the Canon of Ptolemy rests, and the Canon of Ptolemy is the only obstacle in the way of the establishment of the Chronology of the Old Testament.
11. **Alphonse des Vignolles** (fl. 1738), has written a very valuable treatise on Chronology entitled *la Chronologie de l’histoire Sainte*. Des Vignolles, Jackson, and Hales are the main advocates of a return to the longer Patriarchal Chronology based on the LXX in preference to the shorter Patriarchal Chronology given in the Hebrew Text, which was adopted by Scaliger, Petavius and Ussher at an earlier date, and subsequently by Clinton. Canon Rawlinson, and most Egyptologists adopt the longer Chronology, or demand a still earlier date for the rise of civilization in Egypt, but the entire weight of their argument rests upon their interpretation of the testimony of Manetho and Berosus, and the astronomical calculations by which it is supported.
12. **N. Leuglet Dufresnoy** (fl. 1744) is the author of some very carefully compiled dates, entitled

Tablettes chronologiques de l'histoire universelle.

13. The **Benedictine Congregation of Saint Maur** published in 1750, in one large quarto volume, their elaborate treatise *L'Art de verifier les dates*. This was subsequently enlarged into 38 octavo volumes published between 1818 & 1831.
14. **John Jackson** (fl. 1752), the author of *Chronological Antiquities*, and a disciple of the acute and learned Vossius, is the first English Chronologer of the modern school to break away from the sure ground of the Hebrew Text, hitherto accepted by Scaliger, Petavius and Ussher alike, and to adopt the longer Chronology of the Greek LXX. His work is distinguished by learning and ingenuity. It reveals a spirit of adventure, and a love of change, and a bounds in ingenious criticisms and "conjectural emendations" of the received systems. His fundamental error is his introduction of the 130 years of the interpolated Second Cainan, between Arphaxad and Salah, from the LXX. version of Gen. 11:13, where alone it is to be found. He also adopted the common error that Terah was 70 years old at the birth of Abraham, though Ussher had proved that he was 130. He took a step in the right direction in rejecting Ussher's interpretation of the length of the period from the Exodus to the 4th year of Solomon in I Kings 6:1, and substituted 579 years instead of 480. It should have been 594 years. He critically determined his fundamental date BC 586 for the destruction of the Temple.
15. **John Kennedy** (fl. 1752) was the Rector of Bradley in Derbyshire. His system is based on the Hebrew Text, of which he has made a special study from the point of view of astronomy. His New method of stating and explaining the Scripture Chronology upon Mosaic Astronomical principles, mediums and data, as laid down in the Pentateuch develops the astronomical principles followed by Moses, and demonstrates their superiority to modern methods of intercalation from the Metonic and the Callipic cycles to the Julian and the Gregorian rectifications of the length of the year. He translates Hebrew technical terms like Tekuphath Hasshanah = The Vernal or the Autumnal Equinox, explains that Moses always measures time by solar years, and always computes time by lunar years. He shows how time is measured by the Hebrew Shanah or year, consisting of an annual revolution of the earth round the sun, containing the whole of the four seasons, and therefore always invariable, and how the Mognadim (translated seasons), the sacred feasts of the Jews (Passover, Pentecost and Tabernacles), are pinned down to this solar year. His exposition of the story of the flood shows that Noah was exactly 365 days in the ark, and explains Moses' method of Computing in terms of the months of the lunar year, whilst measuring time in terms of the solar year. In his great work *Physiological Chronology*, a bulky quarto volume of 750 pages, he dates the creation BC 4007. He postulates the infallibility of the Hebrew Text, which he says "has never been corrupted in the article of Chronology by Jew or Pagan, by chance or design. It is not more certain that there is a sun and moon in the heavens than it is that not a single error of the press, or of a Jewish transcriber, has crept into the present copies of the Hebrew Massoretic Text, to give the least interruption to its chronological series of years." Kennedy's view of the infallibility of the Hebrew Massoretic Text, coupled with his feeling of certainty with regard to the results obtained from his mathematically exact astronomical calculations, accounts for the dogmatic tone which characterizes his works. This note of infallibility is very annoying to modern scholars, who rejoice in the larger liberty afforded by the method of hypothesis and conjecture!
16. **John Blair** (fl. 1754) takes rank with the most painstaking and accurate Chronologers of modern times. He published his *Chronology and History of the World* first in 1754, and subsequently prepared a new edition very much enlarged. This was published in 1857. He adopts the method of tabulation, and aims at precision of statement and accuracy in his results.
17. **Principal Playfair** of St. Andrews, Scotland (fl. 1784), has given us in his *System of Chronology* a technical and a historical treatise which may be regarded as an improvement on Blair's *Chronology*. He begins with an account of the principles of the science, and carefully defines his terms.
18. **A. H. L. Heeren** (fl. 1799) is the author of a work in German entitled a *Handbuch der Geschichte der Staaten des Alterthums*. It was published in 1799, and is characterized by those qualities of comprehensiveness, thoroughness, and modernity of standpoint which we look for in works by German writers.
19. **G. G. Bredow** (fl. 1803) has given us another German vade mecum on the subject, entitled a *Handbuch der alten Geschichte, Geographie, und Chronologie*. It was published in 1803, and contains his *Historische Tabellen*.
20. **Wm. Hales** (fl. 1809) one of the ablest and best of our modern Chronologers. The fulness, variety, and sustained interest of his treatment of the subject in the four octavo volumes of his *New Analysis of Chronology and Geography, History and Prophecy*, is altogether beyond praise. This was published in 1809–1814. His object is a comprehensive treatment of the whole subject in all its

branches, on principles at once both Scriptural and scientific. He gives an interesting account of the elements of technical Chronology, a review of the history of Chronology, and some valuable rules for “chronologizing.” His Chronology of the Old Testament treats of the period from Adam to Herod the Great. His Chronology of the New Testament treats of the period from Herod the Great to the destruction of Jerusalem, to which is appended an exposition of the prophecies of Daniel and Revelation, in reference to the prophetic history of the Church. In his final volume he surveys the entire field of profane Chronology, including the remains of Sanchoniathon, Berosus, Manetho, and the important historical works of Ctesias, Herodotus, the Persian historian Mirkhond, Ptolemy, Abulfaragus, and Syncellus. He follows Jackson in adopting the longer Chronology of the LXX, but “judiciously” rejects the Second Cainan. His date for the Creation is BC 5411. He has a decidedly modern note, and in his treatment of Scripture he tempers reverence with intelligence, and lowers the “superstitious veneration of the Hebrew Verity or supposed immaculate purity of the Massoretic editions of the Hebrew Text to the proper level of rational respect.” His reasons for rejecting the shorter Hebrew Chronology and adopting in preference the longer Greek Chronology of the LXX are subjective and inconclusive. His work contains a very large quantity of useful chronological material, including many valuable Tables.

21. **C. G. Zumpt** (fl. 1819) is the author of the *Annales Veterum Regnorum*.
22. **Buret de Longchamps** (fl. 1821) has left us some valuable *Tableaux Historiques Chronologiques et Geographiques*.
23. **Henry Fynes Clinton** (fl. 1824) is perhaps the ablest, the soundest, and the most complete and satisfactory of all our modern Chronologers. His *Fasti Hellenici* (1824–1834), his *Fasti Romani* (1845–1850), and his Epitomes of these two elaborate works (1851–1853) are absolutely indispensable to anyone who desires to make an exhaustive study of the subject. His reasoning is clear, his authorities are numerous, and his tone is moderate. His three large quarto volumes of the *Fasti Hellenici* alone are a library in themselves. His Chronology contains perhaps fewer errors than that of any of his predecessors. He determines the Joshua-Judges “Chasm” (20 years instead of 13) and the Samuel “Chasm” (32 years instead of 20) by means of a subjective estimate, or conjecture, instead of by inference from the data contained in the Text, and for the Persian and Greek period from Cyrus to Christ, he adopts the figures of the Canon of Ptolemy instead of those of the prophet Daniel. Like most other Chronologers, he does not understand the Scripture method of recording the lengths of the reigns of the Kings of Israel and Judah. He is to be blamed for his assertion that the figures given in the Books of Kings and Chronicles are sometimes “corrupt” and to be rejected. But apart from these errors, which make his Era for the Creation BC 4138, just 96 years too long, he is a most worthy and a most judicious guide.
24. **Christian Ludwig Ideler** (fl. 1825) has produced in his *Handbuch der Mathematischen und technischen Chronologie* a most valuable treatment of a recondite subject. His researches into the construction of the calendars used by all the different nations of antiquity, have opened up a mine of useful information. His *Lehrbuch der Chronologie*, published in 1831, is a smaller handbook upon the same subject.
25. **M. L’Abbe’ Halma** (fl. 1819) makes considerable use of Ideler in his great work, *Tables Chronologiques des Regnes de C. Ptolemaeus*. This was published in Paris in 1819, and is an admirable account of Ptolemy’s Canon, which he describes as “the most precious Monument of ancient Chronology.”
26. **Sir Harris Nicholas** (fl. 1833) is the author of a valuable Chronology of History (published in 1833).
27. **Edward Greswell** (fl. 1852) has left us three large and important works on technical Chronology. (1) *Fasti Temporis Catholici* (1852), (2) *Origines Kalendariae Italicae* (1854) and (3) *Origines Kalendariae Hellenicae* (1862)
28. **B. B. Woodward & W. L. R. Cates** (fl. 1872) published in 1892 a most valuable Encyclopaedia of Chronology.
29. **J. C. Macdonald** (fl. 1897) has collected in his *Chronologies and Calendars* some interesting curiosities of Chronology.
30. **David Ross Fotheringham** (fl. 1906) has written a useful little handbook on the Chronology of the Old Testament.

Other works of equal importance are omitted for lack of space, or because they deal only with some one special aspect of the subject, but room must be found for the bare mention of (1) Benjamin Marshall’s *Chronological Tables* (1713). Marshall was the literary executor of Bishop Lloyd, whom he closely followed. (2) Dr. Humphrey Prideaux’s *Historical Connection of the Old and New Testaments*. The 1858

edition, revised by J. Talboys Wheeler, contains a valuable account of Rabbinic authorities on Chronology, by Dr. McCaul. (3) *Schrader's Cuneiform Inscriptions and the Old Testament*, a Monumental work, but unfair to the Hebrew Records. (4) Sir Edward Denny's *Seventy Weeks of Daniel*, he is the first to explain the principle of *Anno Dei* reckonings. (5) Palmoni an essay written to prove that every date in the Bible is a fictitious construction, having less relation to objective fact than to the exercise of the mythopoetic faculty as applied to numbers. (6) Henry Browne's *Ordo Saeculorum*, an excellent Chronology of the Holy Scripture, working backwards from Christ to Adam, and eliciting the mystical qualities of the numbers of the years employed in the Divine Administration of the times and seasons. (7) Lumen's startling redatement of the days of Nehemiah in his *Prince of Judah*. (8) Sir Robert Anderson's *Coming Prince*. (9) Canon Girdlestone's excellent little 77-page *Outlines of Bible Chronology*. (10) Charles Foster Kent's *Historical Bible*, which construes the Chronology in accordance with the Higher Critical theory of the origin of the Text, and last, but not least, two works of surpassing merit. (11) Willis Judson Beecher's *Dated Events of the Old Testament* (1907), and (12) *The Companion Bible*, published by the Oxford University Press.

CHAPTERS 2, 3: THE ANTE-DILUVIAN PATRIARCHS — FROM ADAM TO NOAH

1. PERIOD ONE : The Patriarchs—Genesis

(ANNO HOMINIS 1–1056)

THE opening verse of Genesis speaks of the Creation of the heavens, and the earth, in the undefined beginning. From this point we may date the origin of the world, but not the origin of man. For the second verse tells of a catastrophe—the earth became a ruin, and a desolation. The Hebrew verb *hayah* (hayah = to be) here translated was, signifies not only “to be” but also “to become,” “to take place,” “to come to pass.” When a Hebrew writer makes a simple affirmation, or merely predicates the existence of anything, the verb *hayah* is never expressed. Where it is expressed it must always be translated by our verb to become, never by the verb to be, if we desire to convey the exact shade of the meaning of the Original. The words *tohu va-bohu* (*tohu va-bohu*), translated in the AV “without form and void” and in the RV “waste and void” should be rendered *tohu*, a ruin, and *bohu*, a desolation. They do not represent the state of the heavens and the earth as they were created by God. They represent only the state of the earth as it afterwards became—“a ruin and a desolation.” This interpretation is confirmed by the words of Isaiah 45:18, “He created it not *tohu* (a ruin): He formed it to be inhabited (habitable, not desolate).” This excludes the rendering of Gen. 1:2 in the AV and the RV as decisively as the Hebrew of Gen. 1:2 requires the rendering of *hayah* by the word “became” instead of the word “was,” or better still “had become,” the separation of the Vav from the verb being the Hebrew method of indicating the pluperfect tense.

The noble Cathedral, once a perfect work of art, with its crowds of devout worshippers, becomes, with the lapse of ages, a dilapidated ruin. Forsaken by those who once frequented its hallowed courts, it becomes a desolation. Similarly the words of Gen. 1:2, “And the earth became without form and void” are intended to convey to us the fact that the cosmos, once a beautiful and perfect whole, became a “ruin” and a “desolation.” What the cause of this catastrophe was, we are not told, though some speculative interpreters have connected it with the fall of Satan. We know neither the cause, nor the time, nor the manner in which the calamitous change took place. There is no point of contact between the Hebrew *tohu* “ruin” and the Greek conception of chaos, the primeval, shapeless, raw material out of which the world was formed. Genesis 1:2 does not describe a stage in the process of the creation, but a disaster which befell the created earth the original creation of the heavens, and the earth, is chronicled in Gen. 1:1. The next verse, Gen. 1:2, is a statement of the disorder, the ruin, and the state of desolation into which the earth subsequently fell. What follows in Gen. 1:3–31 is the story of the restoration of a lost order by the creative word of God. Between the creation of the heavens and the earth “in the beginning” (Gen. 1:1) and the catastrophe by which they became a “ruin” and a “desolation” (Gen. 1:2) we place those countless ages required by the geologist for the formation of the various strata of the earth’s crust, and the fossil remains embedded therein.

The length of time described by the Hebrew word *Yom* = day, as used in this chapter, cannot be definitely determined. The word itself is frequently used to express a long period, an entire Era. The time occupied by the whole process of the six days’ work is referred to in Genesis 2:4 as “the day that the Lord God made the heavens and the earth.” The use of the expression “and evening came and morning came—day one” (Gen. 1:5; repeated Gen. 1:8, 13, 19, 23, 31) seems to suggest a literal day as measured by the revolution of the earth on its axis, but it cannot be said to be proved that the writer is not here using the words “evening and morning” in a figurative sense, for the commencement and the completion of whatever period he intended to mark by his use of the word “day.” In the same verse (Gen. 1:5) the word “day” is used to mark a still briefer period, *viz.* that portion of the day when it is light.

The attempt to parcel out the six days’ work into the six geological Eras, to which they somewhat roughly, but by no means accurately correspond, cannot be regarded as a satisfactory explanation of the writer’s intention and meaning. There may be certain analogies between the order of Creation as described in the first chapter of Genesis, and the order of the formation of the various strata of the crust of the earth as read by the geologist, and in the order of the occurrence of the fossil remains which are found embedded in the stratified layers of the earth’s crust, for God’s works are all of a piece but there are also great and manifest divergencies, and these are so great, and so manifest that the two series cannot be said to run absolutely parallel with each other, or to perfectly correspond. The natural interpretation of the narrative, to one who recognizes the greatness of the power of God, is that which understands the chapter as a record of the creation of the world in six literal days; but it cannot be denied that the word “day” may have been used by the writer in a figurative sense, and intended by him to indicate a more ex-

tended period corresponding to a geological Era of time.

The creation of Adam took place on the sixth day after the creation of light. Whether this sixth day is to be interpreted as the sixth literal day, as measured by the space of time required for the revolution of the earth upon its own axis, or as a sixth geological Era, must remain uncertain, as there is nothing in the Hebrew Text to decide between the more precise and the more extended connotation of the term.

Similarly the question discussed by Ussher in his *Annals of the Old and New Testaments*, by Kennedy in his *New Method of Scripture Chronology*, by R. G. Faussett in his *Symmetry of Time*, and many other writers, as to the exact month, day and hour at which the first year of the life of Adam began, whether at the autumnal or at the vernal Equinox, cannot be decisively determined.

The following considerations make it appear probable that the original point of departure for the year was the autumnal Equinox, and that this was changed at the Exodus by Divine command, to the vernal Equinox, at all events, as far as the Hebrew people were concerned, whilst other nations may have continued to reckon their New Year's Day from the autumnal Equinox, or may have invented Eras of their own. We know that the later Jews Hellenised their calendar, introducing the principle of intercalation, and using the Greek Metonic cycle of 19 years for this purpose, instead of adhering to the Mosaic principle of direct observation, and eschewing astronomical calculations altogether.

(1) The order of the "evening and the morning" which formed the first day suggests by analogy the propriety of making the year also commence in the autumn.

(2) The autumnal season of harvest, when the fruits of the earth were ripe, seems to be the most appropriate time of the year for the appearance of man on the earth which had been specially prepared for him.

(3) The change of "the first month of the year" to Abib or Nisan occurring at the spring of the year (Exodus 12:2; 13:4, Deut. 16:1) suggests that up to that time the first month of the year was the month which followed immediately upon the Autumnal Equinox. This fixing of Abib or Nisan as the first month of the year may, however, have been a return to the original mode of reckoning from the Creation and a rejection of the Egyptian method of reckoning by the Vague calendar year of exactly 365 days.

But it is not till we reach the fifth chapter of Genesis that we meet with our first definite chronological datum, and here we find a complete list of the ante-diluvian patriarchs. The list is as follows. We adopt the term Anno Hominis rather than Anno Mundi, for, as we have seen, the world was created "in the beginning." This was ages before the creation of Adam, the true starting point of every Chronology. Ussher's date, B.C. 4004, should be removed from Gen. 1:1, and placed at Gen. 1:26, or Gen. 5:1.

The Ante-diluvian Patriarchs: From the Creation to the Flood		
ANNO HOMINIS	EVENT	REFERENCE
0	Adam created	Gen. 5:1
+130	Age of Adam at birth of Seth	Gen. 5:3
130	Seth born	
105+	Add age of Seth at birth of Enos	Gen. 5:6
235	Enos born	
90+	Add age of Enos at birth of Cainan	Gen. 5:9
325	Cainan born	
70+	Add age of Cainan at birth of Mahalaleel	Gen. 5:12
395	Mahalaleel born	
65+	Add age of Mahalaleel at birth of Jared	Gen. 5:15
460	Jared born	
162+	Add age of Jared at birth of Enoch	Gen. 5:18
622	Enoch born	

65+	Add age of Enoch at birth of Methuselah	Gen. 5:21
687	Methuselah born	
187+	Add age of Methuselah at birth of Lamech	Gen. 5:25
874	Lamech born	Gen. 5:28
182+	Add age of Lamech at birth of Noah	
1056	Noah born	
600+	Add age of Noah at the Flood	Gen. 7:6
1656	The Flood	

The design of this genealogical list is to give a Chronology of the period from Adam to the Flood. The line chosen is the line of Noah the preserver of the race, the line of the promised Messiah the Redeemer of the race. It must not be assumed that the son named in each generation is either always or generally the eldest son of his father. This is not stated, it is not suggested, it is not implied. Certainly Seth is not the eldest son of Adam, nor is Shem the eldest son of Noah, though he is mentioned in this list (Gen. 5:32) before his eldest brother Japheth (Gen. 10:21). Moses selects from the genealogical family records only those entries which relate to the chosen people, and those other races who are brought into contact with them in the course of their later history. The line of Noah, Abraham, Isaac and Jacob is selected because to them was given the promise of the "Seed," in whom all the nations of the earth are to be blessed. The theme of the Old Testament is the Redeemer. All its selections are governed, and all its omissions are explained, by this fact.

That the interest of the recorder of these Tables was chronological, may be inferred from the careful attention which he has paid to the subject of Chronology, and the very precise nature, and chronological form of the statements made respecting the ages of each of the Patriarchs. It may also be inferred from the fact that though he gives the descendants of the line of Cain, he attaches no Chronology to that line; his chronological purpose is served if the succession of events is accurately and fully recorded along the one line of succession which he adopts as his chronological Era.

The number of the years of the life of each of the Patriarchs is mentioned, in addition to the years before and after the birth of the son named, probably in order to show by this double statement that however extraordinary the length of the life of the Patriarch, there is no mistake about the accuracy of the figures. There is no reason to doubt the fact that our first fathers were endowed with a better physical frame, which enabled them to live a longer life than the men of the present day. The attempt to interpret the names of these men as the eponymous names of tribes or dynasties, or to give the word "year" a different signification from that which it ordinarily bears, or to discount the narrative as mythical, and the personages named in it as fictitious, is a fallacy induced by a presumed, but false analogy between the Biblical narrative and the legendary accounts of the origins of other nations, or by the gratuitous assumption that as things are to-day, so they always have been, and always will be. We have the same authority for believing that Adam was 930 when he died, that we have for believing that Joseph was 30 when he stood before Pharaoh, and 110 when he died.

The narrative nowhere states, and it must not be understood to imply, that each succeeding Patriarch was born on the very day on which his father attained the age named at his birth. As the purpose of the list is chronological, it must be interpreted to mean that the fractions of a year which are not mentioned are included in the age of the father. Moses intended his calculations to be both accurate and complete. He reckons by complete years, and gives the whole of the year in which the son is born to the age of the father at his son's birth. This is proved by the two instances of Methuselah and Noah. Methuselah's age at death is stated to have been 969 years (Gen. 5:27) but he was only 968 years, 1 month and 17 days old, plus whatever fraction of the year of his birth was included in the 65th year of his father Enoch, when the Flood began. Noah's age when the Flood was upon the earth is given as 600 years (Gen. 7:6), but it was only on the 17th day of the 2nd month of his 600th year that the fountains of the deep were broken up (Gen. 7:11). These statements are given by Moses in order to explain the technical principles on which the Chronology is built. Those who make them into "discrepancies" are self-convicted, (1) of an error of interpretation, and (2) of attributing to the author the mistake which has been made by themselves.

Moses' tables of the Patriarchs, like Ptolemy's Canon of Kings, are constructed on astronomical principles. The numbers taken collectively constitute an uninterrupted series of true, tropical solar years, and register with astronomic accuracy the number of solar revolutions from the creation of Adam to the death of Joseph, which no Chronologer who accepts the statements of the Hebrew Text can make either

one year more, or one year less, than 2369. Adam lived 930 years. The first year of his life runs parallel with the year Anno Hominis 1. The year in which he died runs parallel with AN. HOM. 930. Seth was born in the 130th year of Adam's life, the year AN. HOM. 130. It is not suggested that the Patriarchs were all born at the autumnal Equinox, or all on the same day of the same month of the year. The years are integral, and take no account of fractions. The year of Seth's birth is reckoned to Adam. The 131st year of Adam's life, the year AN. HOM. 131, is reckoned as the 1st year of the life of Seth. Hence, we may safely conclude that Moses' reckoning of years is inclusive, and Noah is said to be 600 years old at the beginning, and not at the end of his 600th year.

The numbers given in this genealogical list are characterized by the strictest regard for accuracy and precision. This is confirmed by the fact that since Ussher, no Chronologer who has adopted the numbers given in the Hebrew Text as the basis of his calculation, has ever failed to fix the Flood in the year AN. HOM. 1656, and the death of Joseph in the year AN. HOM. 2369.

CHAPTER 5: THE NOAH-SHEM CONNECTION

(Noah's age at the birth of Shem = 502 years)

AN. HOM. 1056-1558

THE early Chronology of the Hebrew Scriptures is contained in a series of connected statements, each covering a definite period. Between each of these definite periods is an apparent chasm, or want of connection. A closer and more attentive study reveals the fact that the connecting link between the several periods is always supplied, but it has to be diligently sought for. The five apparent chasms at which the continuity of the chronological record appears to be broken off are as follows:-

1. The *Noah-Shem* connection, which determines the exact age of Noah at the birth of Shem, viz. 502 years.
2. The *Terah-Abraham* connection, which determines the exact age of Terah at the birth of Abraham, viz. 130 years.
3. The *Joseph-Moses* connection, which determines the exact number of years which elapsed between the death of Joseph, with which the Chronology of the book of Genesis ends (Gen. 50:26), and the birth of Moses, with which the Chronology of the book of Exodus begins (Exodus 7:7), viz. 64 years.
4. The *Joshua-Judges* connection, which determines the number of years that elapsed during the administration of Joshua and the Elders that overlived him, between the division of the land at the end of the Seven Years' War of Conquest, with which the Chronology of the Book of Joshua ends (Joshua 14:7,10 with Numbers 10:11,12; 13:17,20), and the oppression of Cushan-Rishathaim of Mesopotamia, with which the Chronology of the Book of Judges begins (Judges 3:8), viz. 13 years.
5. The *Eli-Saul* connection, which determines the number of years that elapsed between the death of Eli and the beginning of the reign of Saul, viz. 20 years. This is given in the summary of I Samuel 7:2.

These breaks in the consecutive statements of the Chronology are made good in various ways. The discussion of them will occupy five separate chapters of this work. They form a series of chronological problems of increasing difficulty, but it will always be found, on closer inspection, that the materials for forming an exact Chronology are always given, so that we are never left to hypothesis or conjecture, and never have to fall back upon the statements of Josephus or other external testimony.

In this chapter we have to deal with the Noah-Shem connection, i.e. to ascertain the age of Noah at the birth of Shem. The problem is solved by the inclusion of an intermediate date, the epoch of the Flood, from which we reckon back to the birth of Noah, and on to the age of Shem at the birth of his son Arphaxad.

The two statements contained in Genesis 5:32, "And Noah was 500 years old: and Noah begat Shem, Ham and Japhet," do not give us any clue to the exact age of Noah at the birth of Shem. Shem is mentioned first, because he is the member of the family with whom the writer is mainly concerned.

The Old Testament is a narrative of the story of Redemption. Redemption is through the Messiah, Who is to come through a particular line of descent. He is progressively defined as the "seed of the woman" (Gen. 3:15), the "seed of Abraham" (Gen. 22:18), "the seed of Isaac" (Gen. 26:4) "the seed of Jacob" (Gen. 28:14), "the Shiloh of the Tribe of Judah" (Gen. 49:10) and "the seed of the House of David" (2 Sam. 7:12-16).

References to other families and other races are summary, and incidental. The grand theme of the whole of the Old Testament Scriptures is the coming of the Redeemer, and the things concerning the race from which He springs. References to other races are introduced only in so far as they bear upon the main theme of the Old Testament Scriptures as a whole.

This explains why Shem is mentioned first amongst the sons of Noah. He was not the eldest son, for in Genesis 10:21 (a text misrendered in the R.V. but correctly translated in the A.V.), Japheth is distinctly described as his elder brother. In the same way, and for the same reason, Abram is mentioned before his elder brothers, Nahor and Haran, in Genesis 11:26, "And Terah lived seventy years, and begat Abram, Nahor and Haran." Similarly Issac is placed before Ishmael in I Chron. 1:28, "The sons of Abraham, Isaac and Ishmael," though Isaac was not the older, but the younger of the two.

We arrive at the age of Noah at the birth of Shem by means of an induction from the facts contained in Genesis 7:6 and Genesis 11:10. From Genesis 7:6 we learn that Noah was 600 years old at the epoch of the Flood. From Genesis 11:10 we learn that Shem was 100 years old, two years after the Flood. Therefore Shem was 98 years old at the Flood, that is Shem was 98 years old when Noah was 600. Therefore Shem was born when Noah was 502. This enables us to connect the Chronology of the ante-diluvian Patriarchs with the Chronology of the post-diluvian Patriarchs, and we may proceed in either of two ways. We may use the intermediate date of the Flood, or we may use the age of Noah at the birth of Shem, at which we have arrived by means of a mathematical deduction from the statements of the Hebrew narrative.

THE NOAH–SHEM CONNECTION

❑ First Method

AN. HOM. EVENT REFERENCE

1056 Noah born See Chapter 4

502+ Add age of Noah at birth of Shem Gen. 7:6 with 11:10

1558 Shem born

100+ Add age of Shem at birth of Arphaxad Gen. 7:6 with 11:10

1658 Arphaxad born

❑ Second Method

AN. HOM. EVENT REFERENCE

1056 Noah born See Chapter 4

600+ Add age of Noah at Flood Gen. 7:6

1656 Date of the Flood

2+ Add years after the Flood when Arphaxad was born Gen. 11:10

1658 Arphaxad born

The date of the Flood is treated as an epoch in the same way as the birth of one of the Patriarchs. It began on the 17th day of the 2nd month of the 600th year of Noah's age. Noah remained in the Ark for one whole year of exactly 365 days. But the expression "two years after the flood" in Gen. 11:10 is not to be interpreted as meaning two years after the flood was over. The flood is treated as an epoch or point of time from which the Chronology is continued in the same manner as from the birth of one of the Patriarchs.

The Chronology of the Flood year throws an interesting light upon the primitive Hebrew calendar. The commencement of the Flood is dated the 17th day of the 2nd month of the 600th year of Noah's life (Gen. 7:11). The Ark rested on the 17th day of the 7th month (Gen. 8:4). The interval of five months between these two dates is described as an interval of 150 days, each of these five months consisting of 30 days. The Hebrews always reckoned 30 days to the month, except when they saw the New Moon on the 30th, which then became the 1st day of the new month. Moses may have followed this usage here. But Kennedy interprets him as reckoning 30 days to each of the first 11 months, and 24 days, or where necessary 25 days to the 12th month. Kennedy's account of the Flood year is as follows. The waters decreased continually till the 1st day of the 10th month, an interval embracing the remaining 14 days of the 7th month, and the two following months, or 74 days. The waters were dried up on the 1st day of the 1st month of the 601st year, after a further interval of 95 days, comprising a tenth month of 30 days, an eleventh month of 30 days, and a twelfth month of 24 days, making altogether 84 days to complete the twelve months of the lunar year, and a further 11 days to the eleventh day of the 1st month of the new lunar year to complete the 365 days of the solar year, the 600th year of Noah's life.

At this time Noah "removed the covering of the ark and looked, and behold the face of the ground was dry." Nevertheless he remained in the ark until the 27th day of the 2nd month of the new lunar year, a further interval of 46 days, comprising the remaining 19 days of the 1st month, and the 27 days of the second month of the new lunar year, when at the command of God he went forth out of the ark in which he had remained exactly 365 days.

From these particulars Kennedy concludes that in the primitive Hebrew calendar time is measured by the solar year of 365 days, but computed in terms of the lunar year of twelve months, viz. eleven months of 30 days, and a twelfth month of 24 days, when the lunar year or the 12 revolutions of the moon occupy 354 days, and 25 days when the lunar year or the 12 revolutions of the moon occupy 355 days. The facts as viewed by Kennedy may be graphically represented as follows:-

**DIAGRAM OF THE FLOOD YEAR ACCORDING TO JOHN KENNEDY'S
New Method of Scripture Chronology.**

AN.HOM. 1655		599th Year in the Life of Noah	
Beginning of the Solar Year AN.HOM. 1656		Which this year coincides with the lunar year	
AN.HOM. 1656		600th Year of the Life of Noah	
Month 1			
Month 2	46 days into year	Noah entered Ark 17th day of 2nd month	Start of the 365 days in ark
Month 3		40 days rain ceased 26th day 3rd month	
Month 4			
Month 5			
Month 6			
Month 7		After 150 days of waters prevailed, Ark rested on the 17th day of 7th month	
Month 8			
Month 9			
Month 10		After 74 days of waters decreased	Peaks seen on the 1st day of 10th month
Month 11		Raven sent 11 day 11th month Dove 1 sent 18 day 11th month Dove 2 sent 25 day 11th month	
Month 12		Dove 3 sent 2 day 12th month	
		Lunar year ends after 354 days, 84 days after peaks seen	(Start of EPACT of 11 days to end of Solar year)
Month 1		After 308 days from entering Ark, Ark uncovered 1st day 1st month 601 year of life of Noah	Solar year 1656 ends after 365 days (601st Year of the life of Noah. AN.HOM. 1657)
Month 2		After 365 days in the Ark, and 46 days from uncovering the Ark, Noah went forth out of Ark 27th day 2nd month	

The Biblical year is the luni-solar year. Time is measured by the revolutions of the sun. The feasts are regulated by the revolutions of the moon, and the relations between the solar year are adjusted, not by astronomical calculation, but by observation of the state of the crops, and the appearances of the moon. The resulting system was perfect and self-adjusting. It required neither periodic correction nor intercalation.

According to Kennedy, Moses measures time by the years of the sun. He computes time by the months and days of the years of the moon, which are pinned down to the years of the sun. From the 17th day of the 2nd month of one lunar year to the 27th day of the 2nd month of the following lunar year is a period of $354 + 11 = 365$ or 1st day of the concurrent solar year, we have what is called a year of coincidence. Such a year was the year AN. HOM. 1656, the 600th year of Noah's life. The Flood year occupied 319 days of the solar year 1656, and 46 days of the solar year 1657, the year after the Flood. It also occupied 308 days of the lunar year concurrent with the solar year 1656, and 57 days of the lunar year concurrent with the solar year 1657. A year of commensuration is always followed by a year of coincidence.

The sun was appointed for the measurement of time or years. The moon for the regulation and deter-

mination of the periodic returns of the “seasons,” i.e. the set feasts and solemn assemblies (Gen. 1:14, Psa. 104:19).

The Mosaic Shanah (a word which like Mishna signifies repetition) invariably denotes a true, tropical solar year containing all the four seasons, and always returning to the same point in the ecliptic. These feasts were pinned down to the solar year, but they were computed and regulated by the months and days of the year of the moon. The first month was the month whose full moon either fell upon or followed next after the beginning of the solar year, Tekuphath hasshanah = the return of the year (Ex. 34:22, I Sam. 1:20 margin, 2 Chron. 24:23 margin, Psalm 19:6.)

From the Creation to the Exodus this “beginning of the year” was fixed at the autumnal Equinox in the month Tisri, but from the Exodus onward it was transferred by Divine command to the vernal Equinox, and to the month Abib, which was henceforth to be “the beginning of months, the first month of the year” (Ex. 12:2, 13:4). So far Kennedy.

Sir Isaac Newton’s account of the Hebrew calendar differs somewhat from Kennedy’s. “All nations,” he says in his *Chronology of Ancient Kingdoms Amended*, “before the just length of the solar year was known, reckoned months by the course of the moon, and years by the return of winter and summer, spring and autumn (Gen. 1:14, 8:22; Censorinus, c.19 and 20; Cicero in *Verrem*, Geminus, c.6), and in making calendars for their festivals they reckoned 30 days to a lunar month, taking the nearest round numbers, whence came the division of the ecliptic into 360 degrees. So in the time of Noah’s Flood when the moon could not be seen, Noah reckoned 30 days to a month, but if the moon appeared a day or two before the month, they began the next month with the first day of her appearing. That the Israelites used the luni-solar year is beyond question. Their months began with the new moons. Their first month was called Abib, from the earing of corn in that month. Their Passover was kept from the 14th day of the first month, the moon being then in the full. And if the corn was not then ripe enough for offering the first fruits, the festival was put off by adding an intercalary month to the end of the year, and the harvest was got in before Pentecost, and the other fruits gathered before the feast of the seventh month.”

This intercalation is nowhere provided for in the Mosaic law, nor is it ever mentioned or referred to in the whole of the Old Testament. Nevertheless it undoubtedly follows as a necessary consequence of the system. For the revolution of the sun is completed in 365.242242 days, and that of the moon in 29.530588 days, so that 12 moons fill the space of only 354 or 355 of the 365 days in the year. The added month did not come into the calendar. We ourselves never speak of intercalating a 53rd week in our year.