ALL PAST TIME.

BY FIVE LINES OF ASTRONOMICAL TIME.

Authenticated by the British Chronological and Astronomical Association, and the only Complete Record of Time published. Containing a Classification of

ALL ECLIPSES AND TRANSITS FROM CREATION,

ARRIVING BY

SUCCESSIVE DATES IN LINES AND TEAMS TO THOSE NOW SEEN.

ALSO

THE THREE SOLAR CYCLES OF ALL TIME SINCE THE CREATION OF MAN,

SHOWING

THE TOTAL NUMBER OF THE YEARS OF THE WORLD,

AND

Every Day since Creation in Weeks of Seven Days.

TOGETHER WITH TABLES OF THE

KINGS OF BABYLON, ASSYRIA, EGYPT, JUDAH, ISRAEL, PERSIA, AND ROMAN EMPERORS OF THE FIRST CENTURY.

BY

J. B. DIMBLEBY,

Premier Chronologist to the British Chronological and Astronomical Association, London. First Calculator of all the Eclipses and Transits. Transit Medallist. Editor of "All Past Time," and Prize Essayist (£100) on "Universal Time,"

British Chronological and Astronomical Association,

(ESTABLISHED 1879.)

MEMORIAL HALL, LONDON STREET, E.

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☞ As arrangements are being made for transferring the Offices from the Memorial Hall to more central quarters in the City, it is desirable that all communications for the present should be addressed to the Editor, at Wanstead, E., where the work of the Observatory is carried on.

This Association consists of a large and increasing number of Chronologists, and others, all of whom acknowledge one method in determining past time, viz., by the arbitrary but sure rule of astronomical cycles and measurements ; in other words, by the movements of the orbs of the solar system, which originate and control time. There can be no other method for determining time correctly, hence Chronology, which, like Astronomy, has been imperfect, is now systematised, and is rendered an "exact science." It is Astronomy practically applied and enlarged—applied by making that science subservient to measurements of time instead of confining it to the less certain results of distance, and enlarged by calculating and classifying all past eclipses and transits, the former being associated, as they occur, with many great events of history, which render their periodical recurrence more impressive, interesting, and useful to the intelligent mind.

The objects of the Association are: to authoritatively maintain and make known the concensus of the science of time, thus definitely and correctly obtained; to remove the ignorance which exists amongst mankind through an imperfect knowledge of the elementary character of time; and to systematise and simplify history, which through the absence of scientific data is misunderstood and sometimes doubted instead of being admired.

The work already achieved by scientific Chronology is a complete and absolute control of every day since history began and time was instituted on the earth, viz., from the epoch known as Creation, or the re-fabrication of the globe and the formation of moral man. ❂ The transactions of the Association, which are continually issued, show how conclusively the definite character of that epoch has been obtained, and how perfectly all astronomical phenomena proceed upon five lines of lunar, solar and planetary time, from the first day of that period to the present time. Another great achievement of scientific Chronology is, that by the classification and enumeration of eclipses and transits, they have been reduced to a system of great practical utility as metrical indicators for proving the whole or any fractional part of past time. This had long been wanted in order to settle controversy. There is yet a third achievement, which is deserving of special notice, viz., the discovery of the beautiful and encouraging fact, that all Biblical history is astronomical, being unalterable lunar time, marked off in knots of seven days, and hence all the dates of Scripture fall with precision on the lines of scientific time like the cogs of a wheel. It thus becomes clear that the Book of Genesis, which gives us records of the earliest history of our race, is by its dates a marvellous compendium of the movements of planetary orbs, and supplies that point of time which Chronologists and Astronomers had long been desirous of obtaining, in order to verify all subsequent periods of history and celestial phenomena. Too much cannot be said of this splendid discovery.

The membership of the Association is honorary and subscribing, the latter being an annual subscription of half a guinea. Members receive the Transactions free, and are entitled to forward communications to be read at the ordinary meetings of the Association. Subscriptions and donations are asked for, in order that the publications of the Association may be more extensively circulated, for it is to be regretted that at present the British Chronological Association has no other source of income.

There is no other Institution of Scientific Time in the British Empire, and, in order to provide facilities for inquiries, no fees are charged when a stamped envelope is enclosed.

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CONTENTS.

ERRATA.

Page 7, line 7, for substracting read subtracting.
" 114, " 23, " velosity read velocity.
" 111, " 36, " phenominal read phenomenal.
" 11, " 25, " seige read siege.

When there is a difference of a year between the beginning of the reign of a King, and that given in some other page, it is because the dates at the British Museum are not authenticated, whilst those of the British Chronological and Astronomical Association are obtained by measurements.

The cut representing the configurations of Venus, page 140, has inadvertently got turned round, and whilst at press an accident occurred to another cut, No. 8, on page 135, by which it is almost obliterated.

PREFACE.

TIME is the amount of duration whilst some heavenly body, or the earth, moves from one position to another. There can be no other time than this which alone is natural and scientific; but notwithstanding the professions of intelligence amongst mankind, there are now thirteen different systems of time in use in various parts of the world. Our English time is one of them, but they are all spurious and unfit for practical use, because they are merely legislative enactments. Hence no two men can agree concerning the amount of time from one distant period of history to another, and what is worse, the events of history, which should be known, are hidden from observation or knowledge. It is owing to the use of unscientific methods of computing time that none of the chiefs of astronomical observatories, nor even our own Astronomers Royal, have ever published tables of eclipses of the sun or moon, or transits of the planets Mercury and Venus. They cannot do so, because their systems of time have no accord with planetary motion. For example, the last legislative enactment of the British Parliament made respecting time was so recent as 1752, A.D., when the year was ordered to begin with January, the fourth month of the solar year, instead of the 21st of March, the sixth month, as formerly. If our Astronomer Royal began to construct lines of eclipses he could not go beyond 1752, because that year had only nine months.

The purpose, therefore, of this book—ALL PAST TIME—is to explain what is the Science of Time, and to show by measurements what is the true amount of duration, or natural and scientific time from one period to another. As such, this book is a standard work on Time, and is the only publication which exists on the subject. It shows that history is now a science.

These methods and the astronomical line of time which the motions of the heavenly bodies have produced, have now been published, in one form or another, for fifteen years. During this period they have never been challenged. To do so would be equal to challenging the multiplication tables, or denying our knowledge of all the astronomical phenomena which we see with our eyes. Time, like arithmetic, is a fundamental science We can add nothing to it nor diminish anything belonging to it. It is Chronological Astronomy, and like Nautical Astronomy is capable of great practical use by measurements. The calculations made at our observatories are worthless in respect to history, because English time is not natural or scientific. If astronomy is not dealt with on natural and scientific lines, it is mere star-gazing, and not worthy of the name of science.

The great drawback to the calculations used at the Greenwich Observatory is that the solar year does not begin where the sun begins it, namely, when the sun is on the equinoctial colure, or autumnal equinox, on the 22nd-23rd of September. Hence all the years at the Observatory overlap each other and are worthless for measurement. Another drawback equally unscientific is that the standard of a year has been pulled about and altered by legislative enactments, and, therefore, is inapplicable for measuring scientific time.

For the same reason all other astronomical periods are thrown out of gear and are rendered useless, whether they be solar cycles, the Metonic cycle, eclipses, or transits. But the calculations at the Observatory are well made, and if they were properly based would be of service. As at present constituted, the Observatory is entirely a nautical institution, and has nothing to do with the Science of Time.

It is not urged in this book that we must abandon our English system of time. We could not well do this now, but whether a false and misleading system will long survive in the presence of a correct one, experience must determine. What is insisted on is, that for obtaining correct knowledge of astronomy, geology, and history, we must use natural and scientific methods, otherwise mankind must continue in confusion on these and many other subjects.

Unfortunately, whilst there are professors of all other sciences at our Universities, there are none of the Science of Time. A day of 24 hours is the longest period in use which is natural time and planetary motion in England; all other periods of time are fictitious, and the cause of all the argument and uncertainty amongst mankind. Months and years are not in their proper form and position. Extravagant sums are annually voted from the public purse for making observations and calculations, pertaining to celestial phenomena, which practically—save for sailors—are not worth a straw. Perhaps the only remedy for all this Egyptian darkness is, that either a new department for notifying scientific time must be added to the Greenwich Observatory, or a separate institution—already formed by the British Chronological and Astronomical Association—must be moderately endowed. The public could then have proper information, our scholastic institutions would be elevated, and disagreements about history, science and revelation would be ended.

There is one great feature in this book which must be mentioned. The use of natural and scientific time enables us to deal correctly with history, because no man can put into a given period of time any more years than it contains. Now investigation shows that the line of time in the Scriptures is true planetary motion, therefore every event narrated in the Bible is capable of being proved. Creation, for example, is found to be an astronomical date of the highest character. This fact would have been known before, but astronomy, by basing its calculations on fictitious years, was unable to make the proper investigation. It is now certain that the epoch of creation, year 0 A.M., was a period when all the ten cycles of time started together. They have never got together since then, and cannot do so, owing to their diversified character and length. Nor could they have got all into one line, or starting-post, as at Creation, without special arrangement. Creation was evidently "the beginning" of the motions of the earth and the moon, and investigation shows that from that point all Biblical periods, years, and dates proceed, travelling with undeviating precision side by side with all the astronomical periods, so that every seventh year of Biblical time is the seventh year of all planetary motion.

J. B. DIMBLEBY.

Wanstead, London, E.
Sept. 20th, 1894, A.D., 1st day of 5893, A.M.

FIRST LINE OF TIME.

The date of "the beginning" in Genesis i., and the subsequent dates of the Ante diluvians are scientific time produced by planetary motion and the rotation of the earth. For this reason they are of the highest scientific character as statements of the amount of duration, known as time, which elapses whilst any planetary body proceeds from one place of its orbit to another. As records of motion, such scientific dates, like the statements of latitudes and longitudes, cannot be disturbed, nor can they be made subject to the shifting cavils of unlearned men. Hence investigation shows that as there is not a day, date of the month, year, or period in Scripture, which is not scientific, they have all to be accepted as truth, the rejection of which would necessitate that the heavens should fall and the wreck of worlds become an appalling fact.

There is no other book in the world than the Bible which contains scientific time, for although the calculations of the Greenwich Observatory are correct in relation to the Roman form of the year, yet such a year has no affinity with the true solar year, which can only begin when the sun is on the equinoctial colure in September, producing equal day and night over the world. The pagan Roman year by beginning the solar period with the fourth month, January, is out of gear with eclipses and transits. For this reason no tables of these phenomena can be produced by our English year, nor by the other 12 spurious systems of time observed by various nations of the world. Another great drawback in respect to the use of unnatural years is, calculations of the motions of the heavenly bodies at the Greenwich Observatory are made from the point of the vernal equinox in March, which is the beginning of another form of spurious years. These are things which all true and scientific men have to deplore. Such mischief reduces the science of astronomy to a system of star-gazing instead of making it one of practical use. It also hides history and darkens our knowledge of " the beginning," Like a useless tree, the Roman year is marked to fall—it must be rooted up if knowledge is to be power.

After these statements, which it has been necessary to make, we proceed by remarking that the dates of the Antediluvians work on a Solar Cycle of seven lunar years, each containing 354 days, and divided into 12 months alternately possessing 30 or 29 days. This Cycle is self-constructive and lasts for ever, because it forms itself by the natural use of weeks of 7 days. Hence the week of 7 days mentioned in the first chapter of Genesis must correctly produce all subsequent time for ever. It is the varying positions of the seven days, as dates of the month, which are exhausted in 7 years, so that the following year must begin a new cycle by again beginning with the first day of the week, Sunday. If the week could be broken the Solar Cycle would fall into pieces. There can be no such thing as a Solar Cycle unless weeks be observed, neither can Eclipse or other astronomical Cycles be worked out without it. But it is not only the cycle of all time, it is also the first astronomical table. It supplies us with the dates and days of the week on which eclipses and transits fall. Indeed, if men refused to observe weeks, and the line of time was forgotten, the days of the week could be recovered by observing when transits of the planets, or eclipses of the sun and moon occurred. These great Sentinels of the Skies keep seven days with scientific accuracy, thundering out the seven days inscribed on the inspired page as they proceed through the ages, and writing the date of the beginning on the walls of heaven. The First Line of Time therefore began :—

I. With Sunday as the 1st day of seven days. A Solar Cycle requires seven days, otherwise eclipses could not be kept in their years.

II. When Sunday was the first day of the month. This can only occur in lunar years after periods of 9 and 4 months—which are the periods of the nodes of the moon.

III. When Sunday was the first day of the year. This can only occur once in seven years and must be the 1st of a Solar Cycle.

IV. When the lunar and Solar years begin together on Sunday. This can only occur once in 4543 years—the Great Septennial Astronomical Year, 7 times 649.

V. When the 1st solar eclipse (No. 1, Line I.) begins a team of 70 eclipses. This can only take place once in 18 years, when beginning 649 with the 4th month.

VI. When the same eclipse No. 1. occurs on the 1st day of the 4th month. This must be the beginning of a period of 649 years.

VII. When the Metonic Cycle of 19 solar years began with the Antediluvian Solar Cycle. This is 133 years—7 times 19 are 133 and re-produce Creation year having Sunday for the 1st day. This is a powerful and useful measure and last produced Sunday, Sept. 20th. 1846, (5845, A.M.) as the anniversary of the 1st day of creation.

VIII. When the sun was on the equinoctial colure on the " fourth day." This is every solar year on the 23rd Sept. and is a splendid annual repetition of Gen. i. 19.

IX. When the following year produced the 1st Transit of the planet Mercury, leading down by teams of 15 in 92 years to those we now see.

B

ANTEDILUVIAN PATRIARCHS.—From Father to Son.
Historical Table I.

Genesis i. 27.	Adam formed at Creation	0	... ...	0
Do. v. 3.	Seth was born when his father Adam	was 130	which was year	130
Do. ,, 6.	Enos do. do. Seth	was 105	do.	235
Do. ,, 9.	Cainan do. do. Enos	was 90	do.	325
Do. ,, 12.	Mahalaleel do. do. Cainan	was 70	do.	395
Do. ,, 15.	Jared do. do. Mahalaleel	was 65	do.	460
Do. ,, 18.	Enoch do. do. Jared	was 162	do.	622
Do. ,, 21.	Methuselah do. do. Enoch	was 65	do.	687
Do. ,, 25.	Lamech do. do. Methuselah	was 187	do.	874
Do. ,, 28.	Noah do. do, Lamech	was 182	do.	1056
Do. vii. 11.	Flood came when the patriarch Noah	was 600	do,	1656

Total 1656, the flood year.

Notice—The solar cycle being 7 years, it goes 236 times over to produce 1652, which was a first year of the cycle because Creation year is 0. Hence the 5th year was 1656, and contains the dates of the Flood produced by the motions of the earth and the moon.

POST-DILUVIAN PATRIARCHS.—From Father to Son.
Historical Table II.

Gen. vii. 11.	Noah was 600 years old at Flood in 1656		1656
Do. xi. 10.	Arphaxad was born 2 years after the Flood ...	2 which was year	1658
Do. ,, 12.	Salah was born when Arphaxed ... was 35	do.	1693
Do. ,, 14.	Eber do. Salah, his father, was 30	do.	1723
Do. ,, 16.	Peleg do. Eber do. was 34	do.	1757
Do. ,, 18.	Reu do. Peleg do. was 30	do.	1787
Do. ,, 20.	Serug do. Reu do. was 32	do.	1819
Do. ,, 22	Nahor do. Serug do. was 30	do.	1849
Do. ,, 24	Terah do. Nahor do. was 29	do.	1878
xi. 32 xii. 4.	Abraham do. Terah do. was 130	do.	2008
Do. xxi 5.	Isaac do. Abraham do. was 100	do.	2108
Do. xxv. 26.	Jacob do. Isaac do. was 60	do.	2168

Total 2168

Note—Although Abraham was 75 in 2083, yet he began his 75th in 2082, and we have to reckon from that year.

PATRIARCHS IN EGYPT.—From Father to Son.
Historical Table III.

The years when the Patriarchs were born who succeeded Jacob are not definitely given in Scripture, but they are correctly ascertained by working from the bottom with Moses and the date of the Exodus, and by using the number of years they lived, &c.

Born.	Lived after.	Age.	Remarks.	Lived after.	Died.	References.
Jacob 2168 / 80	67	147	Entered Egypt in 2298 when 130	17	2315	Genesis xlvii. 9.
Levi ...2248 / 44	93	137	Entered Egypt in 2298 when 50	87	2385	Exodus vi. 16.
Kohath 2292 / 65	68	133	Entered Egypt in 2298 when 6	127	2425	Do. 18.
Amram 2357 / 76	61	137	Died 19 years before Exodus	—	2494	Do. 20.
Moses ...2433 / At Exodus 80	40	120	When Amram died Moses was 61 / Moses lived before Exodus 80	59 / 40	2553	Do. vii. 7.
Exodus 2513			Moses was the 25th from Adam.			Deut. xxxiv. 7.

The above three simple tables were better known to Solomon than to us. We read (1 Kings vi. 1) that he laid the foundation of the temple in the 480th year after exodus, viz. 2993. It was 7 years in building and the dedication dates on the solar cycle are 3000.

The three tables succeed each other in years and give a line of time from father to son for 2553 years. Table iii. means when Jacob was 80, Levi was born; when Levi was 44 Kohath was born, &c., up to the birth of Moses.

THE FIRST LINE OF TIME—BY HISTORY.

By the foregoing direct line from FATHER TO SON DURING 2553 YEARS, Moses dying that year, and by the "480" years, with 7 for building, we reach the dedication of the temple in 3000, but I shall subsequently show, all the years and dates on the solar cycle and by astronomical measurements, which are conclusive. Now Solomon, we are told, reigned 40 years. As 2993 was his "4th," he died at the end of 3029 which was table c of the Ancient Hebrew Solar Cycle, and was succeeded by his son Rehoboham.

Rehoboham to the great Captivity in 3406½ was 377 years—important point.

Rehoboham 17	Jehosaphat 25	Athaliah 6	Uzziah 52	Hezekiah 29	Josiah ... 31
Abijah 3	Jehoram... 8	Joash ...40	Jotham 16	Manasseh 55	Jehoahaz ¼
Asa ... 41	Ahaziah... 1	Amaziah 29	Ahaz ...16	Amon ... 2	Jehoiachim 11

Jehoiachim was succeeded by his son Jehoiachin, who reigned 3 months, and investigation shows that some of the kings reigned a few months short of the years assigned to them. This will be subsequently dealt with. Zedekiah was raised to the throne by Nebuchadnezzar when the Captivity began in 3406½ e, and reigned nearly 11 years. o 3416

When we proceed, in the first instance, by reigns of kings whose exact periods are not given in months short or over the years, it is necessary to keep correct by using some near well-known definite point of time. Hence we take the great Captivity, which is conclusively proved, chiefly by Ezekiel always dating from it. As his dates are always found on the solar cycle, it is impossible to err in noticing e 3406½ where they begin.

INTERESTING EVENTS.

3416 o Jewish monarchy ended and temple burnt. The events were as follows: In the 9th year of Zedekiah, which ended on the middle of 3415, table n, on Sunday the 10th day of the 4th civil month, which was the 10th sacred, Nebuchadnezzar pitched against Jerusalem. See 2 Kings xxv. 1, Jer. xxxix. 1, and Ezekiel xxiv. 1. The seige lasted till nearly the end of the next year 3416, table o, for on Friday, the 9th day of the 4th (10th civil) month, there was no bread left, and all the Hebrew men of war fled in the night between the two walls via the king's garden. They ran across the plains towards Jericho, but were overtaken by the Chaldæans and the King and his sons made prisoners. The city was thus broken up and Zedekiah being taken before Nebuchadnezzar, his sons were slain in his presence, after which his eyes were put out. In the next month, which was 5th sacred, namely on Thursday, the 7th, the Babylonian army began to burn the city. On Sunday, the 10th, the temple built by Solomon, was in flames. The king's house and all the great buildings were consumed by fire, and the walls of the city were levelled to the ground.

These events should be followed on the solar cycle. They are all astronomical time, but if the foregoing years of the patriarchs had been recorded as one less or more, these dates could not be proved by the solar cycle, nor by the eclipses and transits.

For the sake of extreme accuracy of detail, I must state that the history viewed upon the solar cycle—which is the proper course—shows that the year 3415 was the latter half of Zedekiah's 9th and the first six months of his 10th. In like manner, 3416 was last half of his 10th and first six months of his 11th.

In the next year, 3417, the eclipses were ☉ No. 1 and ☉ No. 2, in the beginning of the 3rd and 10th lunar months, producing the dates of the week as shown by the solar cycle and mentioned in recording the historical events. There would also be a transit of Mercury in 3406 when Zedekiah ascended.

For the continuation of the First Line of Time the reader must turn to the several books or scripture history in the parts of this work, such as Ezekiel, Ezra, Zechariah, Haggai, Esther, and Nehemiah. In these books we have a continuation of accurate history, as will be seen by the use of the letters indicating the table or year of the Solar Cycle. By noticing that the solar cycle consits of 15 years it must begin when the years alternately end with 2 and 7, and also by affixing a letter to each year of the cycle, it is impossible to miss any day of time.

The other books of scripture, as given in this work, also corroborate this First Line of Time in the same way, so that we have proof after proof of the accuracy of "All Past Time."

3569 c The last Biblical date, and the Solar Cycle, brings the First Line of Time down to a reference to the Intercalary Days of 3569, A.M., which was 427, B.C. and the

32nd year of Artaxerxes (see also "Persian Kings.") Therefore from this point of time we deal with uninspired testimony, but it is voluminous, as it is supported by secular and monumental history; nevertheless the letter or table of the Solar Cycle will always supply the correct year.

We have also the eclipses, records of which start from 3101 A.M., or 903 B.C. (old calculation) which was 101 years after Solomon dedicated the Temple, and this eclipse line is again corroborated by the transits of Venus and Mercury.

Of all secular history we will take that of Rome as being most straight forward and well adapted for the continuation of this First Line of Time. The first year of Rome was 3246 A.M., table *j*, and Jesus Christ was born in the 750th year of Rome, 3996 A.M. and also table *j*. We therefore for the sake of brevity proceed as follows :—

A.M.		B.C.
3246 *j*	First year of Rome completed (the foundation being in 749 B.C.	750
3441 *j*	One Hundred and ninety-fifth of Rome.	555
3636 *j*	Three Hundred and nintieth of Rome.	360
3831 *j*	Five Hundred and eighty-fifth of Rome.	165
3996 *j*	Seven Hundred and fiftieth of Rome.	
3996 *j*	Jesus Christ born, at the end of the 3rd civil month, our Dec.	
3997 *k*		
3998 *l*		
3999 *m*		
4000 *n*	First Year of Christian Era completed commencing with the 4th month.	
4001 *o*	Second	
4002 *a*	Third	

CHRISTIAN ERA.

Now that we arrive at our own years all our difficulties commence, because our years are unscientific and do not begin with the proper month. which according to ancient history and astronomical science, should be at the end of September, a proper period for the introduction of man when the fruits of the earth were ripe. The reader must give his careful attention in order that we may land correct time upon our solar cycle. It will already be seen that we are wrong in computation, thus 4002 is not our year 2, because we foolishly began with 4000 instead of 4001, that is to say we commenced the Christian Era in the last year or the third millennium, instead of the first of the fourth. This blunder follows us through every year, so that 1878 A.D. is not 5878 A.M. but 5877 was the first three months of our 1878 and 9 months of our 1879.

To land the Ancient Hebrew Solar Cycle on our Solar Cycle of 28 years, the following table is constructed :—

A.M.	A.D.	A.M.	A.D	A.M.	A.D.	A.M.	A.D.	A.M.	A.M.	A.M.	A.D.
4002	3	4317	318	4632	633	4947	948	5262	1263	5577	1578
4017	18	4332	333	4647	648	4962	963	5277	1278	5592	1593
4032	33	4347	348	4662	663	4977	978	5292	1293	5607	1608
4047	48	4362	363	4677	678	4992	993	5307	1308	5622	1623
4062	63	4377	378	4692	693	5007	1008	5322	1323	5637	1638
4077	78	4392	393	4707	708	5022	1023	5337	1338	5652	1653
4092	93	4407	408	4723	723	5037	1038	5352	1353	5667	1668
4107	108	4422	423	4737	738	5052	1053	5367	1368	5682	1683
4122	123	4437	438	4752	753	5067	1068	5382	1383	5697	1698
4137	138	4452	453	4767	768	5082	1083	5397	1398	5712	1713
4152	153	4467	468	4782	783	5097	1098	5412	1413	5727	1728
4167	168	4482	483	4797	798	5112	1113	5427	1428	5742	1743
4182	183	4497	498	4812	813	5127	1128	5442	1443	5757	1758
4197	198	4512	513	4827	2-8	5142	1143	5457	1458	2772	1773
4212	213	4527	528	4842	843	5157	1158	5472	1473	5787	1788
4227	228	4542	543	4857	858	5172	1173	5487	1488	5802	1803
4242	243	4557	558	4872	873	5187	1188	5502	1503	5817	1818
4257	258	4572	573	4887	888	5202	1203	5517	1518	5832	1833
4272	273	4587	588	4902	903	5217	1218	5532	1533	5847	1848
4287	288	4602	603	4917	918	5232	1233	5547	1648	5862	1863
4302	303	4617	618	4932	933	5247	1248	5562	1563	5877	1878

The above A.M. years are a continuation of those annexed to the Hebrew Solar Cycle of 15 years, and began each cycle, being table *a*.

CONTEMPORARY ANTEDILUVIAN PATRIARCHS.

The years are solar, 365¼ days, and as they severally and unitedly agree astronomically with Eclipse and Transit Measurements, as well as with the Solar Cycle, tested by the Metonic Cycle, there is no possibility of doubting their accuracy.

	Born A.M.	Age.	Died A.M.	And Lived with	Adam.	Seth.	Enos.	Cainan	Mahalaleel	Jared.	Enoch.	Methuselah	Lamech	Noah.
Adam	⊙ 0	930	930	...	...	800	695	605	535	470	308	243	56	...
Seth.........	130	912	1042	Seth...	800		677	587	647	582	365	225	168	...
Enos	235	905	1140	Enos	695	677		815	745	680	365	453	266	84
Cainan ...	325	910	1235	Cainn.	605	587	815		840	775	365	548	361	179
Mahalaleel	395	895	1290	Mahll.	535	647	745	840		830	365	603	416	234
Jared	460	962	1422	Jared	470	582	680	775	830	..	365	735	548	366
Enoch	622	365	987	Enoch	303	365	365	365	365	365		800	113	...
Methuselah	687	969	1656	Meth.	243	225	453	518	603	735	300	...	782	600
Lamech ...	874	777	1651	Lamh.	56	168	266	361	416	548	113	782		595
Noah	1056	950	2006	...	...	...	84	179	234	366	...	600	595	...

Methuselah died within two months of the Flood. Enoch was translated 57 years after Adam died. Noah was in the ark 365 days, which form a solar year. The Solar Cycle proves that nine of the dates of the Flood period were seventh days, Saturdays, thus verefying the three seventh days specially mentioned in Gen. viii. We have no reason to suppose that all the antediluvians lived cathedral-like years. The long lives of the patriarchs, in a direct line from Adam, were probably continued to show that man was not created to die.

CONTEMPORARY POST-DILUVIAN PATRIARCHS.

AND LIVED WITH

Born A.M.	Age	Died A.M.	Noah	Shem	+⊙ Arphxed	Salah	Eber	Peleg	Reu	Serug	Nahor	Terah	Abraham.	Isaac	Jacob	Levi	Kohath	Amram	Moses
1056 Noah	950	2006		448	348	309	283	249	219	187	157	128	...	...	...	...	...	...	...
1558 Shem	600	2158	448		438	465	435	401	371	339	309	280	150	50	...	...	...	...	...
1658 Arphxd.	438	2096	348	438		403	373	339	309	277	247	218	88	...	...	...	...	...	...
1693 Salah	433	2126	309	465	403		403	369	339	307	277	248	118	18	...	...	...	...	...
1723 Eber	464	2187	283	435	373	403		430	400	368	338	309	179	79	19	...	...	...	...
1757 Peleg	239	1996	249	401	339	369	430		209	177	147	118	...	...	...	...	...	...	...
1787 Reu	239	2026	219	371	309	339	400	209		207	177	148	18	...	...	...	...	...	...
1819 Serug	230	2049	187	339	277	307	368	177	207		200	171	41	...	...	...	...	...	...
1849 Nahor	148	1997	157	309	247	277	338	147	177	200		119	...	...	...	...	...	...	...
1878 Terah	205	2083	128	280	218	248	309	118	148	171	119		75	...	...	...	...	...	...
2008 Abrahm	175	2183	...	150	88	118	179	...	18	41	...	75		75	15	...	...	...	...
2108 Isaac	180	2288	...	50	...	18	79	...	...	...	...	...	75		120	40	...	...	...
2168 Jacob	147	2315	...	...	...	...	19	...	...	..	...	...	15	120		67	23	...	...
2248 Levi	137	2385	...	...	...	...	...	...	...	...	...	...	...	40	67		93	28	...
2292 Kohath	133	2425	...	...	...	...	...	...	...	...	...	...	...	...	23	93		68	...
2357 Amram	137	2494	...	...	...	...	...	...	...	...	...	...	...	...	...	28	68		61
2433 Moses	120	2553	...	...	...	...	...	...	...	...	...	...	...	...	...	...	61		

Much discussion has been raised by some writers about the date when the Israelites left Egypt, but the above table supplies it, and also the end of the 40 years in the wilderness. We cannot have a more simple and correct method than a line of time from father to son. The reader will see from this table and Historical Table III., (" Patriarchs in Egypt.") that Moses died in the middle of 2553, viz., after the 40 years in the wilderness. We are told in Scripture that he was 80 at the exodus and 120 when he died. We also read that Jacob lived 147 years, and entered Egypt when he was 130.

ANOTHER IMPORTANT DATE CLEARLY FIXED.

If we know the end of a period, we also know its beginning. Hence as we find that the line of time from father to son continues from Creation to 2553, by the death of Moses, we see that Creation was its beginning. Then in accordance with this, a glance at the Solar Cycle shows us that the year began the Cycle, starting with Sunday, and that Tuesday was the 15th of the 7th sacred month in the exodus month, 2513. ¼

SAMARITAN AND SEPTUAGINT ERRORS.

In addition to the Hebrew text of the births and lives of the Antediluvian Patriarchs which is found in Genesis v. in our English Bibles, there are two others, viz., the Samaritan and Septuagint. All three are given below, but investigation shows that the Septuagint and Samaritan are not worth a straw, as they are not astronomical and will not work with eclipses or transits. Neither are their years subject to Solar Cycles, and as to the Metonic Cycle, they have no possible agreement. But the Hebrew version agrees with marvellous precision with all these scientific tests, so that men who have a wholesale way of dealing with years without investigation should give some proof of the possibility of their existence before expecting us to believe in their phantoms. The years claimed for Egyptian and Chinese history before the Flood have had no existence. If there had been one year less or more in any of the records of the births of the ten patriarchs they could not be acceptable. The whole would have fallen.

	HEBREW.			SAMARITAN.			SEPTUAGINT.		
	Son born.	Lived after.	Age.						
Adam	130	800	930	130	800	930	230	700	930
Seth...	105	807	912	105	807	912	205	707	912
Enos	90	815	905	90	815	905	190	715	905
Cainan	70	840	910	70	840	910	170	740	910
Mahalaleel...	65	830	895	65	830	895	165	730	895
Jared	162	800	962	62	785	847	162	800	962
Enoch...	65	300	365	65	300	365	165	200	365
Methuseleh	187	782	969	67	653	720	187	782	969
Lamech	182	595	777	53	600	653	183	565	753
Noah	500	—	—	500	—	—	500	—	—
Do. to the Flood ...	100	350	950	100	—	—	100	—	—
Creation to Flood ...1656				1307			2262		

The year 1307 which is the total of the Samaritan version falls on the 6th of the Solar Cycle formed by the motions of the moon and the earth, so that it has not the dates of Noah's diary of the Flood on the seventh days. The Jews had always occasion to complain of the perversion of the Scriptures by the Samaritans. Respecting the year 2262, the total of the Septuagint list, it was never on the Antediluvian Solar Cycle. The Cycle ceased at the end of 1721. But I marvel that Blair should have been carried away by the Septuagint and without any investigation. Yet so long as universities teach history without measurements, and have no Professors of the Science of Time, all such folly will continue, and the knowledge taught there will not be power.

It is remarkable that the Ancient Hebrews in the time of Abraham, and the Antediluvians, understood the true length of the Solar year, as rather less than 365¼ days, when modern nations down to the 17th century of the Christian era, were ignorant of it. The evection, which is the greatest irregularity of the motion of the moon, was understood by men in patriaachal times, but was unknown amongst the Egyptians and Romans until the time of Ptolemy in the year 133 of our era.

————o————o————

ADJUSTING THE ANTEDILUVIAN LUNI-SOLAR CYCLE WITH THE SOLAR PERIOD.

TRUE REVELATION AND GOOD SCIENCE.

Several letters have reached me asking how the Antediluvians adjusted their Solar Cycle to the solar period? I do not know. They could do in three ways, but we have no means of knowing what plan they adopted. They seem however to have done the work with great accuracy. They divided the lunar year into weeks and dates, and not the solar period as we do. It is evident by their dates that they did not insert the extra or intercalary days till the seven lunar years were ended. We see this by the Flood beginning on the "17th day of the 2nd month." As the lunar year is 11 days shorter than the solar, the latter would begin with the date just mentioned and end with the "27th of the 2nd month" in the following lunar year, the 6th of the cycle. Noah was evidently a solar year in the ark, and both the dates just mentioned were Saturdays, or seventh days, as were also seven other dates of the Flood. But they could not have been seventh days if one of the lives of the patriarchs had been one year shorter or longer. Here then we have a most marvellous record, but one forsooth which some "high critics" have questioned! I do not find, in the whole range of history anything so marvellously beautiful, so impressively accurate, or so majestically scientific.

HISTORICAL AND SCIENTIFIC SUMMARY OF ALL PAST YEARS FROM CREATION.

The following is a clear summary of all years since time was instituted at Creation period, down to end of 5876, A.M., which was Sept. 1878, A.D. :—

Past Years.

246 Antediluvian Solar Cycles of 7 years each, from year 0 to 1721, inclusive. (See Antediluvian Solar Cycle and following page of first years of each cycle). 1721

152 Ancient Hebrew Solar Cycles, of 15 years each, from 1722 to 4001 inclusive. (See Ancient Hebrew Solar Cycle and following page of First Years of each cycle). 2280

125 Ancient Hebrew Solar Cycles of 15 years each, brought forward from 4002 to 5876 inclusive. See First Line of Time showing Ancient Hebrew Solar Cycle Sychronized. 1875

Total, end of... 5876

The foregoing summary is the production of historical records and dates. A solar cycle cannot be broken by jumping off one to another before one is complete, nor can a year be broken. It must, both for the sake of seasons and dates, be completed before another is begun.

The following are the chief reasons why we cannot use the solar cycle of 28 years belonging to the Christian Era:—In the first place, there is no succession, as our year begins with January, the 4th month of the true year. To illustrate this great disadvantage, let it be supposed that a man is measuring a piece of timber, and after marking off several feet he stops and begins somewhere farther on. This breach would preclude him from giving the true length of the timber. In the second place we jumped eleven days in the year of 1752, which was making another hole in our cycles of time. And in the third place, we thrice omit a day in every 400 years. With chasms like these, increasing as time goes on our solar cycle is a worthless thing for measurement.

Respecting the astronomical or scientific character of these 5876 years, the reader must refer to eclipses, the lunar cycle, the transits of Mercury and the transits of Venus, which poduce precisely the same number of years either taken in parts, that is from period to period, or as a whole.

It is this extreme accuracy and minuteness of detail, obtained by solar cycles, that excludes the requirement of such a crutch as the Julian Period. A good chronologist never requires such support.

It is a great fact, and ought therefore to be stated, that no dates are scientific but those found in the scriptures. They are all a simple succession in the chain of time from "the first day," and no man can alter that succession. Every date in the Bible falls upon the proper year of the solar cycle, and the correctness of the year is shown by the fact that every Antediluvian solar cycle must have for its last figures 0, 7, 4, 1, 8, 5, 2, 9, 6, or 3, and every Ancient Hebrew Cycle 2 or 7. By observing this we could see in a moment if any year was erroneously on the cycle or wrongly dated.

IMPORTANT SUGGESTION TO ALL NATIONS.

The perfect succession of years from the point of time when history began shows the preference which must be given to the use of the A.M. years as a true succession of time. For this reason I hope that if the world reaches the conclusion of the present century, men will consider themselves sufficiently advanced in intelligence as to abolish the A.D. year, which is irregular, owing to proceeding from 3996, 4004 and 4000, and that for the purposes of systematising both history and astronomical science, we shall amend our present humiliating errors.

The subject commends itself to all nations. The present unscientific system is increasing our difficulties as time rolls on, and therefore it is easy to see that there is a time coming when the present mode of observing the years will be altered. I would suggest that when the nineteenth century is completed mankind should take up the correct system and true succession of years by starting what would be Wednesday, Jan. 1st, 1901, A.D., as still 1900, until we reach October, which historically and scientifically is the first month of the true year. Then, on Wednesday, October 1st, start with the year as 5900, A.M., and ever afterwards begin the year with that month. If this be done, all eclipses and transits will "strike" the years for us like the bell of a parish church clock and we shall be restored to harmony with the movements of the orbs around us, for which purpose we are told that their motions are designed.

DATES OF THE SABBATH DAYS DURING THE DELUGE;
1656 A.M., or 2340 B.C.

By J. B. DIMBLEBY, Lecturer on Biblical Chronology, and the Discoverer of the form and length of the Ancient Year. Also Discoverer of the Antediluvian and Ancient Hebrew Solar Cycles, and first enumerator of all the Eclipses before Christ.

The lunar year 1656, (the flood year) began with the 3rd day of the week, (Tuesday) hence the 5th of the month would be the first Sabbath Day, (Saturday) of that year. To prove this, see 1st month of "Antediluvian Almanack for 1656," and compare it with the 5th year of the "Solar Cycle of the Antediluvians," which was the flood year. The dates of this 5th year are the natural succession of 7th days from the 1st year of the Cycle, in writing out which we unconsciously enumerate nine dates of the flood derived from the 7th day in the 1st year, by regularly assigning 30 and 29 days alternately to the months. As the dates all come round again on the same day of the week after seven years, 1656 must be the 5th year of the Cycle, and the 5th day of the month the Sabbath Day in a direct line from the first Sabbath in Eden shown in Creation year.

1st month	...	...	5	12	19	26	
2nd „	...	...	3	10a	17b	24	
3rd „	...	...	2	9	16	23	30
4th „	...	...	7	14	21	28	
5th „	...	...	6	13	20	27	
6th „	...	...	4	11	18	25	
7th „	...	...	3	10	17c	24	
8th „	...	...	1	8	15	22	29d
9th „	...	...	7	14	21	28	
10th „	...	...	5	12	19	26	
11th „	...	...	4	11e	18f	25g	
12th „	...	...	2	9	16	23	

The Solar Period of 365 days, from b to i, see Gen. vii. 11, and viii. 14, the time Noah was in the ark.

The LUNAR YEAR of 354 days, and distinguished from the Solar Period by divisions of months, weeks, and days.

The year ended on the 6th day of the week.

Part of Year 1657, Noah's 601st.

1st month	...	...	1h	8	15	22	29
2nd „	...	...	6	13	20	27i	

REFERENCES —a Genesis vii. 1 with 4; b vii. 11; c viii. 4; d viii. 3 (the 150 days after 40 of rain ending on the 190th day, of the flood, must fall on Sabbath Day, the 29th of the 8th month); e viii. 6 (the second 40 days began viii. 6, viz:—221st to 260th day of the flood, immediately on their expiration the dove was sent out the first day, which unquestionably rose from the ark on the Sabbath Day); f viii. 10, the dove sent out the second time; g viii. 12, dove sent out the third time; h viii. 13, New Year's Day (lunar) and Sabbath Day; i viii. 14, earth all dried, end of solar period of 365 days, and Noah leaves the ark.

The above nine Sabbath Days come down in unbroken weeks from the creation of man and the first Sabbath in Eden, the 1st day of that week being a triple alliance—the lunar year of 354, the solar period of 365 days, and astronomical lunar cycle all starting together 1656 solar years before the flood—a splendid and marvellous event and a great scientific fact, verified by all the eclipses.

All the years of the Bible were of the above form, that is, lunar, and divided into months and dates of the month in the same way as we divide our solar year of 365¼ days. This will be seen by the following pages which are the twelve months of the year 1656 and the two months of 1657—the flood period. When weeks of seven days are observed, but not without, years form themselves into solar cycles. The Antediluvian cycle comprised seven years, as seen on page 21, where the reader will find the flood year, 1656, as the fifth year of the cycle. This shows that the Antediluvians notified the seventh, or Sabbath day, from Creation, because it is this continuance of dating the seventh days that brings the dates of the month round again in seven years. Our solar cycle is 28 years, because we adopt one day every fourth year—leap year—and thus 4 times 7 are 28. Example: If a man was born on Sunday, the 5th of May, 1850, he would be 28 years old on the same date of the month and same day of the week in 1878. On the 21st page it will be seen that we get the year 1656, as the flood year, from Genesis v.

Beautiful, however, as the proof is of the truthfulness of the flood year and dates in the following pages, and splendid also as showing that Creation year was 1,656 years previously, yet this is only one of five methods of proving the scientific and unalterable character of Bible history. They are all magnificently proved by the succession of the lines of eclipses and transits in their cycles.

THE FLOOD PERIOD—One Year and Two Months, 1656-7, A.M.

Day.	Date.	MONTH I.	Flood Day
3	1	New (lunar) Year's Day. The	
4	2	solar year was a period not	
5	3	divided into days, and would	
6	4	begin this year [a 5th one	
7 Sat	5	on the solar cycle, as is evi-	
1	6	dent by its dates] on the 17th	
2	7	of 2nd month.	
3	8		
4	9		
5	10		
6	11		
7 Sat	12		
1	13		
2	14		
3	15		
4	16		
5	17		
6	18		
7 Sat	19		
1	20		
2	21		
3	22		
4	23		
5	24		
6	25		
7 Sat	26		
1	27		
2	28		
3	29		
4	30		

Day.	Date.	MONTH II.	Flood Day
5	1		
6	2		
7 Sat	3		
1	4		
2	5		
3	6		
4	7		
5	8		
6	9		
7 Sat	10	Prepare to enter Ark (Gen. vii.	
1	11	1) and end of 40 days' grace	
2	12	from 1st day of the lunar	
3	13	year—a sign to Nineveh.	
4	14		
5	15		
6	16		
7 Sat	17	Storm and rain begin (Gen vii.	1
1	18	10, 11) Noah "shut in." It	2
2	19	was the beginning of the	3
3	20	new solar year, and in the	4
4	21	midst of all its festivities.	5
5	22	They were all "eating and	6
6	23	drinking." Mat. xxiv. 38.	7
7 Sat	24		8
1	25		9
2	26		10
3	27		11
4	28		12
5	29		13

Day.	Date.	MONTH III.	Flood Day
6	1		14
7 Sat	2		15
1	3		16
2	4		17
3	5		18
4	6		19
5	7		20
6	8		21
7 Sat	9		22
1	10		23
2	11		24
3	12		25
4	13		26
5	14		27
6	15		28
7 Sat	16		29
1	17		30
2	18		31
3	19		32
4	20		33
5	21		34
6	22		35
7 Sat	23		36
1	24		37
2	25		38
3	26		39
4	27	End of Forty Days rain	40
5	28		41
6	29		42
7 Sat	30		43

Day.	Date.	MONTH IV.	Flood Day
1	1	·	44
2	2		45
3	3		46
4	4		47
5	5		48
6	6		49
7 Sat	7	This was the eighth sabbath	50
1	8	day in the ark. Although	51
2	9	the rain had ceased the	52
3	10	waters still continued to	53
4	11	prevail as we are told for	54
5	12	a period of one hundred	55
6	13	and fifty days. The flood	56
7 Sat	14	was a stupendous and an	57
1	15	unparalleled demonstra-	58
2	16	tion of unlimited power,	59
3	17	whilst all its dates form	60
4	18	a marvellous record of	61
5	19	historical accuracy. The	62
6	20	prevalence of the waters	63
7 Sat	21	for 150 days, and their	64
1	22	great height, is an impres-	65
2	23	sive indication of their	66
3	24	very voluminous charac-	67
4	25	ter. Gen vii. 19, 24.	68
5	26		69
6	27		70
7 Sat	28		71
1	29		72

THE FLOOD PERIOD—Continued.

Day.	Date.	MONTH V.	Flood Day
2	1		73
3	2		74
4	3		75
5	4		76
6	5		77
7 Sat	6		78
1	7		79
2	8		80
3	9		81
4	10		82
5	11		83
6	12		84
7 Sat	13		85
1	14		86
2	15		87
3	16		88
4	17		89
5	18		90
6	19		91
7 Sat	20		92
1	21		93
2	22		94
3	23		95
4	24		96
5	25		97
6	26		98
7 Sat	27		99
1	28		100
2	29		101
3	30		102

Day.	Date.	MONTH VII.	Flood Day
5	1		132
6	2		133
7 Sat	3		134
1	4		135
2	5		136
3	6		137
4	7		138
5	8		139
6	9		140
7 Sat	10		141
1	11		142
2	12		143
3	13		144
4	14		145
5	15		146
6	16		147
7 Sat	17	Ark rested this sabbath day (Gen. viii. 4.)	148
1	18		149
2	19		150
3	20		151
4	21		152
5	22		153
6	23		154
7 Sat	24		155
1	25		156
2	26		157
3	27		158
4	28		159
5	29		160
6	30		161

Day.	Date.	MONTH VI.	Flood Day
4	1		103
5	2		104
6	3		105
7 Sat	4		106
1	5		107
2	6		108
3	7		109
4	8		110
5	9		111
6	10		112
7 Sat	11		113
1	12		114
2	13		115
3	14		116
4	15		117
5	16		118
6	17		119
7 Sat	18		120
1	19		121
2	20		122
3	21		123
4	22		124
5	23		125
6	24		126
7 Sat	25		127
1	26		128
2	27		129
3	28		130
4	29		131

Day.	Date.	MONTH VIII.	Flood Day
7 Sat	1		162
1	2		163
2	3		164
3	4		165
4	5		166
5	6		167
6	7		168
7 Sat	8		169
1	9		170
2	10		171
3	11		172
4	12		173
5	13		174
6	14		175
7 Sat	15		176
1	16		177
2	17		178
3	18		179
4	19		180
5	20		181
6	21		182
7 Sat	22		183
1	23		184
2	24		185
3	25		186
4	26		187
5	27		188
6	28		189
7 Sat	29	End of 150 days of prevalence of waters, Gen. vii. 24.	190

THE FLOOD PERIOD—Continued.

Day.	Date.	MONTH IX.	Flood Day
1	1		191
2	2		192
3	3		193
4	4		194
5	5		195
6	6		196
7 Sat	7		197
1	8		198
2	9		199
3	10		200
4	11		201
5	12		202
6	13		203
7 Sat	14		204
1	15		205
2	16		206
3	17		207
4	18		208
5	19		209
6	20		210
7 Sat	21		211
1	22		212
2	23		213
3	24		214
4	25		215
5	26		216
6	27		217
7 Sat	28		218
1	29		219
2	30		220

Day.	Date.	MONTH XI.	Flood Day
4	1		250
5	2		251
6	3		252
7 Sat	4		253
1	5		254
2	6		255
3	7		256
4	8		257
5	9		258
6	10		259
7 Sat	11	Dove sent out first time,	260
1	12	Gen. viii. 8 & 6 compared.	261
2	13		262
3	14		263
4	15		264
5	16		265
6	17		266
7 Sat	18	Dove sent out second time,	267
1	19	Gen. viii. 10.	268
2	20		269
3	21		270
4	22		271
5	23		272
6	24		273
7 Sat	25	Dove sent out third time,	274
1	26	Gen. viii. 12.	275
2	27		276
3	28		277
4	29		278
5	30		279

Day.	Date.	MONTH X.	Flood Day
3	1	"Tops of mountains seen,"	221
4	2	Gen. viii. 5. The third	222
5	3	forty days now began.	223
6	4	This is the only date	224
7 Sat	5	which is not a sabbath	225
1	6	day, but had it not been	226
2	7	given we should have	227
3	8	had no real certainty	228
4	9	that the dove was sent	229
5	10	out on three consecutive	230
6	11	sabbath days. Verse 6th	231
7 Sat	12	shows that Noah waited	232
1	13	40 days before opening	233
2	14	the window to send out	234
3	15	the dove.	235
4	16		236
5	17		237
6	18		238
7 Sat	19		239
1	20		240
2	21		241
3	22		242
4	23		243
5	24		244
6	25		245
7 Sat	26		246
1	27		247
2	28		248
3	29		249

Day.	Date.	MONTH XII.	Flood Day
6	1		280
7 Sat	2		281
1	3		282
2	4		283
3	5		284
4	6		285
5	7		286
6	8		287
7 Sat	9		288
1	10		289
2	11		290
3	12		291
4	13		292
5	14		293
6	15		294
7 Sat	16		295
1	17		296
2	18		297
3	19		298
4	20		299
5	21		300
6	22		301
7 Sat	23		302
1	24		303
2	25		304
3	26		305
4	27		306
5	28		307
6	29		308

END OF THE LUNAR YEAR 1656. A.M.

THE FLOOD PERIOD—Concluded.

FIRST TWO MONTHS OF THE LUNAR YEAR 1657, A.M.

Day.	Date.	MONTH I.	Flood Day		Day.	Date.	MONTH II.	Flood Day
7 Sat	1	Covering of the ark removed.	309		2	1		339
1	2	New Year's Day, and the	310		3	2		340
2	3	601st of Noah. (Gen. viii.	311		4	3		341
3	4	13). Face of the ground	312		5	4		342
4	5	was dry.	313		6	5		343
5	6		314		7 Sat	6		344
6	7		315		1	7		345
7 Sat	8		316		2	8		346
1	9		317		3	9		347
2	10		318		4	10		348
3	11		319		5	11		349
4	12		320		6	12		350
5	13		321		7 Sat	13		351
6	14		322		1	14		352
7 Sat	15		323		2	15		353
1	16		324		3	16		354
2	17		325		4	17		355
3	18		326		5	18		356
4	19		327		6	19		357
5	20		328		7 Sat	20		358
6	21		329		1	21		359
7 Sat	22		330		2	22		360
1	23		331		3	23		361
2	24		332		4	24		362
3	25		333		5	25		363
4	26		334		6	26		364
5	27		335		7 Sat	27	Noah came out of the ark.	365
6	28		336		1	28	All earth dried. (Gen. viii	
7 Sat	29		337		2	29	14). End of solar year on	
1	30		338				the same day.	

Period of the Flood concluded.

It will be seen by the figures on the right that Noah was in the ark the full solar period of 365 days, and that the incidents of the flood occurred on nine sabbath days, the lunar month having, as now, alternately 30 and 29 days.

It is interesting also to observe that as the dates of the flood are true solar time, proved by the lunar cycle, as those of 1656, the years given us in Gen. v. as the births of the patriarchs, coupled with the 600 years of Noah, amounting also to 1656 years, are a marvellous record of historical accuracy, and not the "poetry" or the "legendary tales" which some rash and unscientific writers have recently called them.

As a chronologist, I feel a difficulty in finding words to express my admiration of the original or antediluvian form of years. A lunar year cannot be played with as we play with our solar year. It was formed by the phases of the moon, which, like a great clock in the firmament registered, when new, the beginning, and when full, middle of a month, and was beyond the reach of human power to alter a moment of time. It was a Divine appointment when time was instituted in Eden, in breaking away from which we have involved ourselves in a host of complications which must ever increase as time goes on. The original, or antediluvian solar cycle of seven simple astronomical years, is another feature of the lunar year which has the stamp of Divinity. Like the number of the days of the lunar year, the solar cycle contained 354 sabbath days, and when the intercalary days were added, the sabbath days were 365, like the number of days in the solar year. The years of Enoch, 365, seem to proclaim the same grand astronomical fact of which Noah's detention in the ark was another symbol. As an unalterable period of time, the lunar year continued in use from creation to the destruction of Jerusalem, and, indeed, is now observed by the Jews, though they are plainly wrong in the way in which they have twice sought to recover the true computation of years. In fact, as scientific men, we cannot get away from the first chapter of Genesis. It bears the stamp and superscription of Deity, and as the beginning of time it is a chain which no man can sever without driving the spheres of heaven out of their courses. As a chronologist and an astronomer, I am obliged to continue the use of the lunar year. It is simple and makes half its own calculations. All the sabbath days of this work are the seventh days of the astronomical line from creation.

THE ANTEDILUVIAN SOLAR CYCLE. (Showing the Dates of all the Sabbath Days.)

	Creation.	2nd year.	3rd.	4th.	5th.	6th.	7th.
1st month	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29	4 11 18 25
2nd "	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23
3rd "	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26 30	1 8 15 22 29
4th "	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
5th "	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26
6th "	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
7th "	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30
8th "	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28
9th "	2 9 16 23 30	5 12 19 26 30	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
10th "	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25
11th "	6 13 20 27	2 9 16 23	5 12 19 26 30	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
12th "	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29

The first or creation year on this solar cycle Is year 0, and the 2nd year, like the second hour of a clock, is 1 We count our age this way as past time. But only the first seven years of this cycle count as six.

The seventh or sabbath days of the inter-calary period would be:—

7 14 21 28 35 42 49 56 63 70 77.

The cycle is proved by the "selfsame day" of the week falling 120 years back on the same day the flood began. See Gen. vii. 13, and compare with the selfsame day in Ex. xii 41. Patriarchs seem to have been the keepers of the Calender, dating their years from new year's day. See Gen. viii. 13.

The unalterable construction of this solar cycle is seen as follows: It is seven lunar years of 354 days each, or 12 revolutions of the moon. As the moon completes a revolution round the earth in 29½ days, the ancients alternately used 30 and 29 days for their months in order to keep up with her movements, and thereby begin each year, as well as every month, with a new moon. If we therefore commence to put on a piece of paper each 7th day we shall write all the figures here printed. Thus the fourth 7th, or sabbath, day in the first month, is 28th. As we have two days to spare, they make the first sabbath of the second month to fall on the 5th of the month. When we have in this way written seven years, we shall find that we can write no more, because the dates come round again. An eighth year would be like the first. This is the meaning of a solar cycle. We shall also find that we have unconsciously written nine of the scriptural dates of the Flood, viz., in the 5th year and the first two months of the 6th year. The Flood, we are told in Gen. v., was in 1656, A.M. Let us see if these dates were. If we look at the following page, giving the first year of each solar cycle, or seven years, we see that 1652 was a first year; therefore 1653 would be a 2nd, 1654 a 3rd, 1655 a 4th, and 1656 a 5th. The dates, then, of the 5th year prove the flood to have occurred in 1656. Now see Gen. v.:—

Seth was born when Adam	was	130 years old.		
Enos	"	Seth	"	105 "
Cainan	"	Enos	"	90 "
Mahaleel	"	Cainan	"	70 "
Jared	"	Mahaleel	"	65 "
Enoch	"	Jared	"	162 "
Methuselah	"	Enoch	"	65 "
Lamech	"	Methuselah		187 "
Noah	"	Lamech	"	182 "
Gen. vii. 11. Flood came when Noah was		600 "		
				1656 or 2340 B.C.

We here find that scripture history and science agree. But the most grand proof is, all the eclipses we now see necessitate the occurrence of the total eclipse No. 43, line xii., in 1656, A.M., which again requires No. 1 at Creation. (See Antediluvian Eclipses and list of Astronomical Years.) We can next apply a stern test to prove these years were made up to solar periods. As the lunar year is 11 days short of the solar, the seasons would in 20 years be reversed and the dates of the 7th days of the first year get into the second. To prevent this great dilemma, the nations using the lunar year employed extra days, called "intercalary." Seven times 11 are 77. The Antediluvians could use no less, and their dates show that they used them at the end of each 7th year, and thus began their solar cycle as at creation. This would not disturb the regular observance of the 7th, or sabbath day, because 77 days are just 11 weeks. Now that they did this is evident from the fact that the 133rd lunar year is the solar year also. The moon is always new, on the same day after 19 solar years. This is known in astronomy as the Metonic, or lunar cycle, and to apply it we must square 7 with 19. See following page.

It is certain, then, that by putting in the extra days at the end of the cycle, the lunar and solar years began together; not exactly so, as at the end of two cycles they have put in an extra week, because 15 years require 171 intercalary days. This is a beautiful scientific test of the precise solar length of the Antediluvian years, an unquestionable demonstration of the true historical character of the book of Genesis, and the Divine origin of time.

*[TABLE OF FIRST YEARS OF THE ANTEDILUVIAN [SOLAR] CYCLE.]
Dating by this Cycle ceased at the end of 1721 A.M.
The following are 7th years and therefore the 1st of each successive Cycle of Seven.

Each of the years enumerated below began on the 1st day of the week, Sunday having their first Sabbath on the 7th day, Saturday. They are therefore all Table 1 of the seven repeating years, or solar cycle, showing the dates of the Antediluvian Sabbaths. Those marked * also commenced a sevenfold lunar cycle—a beautiful scientific proof that the years were made solar. The lunar cycle being a measure of 19 years, to work it upon a scale of seven years, it must be used sevenfold—7 times 19 are 133—hence the expiration of each 133 years reproducing the dates of creation week and year, is an unquestionable demonstration that the shorter lunar years were lengthened to the solar years by adding extra or intercalary days.

To find 1656, the flood year, it will be seen that 1652 was a first year on the solar cycle, therefore table 2 is 1653, table 3 is 1654, table 4 is 1655, and table 5 is 1656.

*0	259	518	777	1036	1295	1554	1813
7	*266	525	784	1043	1302	1561	1820
14	273	*532	791	1050	1309	1568	1827
21	280	539	*798	1057	1316	1575	1834
28	287	546	805	*1064	1323	1582	1841
35	294	553	812	1071	*1330	1589	1848
42	301	560	819	1078	1337	*1596	1855
49	308	567	826	1085	1344	1603	*1862
56	315	574	833	1092	1351	1610	1869
63	322	581	840	1099	1358	1617	1876
70	329	588	847	1106	1365	1624	1883
77	336	595	854	1113	1372	1631	1890
84	343	602	861	1120	1379	1638	1897
91	350	609	868	1127	1386	1645	1904
98	357	616	875	1134	1393	1652	1911
105	364	623	882	1141	1400	1659	1918
112	371	630	889	1148	1407	1666	1925
119	378	637	896	1155	1414	1673	1932
126	385	644	903	1162	1421	1680	1939
*133	392	651	910	1169	1428	1687	1946
140	*399	658	917	1176	1435	1694	1953
147	406	*665	924	1183	1442	1701	1960
154	413	672	*931	1190	1449	1708	1967
161	420	679	938	*1197	1456	1715	1974
168	427	686	945	1204	*1463	1722	1981
175	434	693	952	1211	1470	*1729	1988
182	441	700	959	1218	1477	1736	*1995
189	448	707	966	1225	1484	1743	2002
196	455	714	973	1232	1491	1750	2009
203	462	721	980	1239	1498	1757	2016
210	469	728	987	1246	1505	1764	2023
217	476	735	994	1253	1512	1771	2030
224	483	742	1001	1260	1519	1778	
231	490	749	1008	1267	1526	1785	
238	497	756	1015	1274	1533	1792	
245	504	763	1022	1281	1540	1799	
252	511	770	1029	1288	1547	1806	

It will be seen by the annexed table of Sabbaths of every seven years, which form the solar cycle or repeating years of the antediluvians, that when they are backed up to the time of creation, namely, 1656 years before the flood, that the first sabbath was the 7th day of the 1st month of the first year! Hence it is plain that time was instituted in Eden, and that the date of creation is an historical and scientific fact.

It will be seen by the solar cycle on the other page that the dates of the deluge always came round again on the same days of the week when the year was the fifth of the cycle, or sevenfold series. Taking 1652, which the annexed table of first years supplies, the fifth of the cycle is 1656 having the same dates for Sabbaths as those printed in black type with scriptural references in the explanation of the nine Sabbaths in Noah's diary of the deluge. How beautiful is this! It proves that the dates of creation and the deluge are historical facts and the Bible the Log Book of the World.

These seventh years were not originally written in the simple order as printed. They were worked backwards from the flood. Having first found the true form of the deluge year, the next step was to obtain the solar cycle by ascertaining how many years elapsed before the dates repeated themselves on the same Sabbath days. When this was done the years were backed in sevens, and it was found that they exactly took in the 1656 years obtained in Genesis v., and began the first Sabbath in Eden on the 7th day of the 1st month.

The lunar cycle being 19 solar years (a period of 235 lunations when the moon is again new at the same time and place), we have a beautiful scientific proof that the antediluvians carefully added the necessary extra intercalary days, otherwise it could not fall on a first year. These are great scientific facts. What creation was this work does not undertake to say, but it was the Divine institution of time and the origin of man—Adam's years are the progress of time.

Note—the lunar cycle being 2 hours and 4 minutes longer than 19 solar years does not interfere with the computation of years.

THE LUNAR CYCLE.

THE SECOND LINE OF ASTRONOMICAL TIME.   HISTORY SYSTEMISED.

A Lunar Cycle—sometimes called Metonic Cycle in honour of Meton, its discoverer—is a period of 19 tropical years, or 19 years, two hours, and four minutes, when the same new moon occurs.   Thus if a man saw the moon new, apparently resting on the top of a distant church spire, and the clock struck nine in the evening, he might see the moon again new 19 years afterwards, at four minutes past eleven, and in the same position.   The period is a measure of time, 325 lunations, which will guage all past time by measuring it off as a man might measure off a firkin of wine with a standard pint jug.

Apply this to the Antediluvian Solar Cycle and it will show that every 133rd year was the same as the 1st year, that is beginning with Sunday and having Saturday on the 7th day of the month.

The process is fully explained in the page Table of First Years of each Antediluvian Solar Cycle, showing that to square 7 with 19 we must take the Solar Cycle seven-fold. Thus seven times 19 are 133.   Every 133rd year is in that page marked *, and it falls on a first year.   If it fell on any other year, it would show that the patriarchs had not kept correct time, or had not properly observed the intercalary days.

The following is an astronomical method for proving the year of the FLOOD;

```
7 cycles of 19 years are 133 A.M.
14   do.      do.     266   "
21   do.      do.     399   "
28   do.      do.     532   "
35   do.      do.     665   "
42   do.      do.     798   "
49   do.      do.     931   "
56   do.      do.    1064   "
63   do.      do.    1197   "
70   do.      do.    1330   "
77   do.      do.    1463   "
84   do.      do.    1596   "————1596
                1 cycle of 19 years    19
                1   do.      do.       19
                1   do.      do.       19
                                      ————
```

Table 2 of Solar Cycle was year 1653 Hence table 3 was 1654, table 4 was 1655 and table 5 was 1656, upon which we find the dates of the Flood, in Gen. vii. and viii.; and from chap. v. we find the Flood year was 1656.

The above is historical time, or years A.M. They would be 1 less if we start year 0 as 1.

This Lunar Cycle proves all periods of history.   It settles the doubts of men respecting the length of the years of the patriarchs.   We find that they were solar, and that although the ancients only divided the lunar year into weeks and months, yet they observed the annual revolution of the earth as a solar period, the precise length of which they have known and observed better than we have.

The 15 years of the Ancient Hebrew Solar Cycle are also proved by the Lunar cycle, and show us that there has not been a day lost or added improperly since time began. 15 times 19 are 285, therefore every 285th year is the first of the Solar Cycle, having Saturday on the 7th of the month as at Creation.   It works in this way down to the present year, giving us a simple and unquestionable proof that unbroken weeks of seven days have come down to us from Eden.   It could not be otherwise with lunar years which no man can alter if he tried.   The Lunar Cycle is the natural production of lunar time. We cannot fool and muddle about the lunar year as we have done with the solar period. It is the production of the motions of the moon, and being sternly astronomical, we cannot alter it nor the multiplication table. The eclipses and transits would mock us if we touch the Lunar Cycle, the Second Line of Astronomical Time.   Alas! they mock us now because we inherit pagan time.   We assign dates to them with which they have no proper concurrence.

Any history to which the Lunar Cycle will not apply must be rejected as spurious.   That of Babylon and also that of Assyria are good, and have a close relationship to scripture; but Chinese history is purely mythological earlier than 1796, A.M., which was soon after the dispersion from Babel.

Neither can any system of Chronology be worth attention which is incompatible with this and other systematic scientific measurements.   It is supreme folly to put 30 years into a Lunar Cycle of 19 years, which must be done if the hap-hazzard systems of Hales and Deutch are followed.   Of all the old Chronologists Usher was the truest.   His line of history commences 4004, instead of 3996 B.C., the true year of the nativity, as all chronologists now admit.   Allow Usher these eight years and the length of his line is correct, but for want of a scientific system, he could not adjust some of the Biblical dates.

The great advantage of the Lunar Cycle is that it absolutely determines the precise succession of years and days.   For instance, the Ancient Hebrew Solar Cycle began with 1722, hence every 285th year must be the same as the 1st as to the dates of the Sabbath Days. If the historical dates showed that this was not so, it would be a sure proof of a departure from a true consecutive record.   It will also be seen that the first year of the cycle always alternately ends with 2 or 7.   Antediluvian time has this systematic precision by the Lunar Cycle in lengths of 133 years.   This is grand work! Instead of doubting we must admire!

HOW ANY MAN CAN PROVE THE DATE OF CREATION AND THE FLOOD.

The annexed page (the Antediluvian Solar Cycle) has brought me hundreds of letters of congratulation. It gives, even to a child, the means of proving the historical record of the creation of the present order of things of the world and the year of the Flood. The simple way of doing this is as follows:—

First reckon up the years of the world when each of the Patriarchs was born, as given us in Genesis v. The line is consecutive from father to son, and the years are tabulated under the solar cycle, where they produce a total of 1656 as the Flood year.

Look next at the Antediluvian Solar Cycle, It contains seven years and cannot be longer or shorter because seven years bring round the day of the week upon the same date of the month. This is the meaning of a Solar Cycle, or cycle of days produced by the sun. The figures are the dates of the seventh or Sabbath Days of each month, and they could never alter. Thus the first month of the first year of each cycle had always its Sabbath Days on the 7th, 14th, 21st, and 28th of the month. Indeed every figure of the Solar Cycle is the consecutive date of the seventh day. The years are lunar, and therefore the months have alternately 30 and 29 days. This arrangement is now observed by the Jews, Turks, and Chinese, and has the moon new on the 1st day of each month, because the moon travels round the earth in $29\frac{1}{2}$ days, so that by borrowing the half day from every other month, the moon was like a great clock in the sky—new at the beginning and full in the middle of the month. A boy when blindfolded, and bearing in mind that lunar months have alternately 30 and 29 days, could repeat all the figures of the Solar Cycle, and he would unconsciously mention nine of the ten dates of the Flood in the 5th year of the cycle and the two first months of the 6th year. This proves that the 5th year was the Flood year.

We have next to see whether this 5th year of the cycle ever became 1656. It did, and the proof is as follows: As the Cycle is 7 years, 236 cycles are 1652. Therefore, the 1st year of the cycle would be 1652, the 2nd 1653, the 3rd 1654, the 4th 1655, and the 5th (the year we are looking for) would be 1656. In this 5th year we have the Flood dates, as shown in a previous page giving the dates of the Deluge. N.B. The reason why 1652 was a first year of the cycle, and not the last is, creation year is 0, as is the first of a life.

As we can now precisely determine the accuracy of the year of the Flood, we can with the same astronomical precision find the the date or first day of creation. It is manifest that this was Sunday, the 1st day of the week, the 1st day of the month, and the 1st year of the Solar Cycle, or in other words, 1656 years before the Flood. We cannot have one date without the other. It is the Solar Cycle which gives us the power to determine both, and let it be remembered that the Lunar Cycle is a high scientific way for showing that the Solar Cycle has been carried on correctly.

It is still more satisfactory to know that every day of the Solar Cycle is required by the Eclipse Cycle, the working of which in its "tell-tale," or progressive character, shows the necessary consecutive years, and like the two Transit Lines of time, supplies the day of the week with which each year has begun. These are all explained.

From the epoch of Creation, to the end of September, 1883, A.D., was 5882 years. As this is a period determined by Five Lines of Astronomical Time, we cannot alter it without altering the motions and orbits of the planets. They are a clock whose wheels we cannot reach. How precise and continuous are their splendid movements!

We must admit that one of the impressive and brilliant features of Creation is the high scientific character of its date. We cannot suppose that the date was given by the writers merely to show that there was such a date. What did the Antediluvians, or Moses who quotes from their records, know about the transit of Mercury? We must accept the date as a reference to an event, in the same way as the birth of a child. The events are stated to be a reconstruction of the face of the world (This is the least construction we can accept) and the introduction of intelligent and moral man, because the same writers who give us the date inform us that before Adam "there was not a man to till the ground." Some men say that Adam was the head of a new race. But if the writers of Scripture are so marvellously correct with the date, ought we not to give them credence for the facts which they supply? Besides this it is evident that the date has been carried on consecutively, and if the events were not correct it would not be possible to record anything which the early generations of men would know was not true.

Men should beware of teaching what is speculative, because experience shows that as true science advances, it has often destroyed theory and brought its advocates to shame.

HOW THE LINE OF CONSECUTIVE SOLAR YEARS OBTAINED FROM THE BIRTHS OF PATRIARCHS IS PROVED TO BE ASTRONOMICAL.

The way of testing the scientific correctness of the foregoing tables is simple when understood. It is as follows:

1st. By the solar cycle. It will be seen by the foregoing table of the Antediluvian Patriarchs that Methuseleh, who owing to his long life we may select as an example, died in 1656, which was the flood year. We know this because we find, by compiling from Gen. v., that he was born in 687*, and lived 969 years. We also find that as the flood year was 1656, beginning on the 17th of the second lunar month (Gen. vii. 11), Methuseleh must have died not many days before the flood. We should had no knowledge in what year the deluge came without first obtaining the year in which this great patriarch was born; therefore as we can by several stern scientific methods prove the year of the deluge, we at the same time prove beyond question the year when Methuseleh and the other patriarchs were born, especially when we cannot suppose that the ancients knew anything about the transits of Mercury or Venus by which the accuracy of the year is also determined. To prove, then, that Methuseleh was born in 687, and died in 1656, we have only to look at the Antediluvian solar cycle for the latter year. Thus there are seven years in the cycle. There cannot be more, because if we wrote out an eighth year, it would be like the first. Seven years bring the dates round again on the same days of the week. Divide 1656 by 7, and the product is 1652 with 4 over. Hence the first year of the solar cycle was 1652, the second was 1653, the third 1654, the fourth 1655, and the fifth 1656, or flood year. Now it will be found by reading Gen. vii and viii., that the dates of the month used in Noah's diary of the deluge are in the 5th year of the cycle†. Therefore the solar cycle by its natural progression proves that Methuseleh was born in 687, and also proves all the other records concerning the patriarchs. The reader must bear in mind that this is an astronomical proof, that is the natural succession of days numbered by dates, and controlled by the observance of weeks of seven days, without which no solar cycle can exist. It is also an astronomical record of the motions of the moon, new on the first day of every month and year. There are ten dates supplied in the diary of the flood, nine of which are Saturdays, or the old Sabbath days. This is plain because it will be seen that they are the natural succession from the first figure 7 on the cycle. This will be best understood by looking at the "Flood Period," which is an Almanack of every day of the Flood Year. Bible history is remarkable for showing that this distinction is given to spiritual events. It should also be stated that as Noah was a solar year in the ark, he entered it on the first day of the solar year, which in the 5th year of the cycle began on the 17th of the 2nd month of the lunar year, and left on the last day of the same solar year.

2. The second proof that Methuseleh was born in 687 is obtained by submitting that year and the year of his death to the testing power of the Metonic, or Lunar Cycle. As the lunar year has only 354 days, which is eleven short of the solar year, the Antediluvians would have to use about 77 extra or intercalary days (7 times 11 are 77) at the end of each solar cycle. This would bring the lunar year abreast with the solar year, and every cycle would begin correctly as the first started. They, and all the ancients using the lunar year had to adopt a course like this, otherwise the seasons would get far out of their place. Now the Metonic Cycle consists of 19 solar years, 2 hours and 4 minutes. This is a perfect and unalterable period of time and can be applied to the measurement of thousands of years. For instance, supposing a man looked through a hole in a building on the 1st of January when the clock struck three in the morning,

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* The year of the world in which each of the patriarchs was born, is easily obtained by writing the age of their fathers when they had a son. Thus:

Seth was born when his father	Adam		...was	130, which was year	130
Enos	do.	do.	Seth	...was	105,	do.	235
Cainan	do.	do.	Enos	...was	90,	do.	325
Mahalaleel	do.	do.	Cainan	...was	70,	do.	395
Jared	do.	do.	Mahalaleel	was	65,	do.	460
Enoch	do.	do.	Jared	...was	162,	do.	622
Methuseleh	do.	do.	Enoch	...was	65,	do.	687
Lamech	do.	do.	Methuseleh	was	187,	do.	874
Noah	do.	do.	Lamelh	...was	182,	do,	1056
Gen. vii. 11, Flood came when Noah...was					600,	do.	1656

Total 1656, the flood year.

† The year 1652 would be the last of the solar cycle; but creation year was 0, and the first cycle only counts as 6 years. A child is not 7 years old till in his 8th year.

and he saw the new moon apparently resting on the top of a church spire, if he looked again through the same aperture 19 years afterwards, four minutes after the clock struck five, he would see the moon new again, and in the same position, apparently on the top of the spire. To apply this visible fact to the measurement of time is not difficult, and it is absolutely reliable for its precision. Let it be used to show the accuracy of the working of the solar cycle by determining what years began like creation year, with the first Saturday on the 7th of the month. To do this we square the 19 solar years of the Metonic Cycle with the seven years of the Solar Cycle. Seven times 19 are 133, therefore every year after 133 will begin like creation year. (See page following Antediluvian solar cycle of seven years, where this measurement is carried out).

3. The third proof that Methuseleh died in 1656, because he was born in 687 and lived 969 years, is by the Eclipses. If we have not a year of eclipses for each of the 1656 years, that number of years never existed, or in other words Methuseleh did not live the years stated. Now when we take 1656 years of eclipses in the Christian era, they cover the same number of years of the Antediluvian period and work the solar cycle by producing the nine flood dates in 1656. Besides this, the position of the pure lunar year would not otherwise be where it is from the point of creation, if we do not precisely allow these patriarchal years. They agree with the progress of the pure lunar year and therefore no astronomer can reject them. This is deep, but very splendid. It will be seen by the Eclipse Chronometer that the Maximum Cycle was completed by the total solar eclipse on the 21st Dcmbr. 1843. The pure lunar year brought it there and formed a junction with the solar year. Had there been an error of one year in the record given us in Gen. v. of the births of the patriarchs, the eclipses would show it, because they would not repeat their dates of occurrence after 649 years, nor preserve their companionship with the transits of Venus, or maintain the proper position of the pure lunar year in its regular advance of the solar period.

4. The fourth scientific method of proving that Methuseleh died in 1656, after living 969 years, is by the transits of Mercury. If men fight against the years of scripture history, they must fight against the transits also. There are 92 years between any transit of the planet Mercury and its reoccurrence. For the sake of simplicity we may use No. 1, as shown in the list of transits. It is easy to see with what day of the week each of these 92 years began, and in this way on the Antediluvian solar cycle they will prove the form of every year up to year 0, A.M. Worked in this way, we shall find that the transit of Mercury on Saturday, the 9th of May, 1891, will also be Saturday, the 13th of the 8th month of the 2nd year of the Antediluvian Solar Cycle, 5888, A.M. which is 5889 astronomical. Transits have a companionship with eclipses, but nothing so powerfully proves all past years and their natural succession than transits. Unlike eclipses they are solar time and therefore more simple in their use for measuring time. Whoever talks about ancient years, without noticing the testimony of transits will place himself in a ludicrous position. Agnostics, if they are willing to learn, may obtain instruction from them. Their voice is louder than thunder.

5. The fifth proof of the years of the patriarchs is that we derive from the planet Venus. They form a line of time independent of those of Mercury, but are worked in a similar way. The reader can see the way they are used by consulting the tables.

I think that what I have stated will be sufficient to convince every intelligent man that the records which we have of the patriarchs are correct, seeing that they bear the test of scientific investigation. That test is simply this: Supposing I have a running account at a bank, a clerk could tell me how that account stood. He would do so by his knowledge of common ascertained facts. That is to say, having found that there are 12 pennies in a shilling, and 20 shillings in a sovereign, he could add up all the items of my account and supply the total. In like manner, when we have ascertained the value of periods of time, we can supply a true total, or test the correctness of any total we desire to investigate. We do this by our knowledge of common facts, such as the following: There are 365¼ days in a solar year; 18 years and 10 to 11 days in an eclipse cycle; 19 years 2 hours, and 4 minutes in the Metonic cycle; 649 solar years in a great astronomical year; 7 years in the Antediluvian, 15 in the Ancient Hebrew, and 28 in our Solar Cycle; 92 years in the transits of Mercury, 486 in those of Venus, &c., &c. By any of these well ascertained facts we can count up anything referring to time, and the results obtained by one man will not differ from those found by any other person.

After these statements it will be seen and understood that it is within the power of all men to prove the scientific accuracy of the history given in the book of Genesis.

BABYLONIAN AND ASSYRIAN HISTORIES,

TOGETHER WITH

CUNEIFORM INSCRIPTIONS OF THE FLOOD,

AND REMARKS ON

THE CHALDEAN RECORDS OF CREATION.

Historical Tables viii. and ix.

Periods of years formed by the consecutive reigns of kings of different nations afford ready facilities for showing years of past time. They are also valuable for comparison, as it frequently occurs in the pages of history that contemporary monarchs are mentioned. For example, in 2 Kings xix., three kings are referred to, namely, Hezekiah of Judea, Sennacherib of Assyria, and Tirharkah of Egypt.

The A.M. years afford facilities for addition, subtraction, or divisions of periods. But to find the B.C. year, deduct the A.M. from 4004; and to get the correct year before Christ deduct from 3996.

KINGS OF BABYLON.

Historical Table ix.

VALUABLE DISCOVERIES CONCERNING THEIR COMMENCEMENT.

A splendid discovery has been made by Mr. Theo. G. Pinches, the persevering and ta'ented translator of cuneiforms at the British Museum, London, the result of which is, we find that the first dynasty of the kings of Babylon began at the Dispersion, 100 years after the Flood, which occurred in 1656, A.M. The subject came to my notice in May, 1894. Whilst at the Museum, Mr. Pinches showed me a list of all the Dynasties of the Kings of Babylon which he had recently translated from a tablet of unbaked clay, found amongst many others brought to London from Babylon three years ago. It is partly illegible, owing to age, but it supplies a confirmation of the beginning of the kingdom of Babylon about 1770, A.M. We have now, therefore, three sources for this information; 1. from Scripture. 2. from the records of eclipses shown to Alexander the Great, when he conqured Babylon in 3672, and 3. the tablet just mentioned.

Respecting the records of eclipses, Calisthenes, who was with Alexander, states that they had been continued for 1903 years from the commencement of the kingdom. Subtracting these 1903 years from 3673, we have 1770, the period of confusion of tongues.

The following is a copy of Mr. Pinches's list, but I have changed his B.C. into A.M. years by deducting them from 4004. They are now subject to all rules of arithmetic, and indicate their consecutive order.

DYNASTY I.   11 kings for 294 years.

A.M.		Reigned	A.M.		Reigned
1772	Sumu-abi	15	1929	Samsi-iluna	35
1787	Sumula-ilu	35	1964	Ebisum	25
1822	Zabu	14	1989	Ammi-atana	25
1836	Apil-Sin	18	2014	Ammisadugga	21
1854	Sin-Muballit	30	2035	Samsusatana	31
1884	Gammurabi, or Kammurabi *	45			

DYNASTY II. of Sis-ku.   11 kings for 368 years.

A.M.		Reigned	A.M.		Reigned
2066	Anma (n)†	51	2315	Kir-gal	50
2117	Ki-an(ni-bi)	55	2365	A-Adara Kalama ‡	28
2172	Damki-ii(i-su	46	2393	A-Kur-du- (anna)	26
2218	Is-ki(pal)	15	2419	Melamma-kurkura...	6
2233	Sussi-ahi	27	2425	Ea-ga(mil)	9
2260	Gul-ki(sar)	55			

DYNASTY III., of Kassi.   36 kings for 576 years.

A.M.		Reigned	A.M.		Reigned
2434	Kan-dis	16	2714	?	
2450	Agum-si	22	2730	Nazim-arudas II.	—
2472	Agu-a-si	22	2747	?	
2494	Ussi	8	2764		22
2502	Adu-Melik	—	2786	[Assur-dan I. in Assyria]	26
2518	Tas-zi-u-mas	—	2812		17
2525	?		2829	Ka-ra	2
2531	?	The tablet is broken	2831	Gis-amme ti	6
2548	?	here and the years	2837	Saga-saltias...	13
2555	?	are approximate.	2850	Bi-bat	8
2581	?		2858	Bel-nadin-sumi	1½
2598	?		2860	Ka-ra-mur-us	1½
2610	Kara-hardas [See Assyrian Kings]₂		2861	Rammanu-nadin-sumi	6
2613	Naiz-bugas	do.	2866	Rammanu-sum-nasir	30
2622	Kura-galuzi	do.	2896	Meli-Sigu	15
......	Meli-Sapak	do.	2912	Marduk-abla-iddin	13
......	Merodach-Beladin I.		2925	Zagaga-nadin-sumi...	1
2697	?		2926	Bel-sum...	3

* There were three kings of similar name, but this could not be Khammuragas, the Elamite, who reigned only 16 years.   † The name is illegible, but it is probably the king of Shinar (Babylonia) mentioned in Gen. xiv. 1. in 2001.   ‡ This king was a contemporary with Amenhotep III., of Egypt, who reigned 2357 to 2393, and whose records state that a correspondence occurred respecting their giving each other their daughters in marriage; the name is Kalamma Sin on the Egyptian records, but it is likely that he is the same person, in which case we have another confirmation of the period when Amenhotep III. reigned, for it is disputed by " genealogical " chronos. ₂ Four added by Ed.

BABYLONIAN HISTORY CONTINUED.

DYNASTY IV. of Pase.   11 kings for 72 years and six months.

2929	Marduk...	17	2955			
2946		6	2955	... ...	22
2951	[David began in Judea, 2950]		2978	Marduk-nadin	1½
2952			2979	Marduk-zir	13
2953			2992	Nabunadin	9
2954					

DYNASTY V. of Tamtu.   3 kings for 21 years and 5 months.

3001	Simmas-Sign or Sipak	18	3019	Kassu-nadin-ahi	3
3019	Ea-mukin-ziri...	½			

DYNASTY VI. of Bazi.   3 kings for 20 years and three months.

3022	E-Ulbar-sakin-sumi	17	3042	Silanim-Sukamuna	¼
3039	Ninip-kudurri-usur II.*... ...	3			

DYNASTY VII. of Elam.   1 king for 6 years.

3043	An Elamite, unknown	6

DYNASTY VIII. of Babylon.   31 kings for 223 years.

3049	... ...	13	3173	
3062	... ...	½	3179	Marduk-balad-su-ikbi
3063	(Assur-dan II. in Assyria)		3187	The kingdom was almost des-
3076			3194	troyed at this time by Samsi-
3083	Nabu-sum-iskun		3201	Vul II. of Assyria.
3090			3208	
3097			3215	
3104			3222	This part of the eighth dyn-
3112	Tugulti-ninip		3229	asty is not recorded owing to
3119	Rammanu-nadin-ahi, or Sum-nasir		3236	the tablet being damaged.
3124	Nabu-abla-iddin I.		3243	
3151	Nabu-sum-iddin		3250	Nabu-sum-iskum
3152	Marduk-bel-usate, a rebel king		3257	Nabu-naser, or Nabonasser ... 14
3154			3270	Nabu-nadin-zeri 2
3159			3272	Nabu-sum-ukin ... ... 1 month
3166				

DYNASTY IX. of Babylon and Assyria.   20 kings for 194 years.

3272	Ukin-zira, of Sasi	3	3316	Sin-ahi-eriba	8
3274	Pulu	2	3324	Assur-ahi-(iddin)	12
3276	Ululaa, of Tinu	5	3337	Samas-sum-ukin	20
3281	Marduk-abla-iddin II., of Tamtin	12	3357	Kandal-anu	22
3293	Sargina	5	3377	Nabu-abla-usur, or Nabopolasser	21
3297	Sin-ahi-eriba, of Sasurgal ...	2	3398	Nabu-kuduri-user Nebuchadnezzer	44
3299	Marduk-abla-sumi ... 1 month		3443	Amil-Maruduk	2
3299	Marduk-abla-iddin, III. † ...	¾	3446	Nergal-zar-usur...	3
3302	Bel-ibni ‡	3	3449	Nabu-naid, or Nabonidas ...	17
3305	Assur-nadin-sumi	6		Belshazzar was second ruler and	
3311	Nergal-usezib	1½		Daniel third. See Dan. v. 7, 16.	
3312	Musezib-Marduk	4	3466½	End of the kingdom of Babylon.	

* This was also the name of Ka-ra-mur-us (2860) who is mentioned in the records of Assyria as warring with Assur-risisi.   † This is the Merodach-baladan of Isaiah xxxix 1. and as his father only reigned a month, we see why he is particularized as "the son of Baladin."   ‡ He was placed on the throne by Sennacherib, who removed him three years afterwards, and raised Assur-nadin-sumi.   The records of Sennacherib state this.

The fall of the kingdom of Babylon is, like that of the end of proud Assyria, a great and impressive event in history.   Many incidents of both kingdoms confirm Biblical records, which although challenged by schemers, always come off victorious when our discoveries and knowledge increase.   The statement in 2 Kings xxv. 27, is remarkable. It gives the first year of Amil-Maruduk as 37 years after the captivity which began in 3406½.   Our knowlege is so perfect now on many of these points that the records of one nation confirm those of another.   But here I should like to say, that as the Jewish punishment clearly began in 3406½, and is to continue 2520 years, it ends in 5926½.   Hence, as the Gentile times are to end 30 years previously, we must see important events in 5896½ (our 1898 at Easter).   We have therefore a subject of great interest before us.

KINGS OF ASSYRIA,

FOLLOWING AFTER THE FIRST SIX ROYAL CITIES.

Historical Table viii.

Like the history of Babylon, we have no record of Assyrian kings before the Flood in 1656, and we see that as Assur left Babylon to found Nineveh (Gen. x. 11.) the former city must have been the seat of a kingdom more ancient than that of Nineveh. Berosus, the ancient historian, assures us of this, and all records show that in its early existence Assyria was much mixed up with the older kingdoms at Ur, Erech, Karrack, Lasar and Akkad, mentioned in Genesis x. and in cuneiform tablets.

UR seems to have been one of the oldest royal cities; when population was yet small Abraham left it on Tuesday, the 15th of the 7th month, 2082. This date is an astronomical record and produced the same day of the week, with the same date, at the end of 430 years. As only $2082\frac{1}{2}$ to $2513\frac{1}{2}$ will do this, the date, or period, is absolutely sure. The names of the kings were Urukh, Dungi (his son), Su-Agu, Amar-Agu, Ibit-Agu, &c. Ur was 300 miles N. of Babylon, and near Ararat where the ark rested.

ERECH was another of the six early city-kingdoms, but was of short duration. One of its kings, Kudar-lagamar, is mentioned in Gen. xiv. 1. where he is called Chardor-laomar. His war was 2091. Another ruler was Kudur-Marbuk, who reigned 30 years. Owing to its proximity to Babylon, 110 miles, S.E., Erech may be called its sister-city. Both Ur and Erech subsequently became subject to Karrak.

KARRAK lasted nearly 300 years. We have the following kings: Gamal-ninip (or Adar) Limit-nana, Ismi-Dagon, and Gungunnuv.

LARSA, called El-Lassar in Gen. xiv) was contemporary with Karrak to some extent. Kings. Nur-Rimmon, Gasin, Sin-Idina, Arioch, and Risa-Agu. Karrak, in its turn, had to give way to Larsa where the great conqueror Khammuragas had his throne 16 years.

BABYLON, which seems to have suffered a drag, subsequently became a great city and kingdom, surviving as it had preceded Assyria. In common with other kingdoms from the Persian Gulf to the Mediterranean, Babylon became tributary to Sargon, of Akkad, and a few years after his death, to Khammuragas, an Elamite king of Larsa. It is said that the latter fixed his throne in Babylon, but this may not be altogether correct, because he and Sargon were great victors like Alexander the Great and Napoleon. Babylon was 290 miles S. of Nineveh. Nimrod its founder flourished before the dispersion, and became renowned for first destroying the beasts of these well-watered plains.

AKKAD the last royal city, save Babylon, 100 miles N., is in Genesis x. 10, called Accad, and was another city founded by Assur. It lasted three centuries and one of its latest kings was Sargon who for his great success in subduing other princes, may be styled an emperor. He subdued all Babylonia, about 2340, and thus became the dominant Sovereign, placing all other kings under tribute. He re-built Akkad after it had been pillaged, and reigned altogether 45 years. He was succeeded by his son, Naran-Sin, but the empire soon fell to pieces, for after the death of Sargon, the various tributary kings revolted. This was about 2350. It would appear that the tributary kings had the help of Khammuragas (also known as Hammarabi) an Elamite king, but it was only like jumping out of the frying-pan into the fire, for Khammuragas subjected them to a more galling yoke about 2360. Sargon established a great library. He must not be confounded with Sargon II. in 3283. As Akkad was the last of the royal cities, and Sargon almost its last monarch, we see when he reigned. The period is also confirmed by the establishment of an " independent kingdom " in Assyria, for soon after Akkad we hear of Assyria.

ASSYRIAN KINGS.

2319 Ismi-Dagon reigned 30 years (Was perhaps the king in Karrak).

2349 Samsi-Vul. 18 years king in Nineveh.

2367 Samsi-Vul II. or Samsi-Rimmon. He and Tritak reigned about 26 years.

...... Tritak who built a " House of Salvation."

2393 Bel-kaphaphu established an "Independent Kingdom," which was not under tribute to Egyptian Pharaohs, Amenhotep II.—2342 to 2349—had conquered Nineveh and his two successors received tribute. Consult Kings of Egypt.

2413 Adasi was king. Length of his reign not stated.

2423 Bel-bani, his son, a great conqueror, was king 15 or 20 years.

2438 Assur-zakir-esir, " Lord of Countries," about 25.

2463 Ninip-tugal-assuri. How long unknown.

...... Four kings followed during 127 years, and Babylon was allied to Assyria by a marriage of the daughter of Assur-uballit to the king of Babylon.

2590 Assur-uballit. In his reign an Egyptian king was unsuccessful in penetrating eastward. Twenty years later Kara-hardas, son of the Assyrian princess just named, took the Babylonian throne, but was slain and Naiz-bugas succeeded.

ASSYRIAN HISTORY CONTINUED.

2610 Bel-nirari began at Assur about this time.   He was son of Assur-uballit **and made** his son Kuri-galuzi king of Babylon after killing Nazi-bugas.

2650 Budil succeeded his father Bel-nirari, reigning 20 years.   Mili-sipak k. at **Babylon**

2670 Vul-nirari I, also called Rammram-nirari began and reigned 30 years.

2700 Shalmaneser I. reigned 29 years.   He defeated the Egyptians,

2729 Tugulti-ninip, styled "King of Nations," reigned 30 years.

2759 Bel-kudur-uzur.   Length of reign unknown, but apparently about 10.

2769 Ninip-pal-eser 20 years.   [First 13 kings on this page synchronize with **time of**

2789 Assur-dan I., 30 years.   Book of Judges and 20th Egyptian Dynasty.]

2819 Mutak-kil-nusku was king during nearly 20 years.

2839 Assur-risisi, son of preceding.

2869 Tugulti-pal-eser, or Tiglath-pileser, 20 years.   He was not the monarch mentioned in the scriptures 400 years later.   Sennacherib states that he was defeated by the Babylonians 418 years before his own invasion of that country.   This is an important statement as it refutes what is said by Mr. Boscawin about Tiglath Pileser I. reigning in 1884, A.M. (1120 B.C.).   Sennacherib began in 3293, after the Ten Tribes of Israel were taken into captivity by his father, Sargon II.

2889 Samsi-vul, brother of preceding, came to the throne, 9 years.

2898 Merodach-nadiu-akhi, after whom the history is bad, but we have Assur-rabu-**amor** defeated by Aram, king of Syria, which probably occasioned the breach.

3039 Assur-dan II. began and reigned 33 years.

3072 Vul-niari II. also called Ramman-nirari, his son, reigned 22 years, after which **the** history is again broken, but we hear of Simmas-sipak reigning 17 years and Ulbar-surki-idini, 6 years, also some little kings; the century is not quite blank.

3094 Tugulti-ninip II, reigned 6 years from this date.

A NEW EMPIRE.   ⊙ An Eclipse identifies the year.

3101 Assur-bani-pal I., also called Assur-natsir-apli, son of preceding king, began and reigned 45 years.   He instituted a new empire and we are indebted to him for recording an eclipse of the sun which fixes the exact year of his accession.   It was ⊙ No. 70, Line xviii.   It has also been calculated at the Observatory and found to have occurred at the time I have given in July. 903, B.C. (3101, A.M.). But 903 is practically useless inasmuch as it is only a proof of events and reigns we know from 4004 back to 903, B.C.; whereas 3100 proves events and reigns previous to that year.   This is what we most want to prove.

3144 Shalmaneser II. his son, reigned 35 years.   His deeds are recorded on the large black obelisk in the British Museum, on which he mentions the tribute paid to him by Jehu, king of Israel.   Jehu began to reign in 3120½ and died in 3148½. He was therefore a contemporary with Shalmaneser.   See 2 Kings x. 36.

   Shalmaneser tells us an eclipse of the sun occasioned a tumult in Nineveh and caused his beginning to reign.   No. 28, Line viii., 1st of 6th month, Easter.

3179 Samsi-vul, his son, reigned 13 years.   He seems to be the monarch when Jonah was in Nineveh.   Maruduk-balat-su-ikbi was king of Babylon.

3192 Vul-nirari III., also called Ramman-Nirari, reigned 9 years.

3221 Shalmaneser II , his son, reigned 6 years.

3230 Assur-dan II . reigned 15 years.   He speaks of an eclipse of the sun.   A valuable record was discovered by Sir. Henry Rawlinson in Nineveh of a notable eclipse which Sir Geo. Airey and Mr. Hind agreed that it took place about mid-day in that city on the 15th of June, 763 B.C. from 4004, which was 3241.   It will be seen on my tables Line xv., No. 57, Hebrew Bird's Eye View, 1st of 6th month, (June).   This calculation proves the accuracy of my tables, for the Triple Eclipse Table, which gives the 1st year of the Bird's Eye View diagram, shows that Line I. was 3227, hence, counting downwards, Line xv. was 3241.

   This king is styled "Pul" when Mehahem reigned in Israel. 2 Kings xv, 19.

   NOTE.—We have another important statement, which like that of Sennacherib just given, tides us over a long period and also proves tables of history. Herodotus, who was born in 3520, says the supremacy of Assyria over Babylon lasted 520 years.   This would be from Tugulti-ninip I., who began to reign in 2729, and for his conquest of Babylon, &c., was called "King of nations," to the anarchy in Nineveh, in 3249. Berosus, who flourished about 3744, says 526 years.   He probably reckoned up to Tiglath-pileser II. who began in 3260.

   We now come to tumultuous times when Nabonasser, king of Babylon, subdued Assyria in 3257.   The date was calculated by Ptolemy by the occurrence of two total eclipses of the moon ◑ ● Line xiii.   But the Assyrians recovered supremacy again till Napolasser in 3376½.

8245 Anarchy prevailed three years.

8248 Assur-ninari II. ascended, but was driven from the throne 9 years afterwards.

8257 The history indicates three years more of anarchy.

8260 Tiglath-pileser II. ascended 736 B.C. and reigned 18 years. He was also made king of Babylon. See 2 Chronicles xxviii. 20. Ahaz ascended at Jerusalem in 3263. His application to Tiglath-pileser, mentioned in 2 Kings xvi. 7. is in the records of Assyria as having occurred in 3265.

8278 Shalmaneser IV. ascended and reigned 5 years. He warred against Hoshea, king of Israel, called Husai in the Assyrian records. See 2 Kings xvii. 3. and xviii. 9.

8283 Sargon ascended and reigned 10 years. He carried the ten tribes of Israel into exile in 3284 A.M., or 712 B.C., which was "at the end of three years," or intercalary period of the Ancient Hebrew Solar Cycle, table c. He thus completed the work begun by Shalmaneser, and alluding to both monarchs, the Biblical record (2 Kings xviii. 10) says "they" took Samaria. Two total lunar eclipses occurred at Babylon in the previous year, 3283, or 713 B.C, (721 old computation). They are mentioned by Ptolemy, and were ● Nov. 49 and 51 Line xiii the Diagram of the Team of Eclipses. Monumental history records that Shalmaneser died during the war in Syria, and that Sargon took the Israelites into captivity (the ten tribes, not those of Judah). Sibahe, or So, was king of Egypt.

8293 Sennacherib ascended and reigned 24 years. 2 Kings xviii. 13. and Isaiah xxxvi, 1. The 14th of Hezekiah at Jerusalem was 3293, table L. The destruction of the army of Sennacherib was not much later.

8317 Esar-haddon ascended and reigned 13 years. He sometimes resided at Babylon. In 2 Kings xix., Sennacherib and Esar-haddon of Assyria, Hezekiah of Jerusalem, and Tirharkah of Egypt, are all mentioned. See Egyptian history.

3330 Assur-bani-pal ascended as sole king, 666 B.C., and reigned 41 years.

8371 Bel-zakir-iskum, or Assur-ebil-ile, ascended and reigned 6 years. He perished in the flames of his palace, which he fired, when the Babylonians and their allies entered Nineveh, and thus ended the great Assyrian Empire, as it now became an adjunct of Babylon where Nabopolasser became king.

8377 End of the Assyrian Empire.

BABYLONIAN HISTORY.

8377 Nabopolassar, crowned king of Babylonia. He was formerly Governor-General at Babylon, appointed by the Assyrian monarch reigning at Nineveh.

8393 Nebuchadnezzar ascended at Babylon in the latter half of the year (Table L. of the Ancient Hebrew Solar Cycle, 598 B.C.) and reigned 44 years. In 3406 he deposed Jehoiachin, at Jerusalem, and carried him and many eminent Jews, amongst whom were Daniel and Ezekiel, to Babylon. He also placed Zedekiah on the throne at Jerusalem.

In 3415 he came up to Jerusalem with an army.

In 3416 his army broke up the holy city on the 9th of the 10th civil month (4th sacred), table o, and on Thursday, the 7th day of the next month, his army began to burn the Jewish temple. See 2 Kings xxv. 1, 9, and Ezekiel xxiv. 1. Zedekiah's 9th year ended with the middle of 3415, which was the end of the Hebrew sacred year, and thus Zedekiah's 11th year fell on 3416, that is after the 6th civil month. The Jewish kingdom was thus ended and the second captivity began in 3416, or 580 B.C., table o. The 70 years commenced with the 7th civil month, 1st sacred, of 3406, which was 590 B.C.

3443 Amil-Maruduk ascended at Babylon, and was the Evil-Merodach of scripture. He reigned 2 years. "In the year he began to reign he lifted up the head of Jehoiachin, king of Judah," who had been dethroned "37 years." See 2 Kings xxv. 27. As 3406 and 37 are 3443, this gives us the 1st year of Amil-Maruduk.

8446 Nergal-zar-zur, the Nergalsharezar of Jeremiah, ascended after murdering his predecessor. He reigned about 3 years.

8448 Another king was assassinated after a reign of nine months.

3450 Nabu-Imtik, or Nabonidus was made king. Length of reign unknown.

...... Bel-sar-uzur, the Belshazzar of Daniel, is supposed to have been a grandson of Nebuchadnezzar. His 3rd year is mentioned in Dan. viii. 1., but his length of reign is not known.

8466 The Babylonian empire was conquered by the brave Cyrus, and Belshazzar slain whilst feasting with his lords. The date is obtained by observing that 3468 was the 1st year of Cyrus, table g. See Ezra i. 1. and Dan. v 30, 31.

REMARKS ON BABYLONIAN AND ASSYRIAN HISTORIES.

I concluded my observations on the first six Royal Cities by stating that soon after Akkad we hear of Assyria. We will now see when the Assyrian kings began and how long their empire lasted. But we must first notice that there is an interval between the rise of the empire, which was in 2076, and the reign of Ismi Dagon in 2319, with whom the list of kings begins on the 1st page. This is owing to the transference of power from one city, or small kingdom, to another; it seems, indeed, that the Assyrian empire was first a confederation of kings in Elam and other places, and the record in Genesis xiv. of the war between four of them and five tributary kings who had rebelled, furnishes a good illustration of what existed and how the line began. Thus—

2076 Kudar-lagamar (Chedor-laomer in scripture), at Elam. The length of his reign is not known, but his 14th is mentioned. He reigned long, say 30 years.

2106 Kudar-Mabuk reigned 30 years,

2136 Risu-Agu (or Risu-Acu) his son, 10 years, was the last Elamite King.

2146 Unrecorded period of 173 years meets Ismi-Dagon in 2319. Perhaps it was the period disturbed by the conquests of Khammuragas, who like Sargon I., subdued Babylon and all the kings from the Persian Gulf to the Mediterranean.

It is the overwhelming evidence in this chapter of Scripture, and the fact that Josephus calls it a battle of the Assyrians, soon after they had become masters of all Asia, that fixes the beginning of the empire 14 years previously. The battle was in 2091, 9 years after Abraham left Ur in 2082, one of the most-reliable dates we have.

Other evidence that the Assyrian empire began in 2076, is the statement by Ctesius Cnidus, Diodorus Siculus, Eusebius, and others that the empire lasted 1300 years. We know that it fell in 3376½, under the sword of Nabopolassar, when Bel-zakir-iskum perished in his palace, which he fired with his own hand when he saw the troops of Babylon and Media enter the city of Nineveh. Deducting 1300 from 3376, we again have 2076 for the beginning of the empire. The same result is obtained by several other means, as I shall proceed to show, arranging them in tabular form, because it is important that we should understand this part of history.

I.—RECORD OF CTESIUS, &c.		IV.—END OF AKKAD.	
Nineveh fell by Nebopolasser in	3376½ E	Akkad under Confederated Kings	2076 C
Deduct 1300 years of Ctesius, &c.	1300 D	Supremacy restored by Sargon I.	2340
		Khammuragas and others till reign	
Asayrian empire began	2076½ C	of Tritak or Bel-kaphaphu ...	

II.—GENESIS XIV.		VI.—BABYLONIAN HISTORY.	
Battle of Confederate Kings was in	2091 F	First Dynasty began	*1772 A
Deduct the 14th year of verse 5 ...	14	Assyrian empire 304 after Babylon	304 B
Assyrian empire began ...	2076 C	Assyrian empire began ...	2076 C

III.—ABRAHAM.		V.—ECLIPSE RECORDS.	
Assyria made a great empire when Ur, Karrak, and Akkad submit.	2076 C	Alexander conquered Babylon at the end of 3672, when he saw eclipse records for 1903 years, dating from the commencement of the kingdom just after the Dispersion or confused tongues.	
Six years afterwards	6		
Abraham left Ur, day 15, month 7,	2082		1770 A
Nine years afterwards	9		
Battle of Genesis xiv. in '14th' yr.	2091 F	Deduct 1903 from 3672.	

The Grecian historians state that Belus enlarged Babylon, and that Ninus, his son, was the first king of Nineveh; but both these names seem to be inventions, a common custom with the old Greek writers. Babylon seems to have been enlarged by building walls when the Confederation power was developing, subsequently centered at Nineveh.

We have no kings of either Babylon or Assyria before the Flood or Dispersion, and the small kingdoms of six Royal Cities are doubtless an example of the petty dynasties existing in Egypt about the same time. Indeed Mizraim, the original name of Egypt, was the uncle of Nimrod. (Compare Gen. xi. 6 and 11 with chapter 1. 11.)

* This was the Dispersion, soon after the Confusion of Tongues, which took place about a century after the Flood. According to a calculation by Dr. Gyles Strauchus, population beginning with 8 persons, could increase in 100 years to 32,768, without twins or triplets which it is said were common in early times. But this rate was not so rapid as that of the Israelites in Egypt.

It will thus be seen that the line of time which I give in this book is one determined by astronomical data, and cannot be controverted. It is indeed supported by five astronomical lines and extends from Adam to the present time. Nothing is left to individual judgment. It is that known as the Hebrew version; but this is because it is the only one which bears the test of the controlling dates of astronomical cycles. As such it must hold its place whatever else may be stated concerning Chinese mythology. It is very remarkable that where reliable Chaldæan, Chinese, or Egyptian history commences, it is close to the period known as the Dispersion. Before this the tradition of these nations states that they were governed by gods, which is a reference to the patriarchs whose long lives and position entitled them to be regarded as "Sons of God." My close and careful investigations show me that prior to the dispersion there is no history, monumental or otherwise, except that obtained through the Hebrews. The epoch of Menes, which commenced the dynasties of Egypt, drawn up by Manetho, the priest of Heliopolis, three centuries B.C. began after the dispersion. Thus we have

The Scriptural account, about 1770, A.M.
Beginning of Chaldæan history 1770 „
Chinese history, the Hia ... 1796 „
Egyptian Epoch of Meno ... 1896 „

The Hebrew text gives us no precise date for the Dispersion, but it is easy to see that it was rather better than a century after the Flood. The Babylonian cuneiform tablets are copies of records made by the Accadians who used the cuneiform system of writing and built the great cities of Chaldæa mentioned in Gen. x. 10., as Accad, &c.

I am therefore of opinion that as the Chaldæan, Chinese, and Egyptian histories commence with the Dispersion, the mythological references are fragmentary allusions to the patriarchal period, which for its great scientific character we are bound to accept. Manetho states that the government of the Egyptians was first by gods; the Chinese state that they were ruled by gods and god-descended men, and the system of time they keep is lunar like that of the Antediluvians, Chaldæans, ancient Babylonians, and Hebrews; and it is also plain that the great Pyramid of Egypt was built by Cheops who flourished 120 years after the Dispersion.

CONSECUTIVE OUTLINE of SECULAR HISTORY FROM THE DISPERSION.

————o————

1770 was about the Dispersion from Babel.

A.M.	CHALDÆAN.	B.C.
1770	Beginning of Chaldæan Empire	2226
2730	Chaldæan Empire ceased, 960 yrs.	1266

BABYLONIAN and ASSYRIAN.

A.M.		B.C.
2730	Bel-lush, one of series of 4 kings	1266
2729	To the fourth King	1267
2769	Ninip-pal-eser first of 5 kings	1227
2789	Assur-dan ruled Bel's people	1207
2819	Mutag-gil-nuska his son ...	1177
2839	Assur-risilim son of preceding	1157
2869	Tugulti-pal-eser I, his son ...	1127
3094	Tugulti-ninip II.	902
3100	Assur-dani-pal	896
3144	Shalmaneser II, son of preceding	852
3233	Pul probly. Iva-lush, 2 Kings xv.	763
3260	Tiglath-pileser, II, 2 Kings xv.	736
3274	Sargon do.	722
3293	Sennacherib, 2 Chron. xxxii. 1	703
3317	Essarhaddon, 2 Kings xix. 37.	679
3330	Assur-emit-ili	666
3371	Saracus, or Sardanapalus II. ...	625
3371	Nebopolasser the Babylonian ...	625
3398	Nebuchadnezzar, 2 Kings xxv. 1.	598
3443	Evil-Merodach	553
3450	Lambynetus and Beltshazzar ...	546

MEDES and PERSIANS.

A.M.		B.C.
3466	Darius the Mede, Dan.ix 1, bgn. e	530
3468	Cyrus, Dan. x. 1. Began g	528
3475	Cambyses, began on solar cycle n	521
3482	Smerdis, usurper, part of a year	
3483	Darius Hystaspes, Hag. i., Bgn g	513
3518	Xerxes (Ahasuerus of Esther) l	478
3538	Artaxerxes Longimanus,Ne.ii.1.b	458

GRECIANS.

A.M.		B.C.
3579	Grecians masters over Persians	417
3668	Alexander the Great ascended	336

ROMANS.

A.M.		B.C.
3850	Romans conquered Greece ...	146
3892	Rome mistress of the World ...	104

GREAT BRITAIN.

A.M.		A.D.
4049	Britain made a Roman province 50	A.D.
4419	Roman power ended in Britain 420	„
5065	Norman Conquest by Wm. I. 1066	„
5460	Edward IV., House of York 1461	„
5648	Charles I. beheaded ... 1649	„
5609	Discovery of Jupiter's moons 1610	„
5881	Victoria: God save the Queen 1882	„

To show the progression of history, it is always best to give the A.M. year. The B.C. year breaks the line of view. In the above outline the years are not always to be considered as correct, excepting such as are lettered from the solar cycle, for example, l. e. g. n. &c. The other years must be regarded as approximate. The outline cannot start earlier than the Dispersion, because we have no secular history, verbal or monumental, prior to that period. The greatest antiquities in the British Museum are Egyptian, but they are all subsequent to the Dispersion. By eclipses and ancient inscriptions, we shall obtain more reigns of contemporary monarchs, with scripture, as we have several of Egypt, Babylon, &c.; we shall then classify Manetho's dynasties of Upper and Lower Egypt, now found to be not successive but contemporary, as are others of his lists.

CUNEIFORM INSCRIPTIONS OF THE DELUGE.

THE CHALDEAN RECORDS.

Mr. H. Rassam, the Assyrian explorer (as explained by himself to me) was fortunate in discovering a large number of cuneiform tablets on which were written an account of the Flood and which had formed part of the library of Assur-bani-pal II. (called Sardanapulus by the old Greek writers) who reigned in Nineveh from 3330 to 3371. The tablets were copies of others much older, evidently in the time of Sargon I., who was a great Elamite king, reigning about a quarter of a century before the Assyrian empire began in 2076. The older tablets were written in the Semitic-Babylonian language. By this fact we know that they have come from the royal city of Erech, where we find other inscriptions showing their connection with the descendents of Shem. We know also that Sargon I., who reigned at Akkad about 400 years after the Flood, subdued Erech and probably brought the original tablets from thence to his own city, or made copies from them in order to enrich his great library at Akkad (called Accad in Gen. x. 10). The inscriptions of Sargon are in the same language. Thirteen centuries later these same tablets appear to have been in the library of Assur-bani-pal II., who had translations made from them, as is seen by the fact that each tablet written by the scribes of Assur-bani-pal II., have a "colophon," at foot, stating that it is a copy of an original document. It is also stated in some places that the original is defective. The tablets of Assur-bani-pal are now in the British Museum, those which were shown to me are much broken in some places, and often defective in others, so that in translating them into English, blanks are left. I give the translations. The figures refer to the lines.

The story shows by the introduction that some monarch, whom the late Mr. G. Smith has called Izdubar, because the phonetic name cannot be understood), fell sick, and on recovery went to see a patriarch named Sisit—the Xisthurus of the Greeks, who was saved by a ship during the deluge—who was supposed to have attained immortality. This might be owing to the great age he had already lived. The purport of the visit of Izdubar was to ascertain how Sisit became immortal, and to learn if he also could become immortal. Sisit, in replying to questions, said :—

19. He ...... spoke to me thus
21. make a great ship for thee......
22. I will destroy the sinners and life......
23. Cause to go in the seed of life, all of it to preserve them.
24. The ship which thou shalt make,
25. ......cubits shall be the length measure.
26. ......cubits its breadth and height.
27. Into the deep launch it.
   Here 15 lines or more are lost.
79. I collected of the seed of life.
80. I caused to go into the ship, all my male and female servants,
81. the beasts of the field, and the sons of the family, I caused to go up.
82. A flood Shamas made, and
83. he spake, saying in the night, "I will cause it to rain from heaven heavily;
84. enter the ship and shut thy door."
85. A Flood he raised,
86. He spake, in the night
87. In the day I held his festival [Sabbath]
88. the day which he had appointed,
89. I entered the ship and shut my door.
90. To guide the ship Buzur-adir-abi, a pilot,
91. the palace I gave to his hand.
92. The raging of a storm in the morning
93. arose, from the horizon extending.
94. Vul in the midst of it thundered.
101. The Flood reached to heaven.
102. The bright earth to a waste was turned,
103. the surface like ...... it swept.
104. It destroyed all life on face of earth.
105. The tempest reached to heaven.

106. Brother saw not his brother, it did not spare the people. In heaven
107. the gods feared the tempest and
103. sought refuge; they ascended to the heaven of Ana.
   Then follows more about the gods in fear, and a speech by the great goddess Ishtar, "The world to sin has turned." The gods concerning the spirits wept with her.
121. Six days and nights passed.
122. On the seventh day the storm calmed,
125. The sea he caused to dry.
127. The whole mankind who turned to sin
128. Like reeds their corpses floated,
129. I opened the window and the light broke in, over my refuge
130. it passed. I sat still and
131. Over my refuge came peace.
132. I was carried over the shore on the sea.
133. For 12 measures it rose over the land.
134. To the country of Nizir went the ship.
135. The mountain Nizir stopped the ship, and to pass over it was no able,
138. For 6 days mountain Nizer the same.
139. On the 7th day, in the course of it
140. I sent forth a dove. It went, searched. but a resting place did not find.
141. It returned. I sent forth a swallow.
142. It left, a resting place it did not find. It returned.
143. I sent forth a raven. It left. Corpses on the water it saw and did eat.
145. It wandered away and did not return.

147. I sent the animals forth to the four winds. I poured out a libation.
148. I built an altar on the mountain peak.
151. The gods collected.
152. Like birds over the sacrifice gathered.
153. From of old the great God in his course,
154. great brightness of Anu had created.
154. When the glory of these gods, as of Ukni stone, on my countenance
155. I could not endure. I prayed that
156. for ever I might not endure it.
157. May the gods come to my altar,
158. May Bel not come to my altar,
159. For not considering, he made tempest
160. and my people consigned to the deep
161. in justice; also Bel in his course
162. saw the ship, and Bel went with anger to the gods and spirits, saying:
163. "Let not any come out alive; let not a man be saved from the deep."
164. Ninip said to the warrior Bel,
165. "Who then will be saved?"
167. Hea said to the warrior [Justice] Bel:
168. "Thou prince of the gods, warrior,
169. when angry a tempest thou madest.
170. The doer of sin did his sin, the doer of evil did his evil.
171. May the exalted not be broken, may

the captive not be delivered.
172. Instead of thee making a tempest, **may** lions increase and men be reduced.
173. Instead of making a tempest, may leopards increase and men be reduced.
174. Instead of tempest may famine happen and the country be destroyed.
175. Instead of thee making a tempest may pestilence rise and men be reduced."
176. I did not peer into the wisdom of gods.
177. Reverent and attentive, a dream they sent and wisdom of the gods I heard.
178. When his judgment was accomplished Bel went up to the midst of the ship.
179. He took my hand and brought me out.
180. He caused my wife to be brought out.
181. He purified the country. He establish- a covenant and took the people.

The tablets then go on to say that Sisit after this went to dwell in a remote place, at the mouth of the rivers, and Izdubar is informed that the life he seeks after he shall gain. A scarlet cloth is to be placed on his head, such as Sisit had on his head when he entered the ship. By the request of the wife of Sisit, Izdubar is purified.

As we find records of Izdubar hunting and wrestling with lions, he must be Nimrod.

The general facts of the cuneiform records, which seem to have been written from tradition, agree with those of Scripture, such as the cause of the deluge being a punishment for the wickedness of the world, the universality of the Flood by the great height of the waters and particularly by taking birds into the huge "palace," collecting the beasts of the field, sending out a dove and afterwards a raven, the offering up of a sacrifice on leaving the ark and a covenant made by the Deity. The statement about taking male and female servants into the ark is considered by some men as reasonable, in order to assist in attending to the animals. It is also regarded as aiding our ideas of population, 100 years afterwards, when the confusion of tongues occurred. The absence of dates is a marked feature; but they would be lost by tradition. The records of Scripture are evidently from the diary of Noah when in the ark, and preserved in patriarchal families The diary gives 10 dates, expressed or implied. They are all correct on the solar cycle, both the days of the week and the dates of the months being seventh, or Sabbath days, of the year 1656, which Genesis v. supplies as the year of the Flood. I know of no other records in the world which are so precise and astronomical as those of the deluge. The seventh days are in unbroken succession from the first Sabbath in Creation year, which begins the solar cycle. It is scientific and imperishable history.

CUNEIFORM RECORDS OF CREATION.

The cuneiform records of Creation, found beneath the mounds and ruins of Nineveh, by the late Mr. George Smith, the cost of whose explorations were defrayed by the proprietors of the London "Daily Telegraph," are of similar character to those of the Deluge and are copies of older tablets from Babylonia. They consist of a series from Creation to some period after the fall of man. Linked with them he also found others detailing the building of the Tower of Babel, the confusion of tongues, and Dispersion. His good fortune was further increased by discovering a tablet about the fallen angels and the origin of evil. They seem to have originally been written about 300 years after the Flood. The narrative of the period of Creation begins with a description of chaos when monsters existed, presided over by a goddess. Creation was by stages, the gods surveying the work as it proceeded. The Divine work culminated in the creation of man, who was made upright, free from evil, and endowed with speech. These ancient records from Babylonia, the source of early human society, are valuable to us. They show us what was commonly believed. Man was created, not evolved, and he was endowed with speech when he was formed. (See Smith's "Chaldean Records of Creation.")

KINGS OF EGYPT.

Historical Table vii.

Compiled according to the latest monumental history of Egypt, and compared with Biblical and Assyrian records.

———————

Statements about the existence of Egyptian Dynasties before the dispersion in 1770, A.M., made by men who shut their eyes against all astronomical phenomena, by which time is produced and measured, still remain without proof, whilst the evidence for disproving such statements is continually increasing.

BIRD'S EYE VIEW OF EGYPTIAN DYNASTIES, upon an Astronomical Scale.

The year for the commencement of Dynsties is A.M. and sometimes approximate. The figures in the Eclipse column are centuries. Indebtedness for the subjoined arrangement of Dynasties is acknowledged to Brugsch, Bunsen, Wilkinson, Poole, and Rawlinson. The cycle of the total lunar eclipse No. 8 ● (repeating its date), is 649 solar years.

1770 — 1. Below Delta in South East.

2. Delta, 1790.

3. Memphite. 1870.

11. Theban 4. Memphite, 1940, Pyramid builders.
or

2018 — 12. Diospolitan 15. Shepherds,
Invasion of

16. Sheps. 5. Memphite driven
to Ethiopia by Shep-

2160 — 13. Diospolitan.
14. Xoite.

17. Sheps. 6 Ethiopian.
& Diospltn 7 8 9 10
no trace.

2235 — 18. Diospolitan.
NEW EMPIRE

2427 — 19. Diospolitan.

2558 — 20. Diospolitan or Theban.

2778 — 21. Tanite at Thebes.

3029 — 22. Bubastite,—Shishak.

3142 — 23. Tanite.

The New Empire had dominion over all Egypt, the collateral dynasties being abolished. No. 7. existed 70 days. Nos. 8, 9, 10 have no kings' names.

3226 — 24. Saite.
3272 — 25. Ethiopia
3334 — 26. Saite

3479 — This year Egypt was conquered by Cambyses, the Persian

June 15, 1767. ● 1756 Dispersion.
Lunar Eclipse,
No 5. line ii. 1

2

3

2084 Abraham in
Egypt.

4

5

2275 Joseph sold
into Egypt.

6

June 15, 2416 ● 2433 Moses adopt-
Lunar Eclipse, ed by Pharaoh's
No. 5, line ii. daughter.

8 2513 Exodus.

9

10

11

12

June 15 3065, 13 3033 Jerusalem
Lunar Eclipse taken by Shishak.
No. 5, line ii.

14

3284 So or Sevah
2 Kings xvii. 4.

15

16 3388 Necho,
Jer. xlvi.
3410 Hophrah,
Jer. xliv. 30.

17

EGYPTIAN HISTORY.

THE PHARAOHS OF SCRIPTURE, ETC.

THE ancient name of Egypt was Mizraim. (See Genesis x. 6 and 13, 1. 2; and 1 Chronicles i. 8.) This Mizraim was one of the sons of Ham, who at the dispersion occupied North Africa. The Assyrians called it Musr, and the Persians named it Mudraya. It was the Greeks who first called it Egypt. Mizraim is thought to be the Hebrew plural of Mizr.

Great care has to be taken in drawing up a line of consecutive history of Egypt as the Egyptians omitted to distinguish the sole reign of a monarch from his joint reign with others. A monarch might occupy the throne 10 years in conjunction with his father, 32 years alone, and 3 years with his son. In an Egyptian royal list, this is the case with Usertesen I., yet he is credited with 45 years.

Manetho, the priest of Heliopolis, who drew up the Egyptian dynasties three centuries B.C., did not mark whether they were contemporaneous or consecutive. Joint reigns were also counted by him as if they were successive, and we find him frequently contradicted by monumental history. It is also evident that there does not seem to have been population sufficient to form great nations before the 18th dynasty.

Brugsch says five of the early dynasties were collateral, Bunsen says seven, and Wilkinson and Stuart Poole twelve.

We find no monumental history of Egypt prior to the dispersion, and the orientation of the great pyramid shows that according to the precession of the equinoxes, the slant passage of the pyramid pointed to the star a in the constellation Dragonis as the pole star in the year 2000 A.M., which was 1996 B.C. This, therefore, must have been about the time in which the pyramids were built, about two centuries after the dispersion.

The best way to understand the first seventeen dynasties is to compare them with the period of other ancient histories. Assyrian history gives us nothing approximating to nationality before 2304, and if we turn to the fuller records of Biblical history, we read of every little city having a king. The reason of which is that after the flood government would of necessity exist in cities before population was large enough to form nations. It is fair, however, to expect that Egypt, as a fertile country, independent of rain, would draw men from Asia, and thus obtain the means of constituting larger governments, and indeed building pyramids of massive but plain proportions. But the larger governments would not likely extend beyond 200 miles, and thus in a well-watered region, and its neighbourhood, there was proper room for half-a-dozen kings to reign contemporaneously. When we come down to 2235, (18th dynasty), things evidently took a wider shape.

According to Bunsen, the kingdom of Menes was divided, one branch reigning in Upper and the other in Lower Egypt. Each came to an end about the same time and the kingdom was re-united.

Manetho, the priest of Heliopolis, who drew up the dynasties of Egypt, says that the country was previously ruled by gods, which was probably a mythological allusion to the long lives of the patriarchs.

The dispersion was about 1756 A.M.

DYNASTY I.

A.M.		Reigned Years.
1756	Menes, the Thinite, ...	62

The name is thought to have some similarity to the Hebrew Mizraim, son of Cush (it being plural of Mizr) and with Musar, the Assyrian name of Egypt. (See Gen. x. 6.)

1818	Athothis, his son, ...	56
1874	Kenkenes, his son, ...	31
1905	Ouenephes, his son, ...	23
1928	Usaphaidos, his son, ...	20
1948	Miebiedos, (Niebaes), his son, ...	26
1974	Semempses, his son, ...	18
1922	Biemieches, his son, ...	26

Thus ending in 2018 ... 262

The first dynasty of Manetho according to the Arminian version of Eusebius, is very straightforward It was all father and son, like that of the Biblical patriarchs.

As this dynasty reaches the 12th, of which there is monumental and Scriptural history, it proves that the intervening were not in the imperial line, but branching, (see Bird's Eye View of Dynasties), and accords with the statements of Brugsch, Bunsen, Wilkinson, and Stuart Poole, that there were several dynasties existing at one time.

For DYNASTIES II., III., IV., V., VI., VII., VIII., IX., X. and XI., see Bird's Eye View of Dynasties.

Rawlinson says that the 4th and 5th were certainly consecutive, and probably the 6th followed the 5th. The 7th, 8th, 9th, and 10th were collateral. Manetho did not give their names. The 14th is as unknown as the 7th, 8th, 9th, and 10th. Monuments confirm only six out of the first fourteen dynasties.

THE PHARAOHS OF SCRIPTURE.

Considerable excitement has arisen amongst historians and Biblical students by the discovery of the embalmed body of Ramses II., the Pharaoh of Egypt in the time of Moses, which was found with almost a score of other embalmed kings and notables of ancient Egypt, at Dayr-el-Bahiri, in a quarry on the 10th July, 1881. The discovery can only be equalled by that of the reading of the cuneiform account of the Deluge by the late Mr. George Smith, which led to many very important results.

By the assistance of monumental history recently obtained we have found not only the name of the imperial Pharaoh of Moses, but also those of the Exodus, the period when Joseph was in Egypt, and the Pharaoh when Abraham was in that country. The reader will obtain in the present article the results which have been realised, which it may be added have been secured by tabulating the number of years reigned by the respective Pharaohs of the 12th to the 19th dynasties given by monumental records, and controlled by the measurements of astronomical lines of time. The first fact which presents itself in connection with the investigation is, that the Pharaoh of Moses was one who reigned a long period, because in Exod. ii. 15, Moses fled from the face of Pharaoh and went to Midian, where he remained 40 years. (Acts vii. 23, 30). Almighty God then telling him that they were dead who sought his life. To meet these circumstances we have the reign of Ramses II., who was on the throne 68 years, having been called to reign conjointly with his father, Seti I., when he was but seven years old. Such united reigns were customary with the Egyptians. The next fact is, that Meneptah, the successor of Ramses II., was the Pharaoh of the Exodus. He is spoken of as a man of great indecision of character, which perhaps much explains his versatile dealings with Moses concerning the Exodus. This Exodus seems to have occurred at the close of some wars which Meneptah had with revolted tribes, and hence we may place the departure of the Israelites in the middle of his reign of eight years. From this point we may begin.

Biblical history and astronomical measurement give the third day of the week (Tuesday), 15th of the 7th month (civil), 2515 A.M. for the Exodus It could be no other date or day of the month, still less any other year, as the natural results of the solar cycle show. If then we take up the line of kings of Egypt from this point—putting the ascension of Meneptah as 2508, we then arrive at a series of facts which agree with Biblical history and illustrate the Scriptural words, not only showing that Meneptah was the Pharaoh of the Exodus, and Ramses the Pharaoh of Moses, but also that Thothmes I. was on the throne when Joseph was sold into Egypt, that Thothmes II. was king when Joseph was in prison, and that Thothmes III. was the Pharaoh who dreamed of the seven years famine and seven years of plenty. The same tabular way of dealing with the number of years required shows that Usertesen II., of the 12th dynasty, was king when Abraham entered Egypt in the year 2804 A.M. during a severe famine of which we have a monumental representation. (Gen. xii. 10.) Thus one fact respecting Ramses II., the long reign of whom fits the the Biblical record, enables us to reach half-a-dozen others. We know that when the new empire began with the 18th dynasty that its most prominent feature was the expulsion of the Shepherds, or Hykshos, and the union of all the kingdoms under the sceptre of Aahmes I. also called Amosis. The history of Joseph also fully shows that "from one end of Egypt, even unto the other," that this was the political condition of the country in his time, and in addition to this we have definite expressions in the Biblical records which settle the name of the Royal dreamer. The reader will see by the peculiar phrasiology of Genesis xli. 13, that the Pharaoh to whom the butler was speaking could not be the king who hanged the baker. Addressing Pharaoh the butler says : "Me *he* restored unto mine office, and him *he* hanged." This plainly shows that these acts were those of the preceding king. Secondly, when the reigns of the kings of Egypt are tabulated from the Hebrew exodus in 2513—a date which for its astronomical importance no man can alter, and one which Usher and all Biblical scholars agree to hold—we find that Thothmes III. was the Pharaoh when Joseph was promoted. He ascended the throne in 2289 and reigned 54 years. This is a long period and proves that he could not have been the Pharaoh referred to by the butler, as reigning when Joseph was in prison.

Jacob blessed Pharaoh, and blessed he seems to have been, not only with a long reign, which was not the case with his two predecessors or two successors, but we are told by monumental history that his reign was one of the most glorious of Egyptian monarchs. Investigation shows that Thothmes I., who reigned 10 years, ascended in 2273, and Biblical history indicates that Joseph was sold into Egypt in 2276, when he was 17 years old. Thothmes II. would therefore become king in 2283. As he reigned but 6 years, the surrounding circumstances show that he was the monarch who hanged the baker and restored the butler. In his reign Joseph was in prison, and thus when in 2289 the throne became that of Thothmes III., the peculiar words already referred to could be used by the butler, who spoke to the king of another Pharaoh who was designated by the third personal pronoun " he," instead of thou.

In the next place it is evident from the date of the dream, "after two full years," (Gen. xli. 1.) that is a full lunar and full solar year, or, more definitely the particular period when both years were full, that the year was 2289. This chronological expression is found in other parts of scripture, but never means 24 months. It refers to the intercalary period and is used by St. Luke (Acts xxiv, 27.) as the period of St. Paul's embarkation, but has erroneously been translated as though the apostle was kept two years in prison—a palpable contradiction of his high calling.

There is yet another incident of importance in connection with this interesting coincidence of Egyptian and Biblical history. When Jacob was introduced by Joseph to Pharaoh, the king said to him, "How old art thou?" which are just such words as a comparatively young sovereign would use, who reigned 44 years after this interview.

To see the full force of all the evidence of Thothmes III. being the Pharaoh who dreamed of the famine, we must remember that he belonged to the glorious 18th dynasty with which the new empire began, the leading feature of which was, the Shepherd invaders had been expelled by its first monarch Aahmes, known as Amosis I. He captured their city, and the war with the invaders, began by the last kings of the 17th dynasty, was concluded by him. All the contemporary dynasties were ended by Aahmes, for by marrying an Ethiopian lady, he united all Egypt under one sceptre. These were events which induced Manetho, the historian, to begin his second volume with the 18th dynasty, and it is evident by the reading of the history of Joseph that all Egypt was subject to one Pharaoh in his time. He "bought all the land of Egypt," and " as for the people, he removed them to cities, from one end of the borders of Egypt, even to the other end thereof." (Gen. xlvii. 20, 21). There was no Shepherd dynasty in his time, a fact which we again see by his father and brethren having to dwell apart from the Egyptians to whom shepherds were an abomination.

But to make all these interesting discoveries plain, the following are extracts from the tables of the reigns and dynasties compiled by the British Chronological Association. The number of years reigned is from monumental history, and the year of the world is that consecutively obtained by the Association.

DYNASTY XII.

2018	Amenemha I.	...	...	...	16
2034	Usertesen I.	...	...	...	32
2066	Amenemha II.	...	...	...	6
2072	Usertesen II.	...	...	...	18

Of the reign of this King we have a monumental representation of the arrival of 37 persons in Egypt, of the Semitic race, during a famine. Their visages and dress show them to be Hebrews, and probably Abraham and his brother Lot with their " men servants," (Gen. xii. 10, 16) According to Biblical history, Abraham "went down into Egypt" in 2083-4, thus indicating that he visited Upper Egypt where the monarchs of this dynasty reigned.

2085	Amenhama III.	...	...	...	42
2126	Usertesen III.	...	...	...	26
2152	Amenemha IV.	...	...	...	8

DYNASTIES XIII, XIV. XV, XVI, and XVII.

Professor Rawlinson says the 13th, 14th, 15th and 16th are supposed to have reigned contemporaneously in four places, the 13th at Thebis, holding possession of middle and upper Egypt, the 14th at Xois in the centre of the Delta, and the 15th and 16th, which were Shepherds, in some portion of the eastern districts, (See Bird's Eye View of Dynasties). To this may be added that the 17th was partly Shepherds and Theban, reigning side by side, as Manetho admits. But there appears about 75 years to be due to the 13th. Manetho's list (Kenrick) puts 13th as 60 kings during 453 years, and 14th as 76 kings for 184 years, evidently meanin consecutive totals of all dynasties from the beginning by Menes. In a similar way he gives us 70 unnamed monarchs for the 8th dynasty which did not last twelve months. His method is often confusing.

See Appendix to Egyptian History.

DYNASTY XVIII.

New Empire.

A.M.

2235 Aahmes, also called Amosis I., ascended in 1761, B.C., and reigned 25 years. He completed the overthrow of the Shepherds, and by marrying an Ethiopian Queen, Nefertari, who was of black but good features, he united all Egypt under one sceptre.

2260 Amenhotep I, ascended and reigned 13 years conjointly with Nefertari, his mother. Was also called Ser-ka-ra.

2273 Thothmes I. ascended, reigned 10 yrs.
    2276, in this year Joseph was sold into
10   Egypt when 17 years old, 1720 B.C.
——   Genesis xxxvii. 2, 28.

2283......Thothmes II. ascends, reign 6 yrs.
    He hanged the baker, Gen. xli 13.
6 13 Joseph was 30; his 13th in Egypt.

2289 2289 Thothmes III. ascends, reigns 54 years. In his 1st he dreamed of the famine, and raised Joseph to dignity (Gen. xli. 46.)*

In these reigns, obtained from monumental history, we have a splendid verification of the true years, both of Biblical and Egyptian events. The facts of both fit admirably. According to the dream Pharaoh was to see both the seven years of plenty and the famine, but Thothmes II. could not, as he reigned only 6 years. But he must have been the Pharaoh spoken of as "he" by the butler when addressing Thothmes III., who had no successor until 54 years afterwards. As to the Biblical years, it must not be forgotten that they are proved by the solar cycle and are astronomical, either in succession from the Flood dates, or reversed from the Exodus.

2342 Amenhotep II. ascends 1654 B.C., and reigns 7 years.

2350 Thothmes IV. ascends; reigns 8 years.

2358 Amenhotep III. ascended and reigned 36 years. During his reign a heresy arose; probably after the death of Joseph in 2369, soon after which the sun was worshipped.

2393 Amenhotep IV ascends; reign 12 yrs. Horus, an heretical king, and period of anarchy covered 22 years.

DYNASTY XIX.

2427 Ramses I. ascended in 1569 B.C. and reigned 1½ years.

2428 Seti I. ascends and reigns 12 yrs alone.
    2433 Moses born in Seti's 5th year.
12   7 years afterwards Ramses II. reigns
—— ——   conjointly with his father.

2440 2440 Ramses II. ascends and reigns 68 years.† Moses fled in 33rd,
33   Exod. ii. 15 & Acts vii. 23, 29.
——   See Appendix B and C.
2473
40 Moses abides 40 years in Median, (Ex. vii. 7, and Acts vii. 23, 30)
68   of which Ramses was 35 years
——   on the throne.

2508 ......Meneptah ascends; reigns 8 years.
——   He was the Pharaoh of Exodus.

2513 Moses returned to Egypt and the exodus takes place in the 5th of
8   Meneptah, on 15th of 7th month.

2516 Seti II. ascends; reigns about 12 yrs.

2528 Sephtah and Tausri (king and queen) ascend and reign 7 years.

2535 Anarchy and heretical kings existed 23 years, and 19th dynasty ended.

The following tables from Egyptian and Biblical history prove Thothmes III. was the dreamer.

Thothmes III asnd, 2289	Joseph was 30 in 1st
He reigns, years 54	year of Thothmes 2289
Amenhotep II. reigns 7	Genesis xli. 46.
Thothmes IV. reigns 8	Jacob enters Egypt
Amenhotep III. reigns 36	after 7 yrs. plenty
Amenhotep IV. reigns 12	and 2 of famine - 9
Horus and Anarchy 22	Gen. xlv. 6.
Ramses I. reigned - 1	His children were 215
Seti I. reigns alone - 12	years there,---half
Ramses II. reigns - 68	of the 430. Gal. iii.
Meneptah reigned be-	17. The sojourn be-
fore Exodus - - 4	gan with Abraham

Egyptian history 2513	Biblical history 2513

† Ramses II. was the oppressor of the Israelites
  He began to reign with his father in - - 2440
  Deprived Israelites of their privileges in
    his 21st year, - - - - 21
  He held them as slaves - - - - 47

He died in 2505

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* The year 2289, at the beginning of which Thothmes III. ascended, is also obtained by noticing that the Exodus of the Israelites, after the sojourn of 430 years commencing with Abraham, took place on Tuesday, the 15th of the 7th civil (or 1st sacred) month, in 2513; and when Jacob entered Egypt, half of the 430 years was ended, viz., 215 years. The sojourn began on "the selfsame day" (See Ex. xii. 41, 51) that is on the same day of the week and date of the month when Abraham left the city of Ur. As Moses, who was a good chronologist, tells us the exodus was at "the end of the 430 years," it requires the middle of 2082 to the middle of 2513, to cover 430 complete years, otherwise, in common computation, 2082 and 340 would only be 2512. On looking at the Ancient Hebrew Solar Cycle, for 2082, which was table *a*, it will be seen that the days of the week had the same dates of the month as those of the year 2513, table *l*, thus producing "the selfsame day" which Moses so emphatically speaks of.

DYNASTY XX.

Monumental history is incomplete respecting this dynasty. It lasted about 283 years and was contemporary with the Judges of Hebrew history. The reigns average 22 years.

2558 Amenmes ascended, 1438 B.C., length of reign unknown.
...... Setinekht, reigned 4 years alone.
...... Rameses III. reigned 31 years.
...... Rameses IV., length of reign unknown
...... *Rameses V.*
...... *Rameses VI.* long reign.
...... *Rameses VII.* short reign.
...... *Rameses VIII.*
...... Rameses IX. His 16th is recorded.
...... *Rameses X.*
...... *Rameses XI.*
...... Rameses XII. reigned at least 33 yrs.
...... Rameses XIII. at least 26 years.

An astronomical ceiling in the ancient palace of these kings indicates a date of 2730; and eclipses mentioned by Assyrian monarchs, as well as the determination of the dates of the month on the Ancient Hebrew Solar Cycle, a splendid astronomical line of time, show that the 20th and 21st dynasties could only have existed between 2558 and 3029. We cannot now move any part of Egyptian history without also moving Hebrew history, and that again cannot be disturbed without rejecting Assyrian records.

DYNASTY XXI.

This dynasty of priests and kings, with a probable interval, lasted about 188 years.

2841 Her-hor. Length of reign unknown, but his 5th is mentioned.
...... Piankh, his son.
...... Pintom I. reigned 25 years.
...... Pintom II. Length of reign unknown
...... Parseben-she. Do. do.
...... Hor-Par-seben-she.
...... Men-kheper-ra, reigned at least 25 yrs.
2992 Pintom III. reigned 36 years. Solomon married his daughter. See Appendix note E. Egyptian history.
3028 This dynasty ended; average 23 years.

DYNASTY XXII.

3029 Shishak I. ascended 967 B.C., and reigned 21 years. He is mentioned in 1. Kings xi. 40, and also in xiv. 25. The latter is a capital proof of the precise period of his reign.
3050 Osarkon I., also called Sekhen-kheprra-sotop-en-ra. He was the Sarkon or Zerah of scripture, and reigned 15 years. See 2 Chron. xiv. 9.
3065 Takelot I. ascended; reigned 4 years.
3069 Osarkon II. ascends; reigns 22 years.
3091 Shishak II. ascends; reign unknown.
...... Takelot II. years reigned unknown.
...... Shishak III. do. do.
...... Shishak IV. do. do.
3142 This dynasty ended.

DYNASTY XXIII.

3142 No-Apsis ascended 854 B.C.
No other king is known of this dynasty which lasted 84 years.

DYANSTY XXIV.

3226 Bokchoris ascends 770 B.C., and reigns 46 years. He was burnt to death. The dynasty was only one reign.

DYNASTY XXV.

3270 Sabaco ascended 724 B.C., reign 12 yrs.
3282 Shabatok ascends and reigns 14 years. He was also called Sibahi or Siveh, and was the "So" of scripture. See 2 Kings xvii. 4. He ascended in the 5th of Hoseah.
3298 Tirharkah ascended and reigned 26 years. He was contemporary with Sennacherib and Esarhaddon of Assyria and Hezekiah of Jerusalem. See 2 Kings xix. 9. In this chapter all these four kings are mentioned.
3328 Six years are required here, probably owing to change of dynasty.

Hebrew or "First Line of Time," and Assyrian history, published in minute and consecutive form by the British Chronological Association, should be consulted for comparison with all dynasties.

DYNASTY XXVI.

3334 Psammatichus I. ascended 662 B.C., and reigned 54 years.
3388 Necho ascends and reigns 16 years. See Jeremiah xlvi. 2.
3404 Psammatichus II. ascends, reign 6 yrs.
3410 Apries ascended and reigned 25 years. He was also called Hophra. See Jer. xliv. 30.
3435 Amasis ascended, reign 44 years.
3479 Psammatichus III. ascended and had reigned six months when he was conquered by Cambyses, in 517 B.C. See Persian kings.

There were four more dynasties, but history from this point is followed in greater detail by the records of Greece, Rome, &c.

B.C. dates are from 3996, the true year.

CLEOPATRA'S NEEDLE.

The inscription placed on the base of this column in London is very erroneous. Instead of 1500, it was erected about 1700, B.C. Thothmes III., whose reign it speaks of, ascended in 2289, A.M., which was 1707, B.C. Such an error would not have been made if the proper chronological methods had been considered.

See important Concluding Note in the Appendix to Egyptian history.

Note A., Dynasty xvii.

All the difficulties of readers of Egyptian history arise from the want of a knowledge of the contemporary dynasties, the period when each began, and the fact that the 18th was the commencement of the new empire in 2235 by uniting all Egypt under one monarch. Down to the end of the 17th dynasty several of them ran side by side, and when we compare the histories of other countries with the same periods, we see that before population was large enough to be united into nations, every city had a king. All Chaldæan history indicates this, as seen by the scripture records several centuries after Abraham. Read Joshua x. and notice Judges i. 7.

Note B., Dynasty xix.

By a monumental inscription, we find that the first Shepherd dynasty began 400 years before some year of the reign of Rameses II. It is a great pity that the year of the reign was not added, but it was probably Rameses's 43rd, because it is not unlikely that it was the great famine mentioned in Gen. xii. 10, as occurring in 2083, which drove them into a land independent of rain and which, owing to its great population, was, in some parts, well cultivated. The Shepherds maintained their position for 152 years, viz., from 2083 to 2235, and this Mr. George W. Smith, of the British Chronological Association, has pointed out as fully agreeing with other incidents. It was in 2235 that the sword of Aahmes completed the subjection of the Shepherd dynasty, and the new empire began by all Egypt being brought under one sceptre.

Note C., Dynasty xix.

We see again how monumental history of Egypt agrees with Hebrew history by a Pharaoh being 35 years on the throne after Moses fled. This is a confirmation of two Biblical statements: "And it came to pass in process of time the king of Egypt died," This decease is spoken of in reference to the Pharaoh from whom Moses fled, and after Moses had been 40 years in Midian (Exodus ii. 15 and 23); "The Lord said to Moses, go return into Egypt, for all the men are dead which sought thy life," (Exod. iv. 19). It is plain that both passages refer to one king and that he reigned many years. When we take this into consideration, and notice that Rameses II. was the predecessor of Meneptah, the exodus Pharaoh, we have the chronology all settled by the exodus year in scripture and verified by the solar cycle, viz. 2513. We cannot alter the date of the exodus year without greatly reducing the length of the day and the periods of the eclipses. Indeed no man would alter the dates and years of the Bible if he understood that all Biblical years having been lunar and formed of weeks of seven days, they were more astronomical than our own and beyond the power of human alteration.

Note D., Dynasty xix.

As the exodus of the Israelites took place in the reign of Meneptah, it is absolutely certain that we can fix the true period of his short reign of eight years. Allusion has already been made to this in connection with the ascension of Thothmes III., and the year of the ascension of every Egyptian king, corroborated by Assyrian and Hebrew history, requires the same period. To alter the date of the exodus, Tuesday, 15th of the 7th civil month, would not only deny all the statements of Biblical history and the record of Egyptian and Assyrian monuments, but also disarrange the solar system.

Note E., Dynasty xxi.

We get the years reigned by Pintom III. from 1 Kings xi. 14-22. Hadad left Egypt when he heard of David's death in 2989. The Pharaoh who treated him kindly would not be the Pharaoh whose daughter Solomon married (See ix. 16) in 2990, but Menkheper-ra, who from this record reigned, at least 25 years. His son, Pintom III. would be the father of Solomon's wife, and must have reigned from 2992 to 3028—36 years—because Shishak was king of Egypt in 3029. See 1 Kings xi. 40. Men-kheper-ra seems to have died soon after David.

Important Concluding Note.

Wherever there is an Egyptian event, or the name of a Pharaoh, mentioned in the Bible, the year A.M. can be found, first, because scripture history abounds with dates of the month which with a solar cycle built up, like our own, of weeks of seven days, supplies the year; secondly, because all the monumental history of Assyria, now very extensive, confirms Hebrew history. As illustrations of these advantages, 2 Kings xix. contains the names of an Egyptian, Hebrew, and Assyrian King, as contemporaries. It is easy, therefore, to fix the period of the Egptian monarch. Again the Exodus was on Tuesday, 15th of 7th civil (1st sacred) month, and a glance at the solar cycle shows that the date of the month fell on that day of the week in 2513 A.M., the very year obtained by other methods, and also the *only* year which at "the end of the 430 years," produces "the selfsame day" of the week and date of the month. See 2083, and 2513, tables *a* and *l*, of the Ancient Hebrew Solar Cycle. As the Exodus took place in the short reign of Meneptah, it is not difficult to determine the period when he reigned.

WHEN WAS THE GREAT PYRAMID BUILT?

The best way for finding when the great Pyramid, at Gizeh, was built, is by the precession of the equinoxes. The pyramid is so built that its four sides face the four quarters of the heavens—east, west, north and south—and the entrance is by a passage in the centre of the northern side, which first slants downwards and then upwards to a chamber in the centre of the building. It would thus occur, that a person standing at the bottom of the slanting passage would look straight outwards to any star situated on or near the north-pole of the heavens. Such a star would have no motion. But all the other stars would wheel round it in circles, the diameter of which would be according to their distance. At the present time, with us, Polaris is situated close to the northern point of the heavens, which is the result of the axis of the earth always pointing to the north. This pole-star therefore is always seen in one place, like a nail driven into the sky. But this northern point in the heavens has a slow motion performing a circle. It is caused by what is known to astronomers as the precession of the equinoxes, and was first noticed by a chart, or map, which Hipparcus made of all the stars 120 years before Christ was born. By this chart, and others, compared with what we now see, we get the amount of motion made by the precession of the equinoxes in a century. It is 1 degree and 23 minutes, which involves a revolution in 25,773 years. A degree is a line a little more than the diameter of the sun as we see him with the naked eye. By this slow motion, we find that the star Draco, in the constellation of the Dragon, was situated on the north-pole when the great pyramid was built. It would be in the centre of the slanting passage in 1826 to 2170, A.M., say 1969: allow 20 years for building, we have 1989, which was 333 years after the Flood. This agrees with history for the dispersion, or confusion of tongues, was about 1770. It also agrees with Cheops, who built the pyramid, being the 2nd king of the fourth dynasty, which began about 1940. There were several dynasties existing at that time, just as we find six kings reigning in six royal cities in Babylonia and near it, at the same period.

AN IMPORTANT POINT OF HISTORY—SIX KINGDOMS IN ASIA, AND SIX IN EGYPT WERE CONTEMPORARY.

With such an example before us, as the almost simultaneous rise of six kingdoms in the several royal cities of Babylon, Ur, Erech, Larsa, Karrak and Akkad, in Asia, it is surprising that some writers err in regarding the first six kingdoms in Egypt as consecutive. There is nothing in history to warrant the conclusion that the early dynasties of Egyptian kings were not existing together, and during the same period as those in Asia. On the contrary, what testimony we have supports this view, whilst analogy points to the conclusion that what existed in one country would, in the first centuries following the Flood, take place in another. Writers ought to bear in mind that their readers are intelligent and that the date of the Flood is clearly proved by astronomy.

HISTORY BUILT UP—JOSEPH, AMENHOTEP IV., OF EGYPT; KALAMA-SIN OF BABYLON, AND JOSHUA OF ISRAEL.

In 1887, a poor Arab woman, looking for nitrate, found in the ruins of Tel-el-Amarna several curious clay tablets covered with cuneiform characters. This led to a search, and the result was 300 tablets were unearthed, some of which have been purchased for the British Museum, whilst others have gone to Berlin. Investigation shows that they are letters or despatches received by Amenhotep III (Amenophis), the 8th Pharaoh of the 18th dynasty, who it will be seen by the list of kings, ended his reign of 36 years in 2393. Fortunately one of these letters was from Kalama-Sin who became king of Babylon in the same year. The two were therefore contemporaries. See Babylonian Kings. Egypt had prospered during the time of Joseph, who died in the 12th year of Amenhotep III., viz. in 2369, and the letter of Kalama-Sin asks that 3,000 talents of gold might be sent to him. Another despatch is from Abdi-tabu, of Jerusalem, before the Israelites had conquered Palestine. It was addressed to Amenhotep iv., son of the previous Pharaoh, who began to reign in 2963-4, stating that Egypt was beginning to lose her hold on Palestine. The Canaanites and Hittites, it seems, were gaining strength by the gradual formation of a powerful confederation of tribes which 150 years later (2553) formed the foes of conquering Israel (Joshua xi. 3. and xii. 8). The cities of Debir and Lachish, mentioned in the despatch, are those subsequently taken by Joshua (x. 3). We also find that Amenhotep iv. by listening to his beautiful Asiatic wife, gave great offence to the Egyptian priests by introducing the worship of the solar disk, so that he was obliged to leave the city; but he enlarged another, which he called Kuu-en-aten, and by which this heretic Pharaoh was also known. Few discoveries are equal to these, because they confirm the period in which Amenhotep iii. and iv. were on the throne (published in "All Past Time" 10 years previously), and the change from the religion of Joseph.

HISTORY BUILT UP—EGYPTIAN DYNASTY XVIII. CONTINUED.

This interesting period of history is further fixed by the fact that Amenhotep II. conquered Nineveh, and that his successors were lords of Syria and Palestine. The list of "Kings of Assyria" shows that Samsi-Vul began to reign in Nineveh in 2349, which was the last year of Amenhotep II. by whom he was probably placed on the throne: but owing to the subsequent decline of the power of Egypt, as stated by the tablets from Tel-Amarna, the Assyrian king, Bel-kaphapu, began his reign in 2393 by establishing an "independent kingdom," which would mean free from tribute to Egypt. This might arise through the death of Amenhotep in the same year. Thus:

2342 Amenhotep II., who reigned 7 years, conquered Nineveh.
2349 Thothmes IV. followed, reigning 8 years, beginning with Samsi-Vul, of Assyria.
2357 Amenhotep III. in Egypt, 36 years—Contemporaries, Samsi Vul II. and Tritak.
2393 Kalama-Sin, asks him for 3,000 talents of gold. See "Kings of Babylon."
2393 Amenhotep III. died. See "Kings of Egypt."
2393 Amenhotep IV. began in Egypt, and is also known as Kheu-en-aten.
2393 Bel-kaphapu establishes an independent kingdom. See "Kings of Assyria."

To this it may be added that if it be correct that Ismi-Dagon is the same person as the king of Karrak (See Karrak) where some of the early kings of Assyria reigned, the new line began with Samsi-Vul I. We may also remark that applications to Amenhotep III. for gold by Kalama-Sin, of Babylon, Tushratta, king of Northern Mesopotamia, and others, was owing to the fact that the kings of Egypt had, by their conquest of Nubia at this period, obtained possession of the gold mines of that country.

All these incidents are of great interest and show me that we can, by monumental inscriptions, fix the period when the last four Pharaohs of the 18th dynasty reigned. This evidence is important because the names of the Pharaohs are not given in those parts of Scripture referring to Abraham, Joseph, and Moses, or to the periods of the oppression and exodus of the Israelites from Egypt. They are also important because although the exodus in the year 2513½ is well established by Biblical scholars, and was confirmed by astronomical measurements, published in "All Past Time," 1884, yet Mr. Flinders Petrie, in his letter to me in Oct. 1892, insisted that Amenhotep IV. began to reign in 2604, A.M. Miss Amelia Edwards also wrote to me and published a series of letters in "Knowledge" stating that the Exodus was a century later than 2513, whilst a third writer asserted that it was 2400. I mention these things to show that all our discoveries confirm Scripture history. It is all planetary motion from the beginning, so that it is never safe to depart from it.

THE SUBJUGATION OF PALESTINE BY JOSHUA.

Some of the Tel-Amarna records belong to a period 40 years after the exodus, viz., 2553, when Joshua subdued Canaan. They are hasty despatches to the Pharaoh of Egypt as the Lord Protector of Canaan, stating that the land is besieged by the 'Abiri (Hebiri, sounded with a soft a, and meaning Hebrews), and that the rulers fear the end Behold, I say, that the land of the king, my lord, is ruined, as the 'Abiri chief is plundering the entire country.

Another despatch states that some of the people are going over to the Hebrews, who are making rapid conquests, owing to the Egyptian garrisons having been withdrawn. This might be a result of the loss of the army in the Red Sea. The despatch seems to allude to the Gibeonites (Joshua ix. 3—15), who made peace with Joshua by dressing themselves in old clothes and thus pretending that they had come from a far country.

The tablets contain the names of Japhia, king of Gezer, (In Joshua x. 3, he is king of Lachish, but he may have had authority over both cities). Japin, is mentioned as king of Hazor, which is the same as Joshua xi. 1. The name of the king of Jerusalem is doubtful. Major Conder thinks it is Adoni-zedec (Joshua x. 3),

KINGS OF JUDAH AND ISRAEL.

PERSIAN MONARCHS.

EMPERORS OF ROME IN 'FIRST CENTURY.

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Historical Tables v. x. and xi.

REIGNS OF THE KINGS OF JUDAH.
Historical Table V.

A.M.		Reign Recorded
2910	Saul began at the commencement of the civil year. September	
40	See 1 Sam. xiii. 1. He reigned "two years," and his 3rd was Sabbatic.	40
2950	David also began his 7½ in Hebron with the civil year, and then began with the commencement of the sacred year, March, 2957½, to reign 33	
40½	over all Israel in Jerusalem. 2 Sam. v. 5 and 1 Chron. iii. 4.	40½
2990½	Solomon began with the sacred year, before David died in the latter part	
40	of the civil year 2990. 2 Chron. ix. 30.	40
3030½	Reoboham reigned over Judah in Jerusalem. The kingdom divided. His father, Solomon, died in the latter part of 3029, which was a third year of the solar cycle. Rehoboam waited till the end of the sacred "three years," 3030½, and thus followed the example of David in Jerusalem and also Solomon, by beginning his reign with the sacred year. This is the meaning of 2 Chron xi. 17—not three years waiting, which	
17	is another of the numerous chronological errors of translators	17
3047½	Abijah began to reign with the sacred year. 2 Chron. xiii. 1 and 2. He	
3	began in the first half of the 18th of Jeroboam, 3047½	3
3050½	Asa succeeded to the throne in the middle of the 9th year of the solar cycle and his long reign is useful in proving kings of Israel. 2 Chron. xvi. 13.	
40	He begun late in sacred year,—died late in his 41st, just before 3091½	41
3090½	Jehoshophat, 2 Chron. xx. 31. Began in 4th of Ahab, 2 Kings xxii. 41, who	
25	began in the 38th of Asa., 1 Kings xvii. 29...	25
3115½	Jehoram reigned also in consort with his father, 2 Kings viii. 16 He died	
4½	in the intercalary days of 3119, a definite period, 2 Chron. xxi. 5 and 19.	8
3120	Ahaziah, 2 Chron. xxii. 2. He seems not to have begun with the sacred	
1	year. He began same year as Jehu, 2 Kings. ix. 27.	1
3121	Athaliah, usurped the throne as a Queen, perhaps a few days before the civil	
5½	year began, 2 Kings xi. 3, and thus counts 6	6
3126½	Joash began with the sacred year, in the 7th, as it counts on the solar cycle	
40	2 Kings xi, 3, 4. and 2 Chron. xxiii. 1...	40
3166½	Amaziah, 2 Kings xiv. 2 Chron. xxv. 1. He lived 15 years after Jehoash	
29	king of Israel died, verse 25. His reign began in a Sabbatic year... ...	29
3195½	Uzziah (also called Azariah), 2 Chron. xxvi. 3. He died at the end of 3246,	
52	same year as Pekah began in Israel, 2 Kings xv. 27...	52
3247½	Jotham, 2 Chron. xxvii. 1. He began to reign in the 2nd of Pekah, a good	
16	method of proving the reign of two kings, 2 Kings xv. 32	16
3263½	Ahaz, 2 Chron. xxviii. 1. He was distressed by Tiglath-pilezer, the king of	
16	Assyria. He began in 17th of Pekah of Israel	16
3279½	Hezekiah, 2 Chron. xxix. 1. His life was lengthened 15 years, from 3293½	
29	to 3308½. The "third day" was first Sabbath of 2nd sacred month ...	29
3308½	Manasseh, 2 Chron. xxxiii 1. His reign was the longest, 55 complete	
55	years, containing two jubilees, viz., 3312 and 3362. Died 6 months after.	55
3363½	Amon, 2 Chron. xxxiii. 21. He reversed the good work of his father's last	
2	years, and was slain in his own house by his servants	2
3365½	Josiah, 2 Chron. xxxiv. 1. The 2420 years, comprising the Times of the	
30	Gentiles began in 3376½. His reign was about 6 months short of 31 ...	31
3395½	Jehoahaz, 2 Chron. xxxvi. 2. A short reign cannot work with the sacred	
½	year. The name must not be confounded with Jehoahaz of Israel ...	½
3395½	Jehoiakim, 2 Chron. xxxvi. 5. The Babylonians having conquered the	
10¾	Egyptians, the Hebrews were now harrassed by Nebuchadnezzar... ...	11
3406¼	Jehoiachin, or Coniah, taken to Babylon at "the end of the (sacred) year."	¼
¼	Jewish Times of 2520 began. From here Ezkel. dates his Captivity years.	
3406½	GREAT CAPTIVITY began after Jehoiachin's 3 months. 2 Chrn. xxxvi. 10. Zedekiah, 2 Chron. xxxvi. 10, 11. Also taken to Babylon in 9th day of	
10¼	the 4th sacred month, Friday, 3416, The story is given in 2 Kings xxv.	11
3416¾	End of the Solar Cycle. All the foregoing years are true planetary motion.	

The above years and reigns were obtained by using the Solar Cycle. By this method **three months**, but only in difficult cases, would be the greatest error.

REIGNS OF THE KINGS OF ISRAEL.
Historical Table V. continued.

A.M.		Reign Recorded
3030	Jeroboam, 1 Kings xiv. 20. Came from Egypt and events delayed the establishment of his throne. The kings of Israel, it will be seen, had no	
21½	scruples about Sabbatic years, and the kingdom was brief and unhappy.	22
3051½	Nadab, 1 Kings, xv. 5, began early in 2nd of Asa of Judah, 3051, and was	
1¼	assassinated in the 3rd, his reign was in 2 years, but was little over 1.	2
3052¾	Baasha began in 3rd of Asa, 1 Kings xv. 33. He was an idolator and given	
23¼	to cruelties and abominations	24
3076	Elah began in the 26th of Asa, 1 Kings. xvi. 8, and was murdered whilst he	
1¼	was drunk, by Zimri, captain of chariots. All his house were slain. ...	2
3077¼	Zimri, the assassin, only reigned 7 days, 1 Kings xvi. 15, when in his distress he set fire to the palace and perished amidst the flames.	
4	Civil War for about 4 years followed—Omri and Tibni struggling to be king.	
3081¼	Omri began to reign in the 31st of Asa, 1 Kings xvi. 23. The "12 years"	
5¼	are from rise of the turmoil (death of Basha) in 26th of Asa, to his 38th	6
3086½	Ahab, began in 38th of Asa, and Jehoshaphat began in 4th of Ahab, 1 Kings	
21¼	xvi. 29 and xxii. 41. These records have to agree with time of reign.	22
3107¾	Ahaziah (not the king of Judah of same name) began in 17th of Jehoshaphat half of which was 3107, 1 Kings xxii. 51. He died in 3109, or just after.	2
½	He reigned with his father Ahab, who died a few months before him.	
3108¼	Joram, son of Ahab, began in 18th of Jehoshaphat, and died same year as	
11½	Ahaziah of Judah, 3120. 2 Kings iii. 1. and ix. 23—25, ...	12
3120¼	Jehu, 2 Kings ix. 6 and x. 36. God's avenger of the wickedness of the	
28¼	house of Ahab. His reign was on 29 years.	29
3148½	Jehoahaz began in the 23rd of Joash of Judah. 2 Kings xiii. 1. His son	
16¼	perhaps reigned in consort a short time	17
3164¾	Jehoash began to reign with his father in 37th of Joash of Judah, 3162½,	
16½	2 Kings xiii. 10. Amaziah lived nearly 15 years after him, 2 Ch. xxv. 25	16
3181¼	Jeroboam II, began to reign alone in the 15th of Amaziah, 2 Kings xv. 23, he having been a partner with his father in 3168½, and had reigned 27 years (which was his 16th alone) in 3195½, the year when Uzziah,	
41¼	who is also called Azariah, began. See 2 Kings xv. i. and margin ...	11
3222½	Interregnum of 11 years followed, according to the next reign, but it is not	
11	mentioned. It was some period of restlessness	
3233½	Zachariah began at the end of last half of 38th of Uzziah, 2 Kings xv. 8, and	
½	reigned six months. This proves an interregnum. See margin. ...	½
0	Shallum began in first half of 39th of Uzziah, 2 Kings xv. 13. He reigned in the intercalary month, a good method of stating time—a third year.	
3234	Menahem, also began in 39th of Uzziah, the last half of which was in 3234.	
10	2 Kings xv. 17. He killed Shallum and stripped the temple	10
3244	Pekahiah began in 50th of Uzziah, 2 Kings xv. 23. He was assassinated	
2	by one of his Generals, Pekah, who then succeeded to the throne ...	2
3246	Pekah in 52nd of Uzziah, 2 Kings xv. 27. In his 2nd year Jotham of Judah	
20½	began. Pekah was killed by Hoshea, who raised a conspiracy	20
3266¼	Conspiracy and anarchy continued, during which the kingdom was reduced	
8¼	till the 20th year from the time when Jotham began. See xv. 30. ...	
3275¼	Hoshea took the throne in the 12th of Ahaz, 2 Kings xvii. 1. but his reign was disastrous. In his 9th year Sargon, of Assyria, who succeeded	
8¾	Shalmanezer IV, during the siege of Samaria, ended the kingdom. ...	
3284	The City fell at the end of the year, which was a third on the solar cycle.	
0	"At the end of three years they took it." 2 Kings xviii. 10. This does not mean that the siege lasted three years. The time was less than two, as it began in Hezekiah's 4th, some time after 3282½. These periods of three years have always been a pitfall to translators throughout the Bible, but the revisers would not listen to offers of help.	

THE TEN TRIBES WERE THEN CARRIED INTO CAPTIVITY.

The unhappy kingdom lasted 255 years, up to the end of 3254. and full of wickedness and bloodshed, scarcely any of its kings can be said to have "slept with his fathers."

JEWISH KINGS AND CONTEMPORARY MONARCHS.

With the reigns of Jewish Kings are mentioned monarchs of Assyria Babylonia, and Egypt, &c., as their contemporaries, such as the following. The statements are all correct, as will be seen. Some Assyrian monuments also have records of Jewish kings.

	King	Reigned		King	Reigned	
1 Kings xvi. 25	...Rehoboam	...3030 to 3047	Shishak of Egypt	...	3029 to	3050
2 Chron. xiv. 9	...Asa ...	...3050 3090	Zerah or Orsarken I. do.		3050	3065
Assyrian History	...Jehu...	...3120 3148	Shalmaneser II., Assyria		3144	3179
2 Kings xv. 29	...Pekah	...3246 3266	Tiglath Pileser II. do.		3260	3278
Do. xvi. 7	...Ahaz...	⊙3263 3279	Tiglath Pileser II. do.		—	—
Do. xvii. 3	...Hoshea	...3275 3284	Shalmaneser IV. do.		3228	3283
Do. do. 4	...Hoshea	... — —	So, or Shabatok, Egypt		3283	3298
Do. xix. 9	...Hezekiah	...3279 3308	Tirhakah do.		3298	3328
Do. xviii. 13	...Hezekiah	... — —	Sennacherib, Assyria		3293	3317
Do. xxiv. 12	...Jehoiachin	...3406½	Nebuchadnezzar. Babylon		3398	3443
Do. xxv. 1	..Zedekiah	...3406 3416	Nebuchadnezzar do.		—	—

The years of the reigns of the kings of Assyria, Babylonia and Egypt, are taken from the Historical Tables of the countries named.

In 2 Kings xix. there are four kings mentioned, namely, Hezekiah of Judea, Tirhakah of Egypt, Sennacherib and Eser-Haddon of Assyria.

In arranging the chronological order of the Jewish kings, the use of the solar cycle is indispensable, because their years are strictly astronomical. The Biblical reference to intercalary periods at the end of every three years, is of great value. They are a marked feature in all Scripture, but unfortunately have all been misunderstood.

AN ALLEGED "WEAK POINT" BECOMES THE STRONGEST FORT.

Much amusement has been made by incompetent men respecting the reigns of Jewish Kings, particularly the records of the Kings of Israel. But investigation shows that men who have no knowledge of the Science of Time are incompetent judges. The years of Hoshea and Hezekiah, instead of being "a mass of contradiction," are valuable testimony of accuracy. Hezekiah's reign began in the middle of the year and Hoshea in the first quarter. They prove and tabulate as follows :

	Hoshea 1 began in 3275 ended in 3276
	2 3276 3277
	3 3277 3278
Hezekiah 1 began in 3279 ended in 3280	4 3278 3279
2 3280 3281	5 3279 3280
3 ⊙ 3281 3282	6 3280 3281
4 3282 3283	7 3281 3282
5 3283 3284	8 3282 3283
6 3284	9 3283 3284

Here we see that the 4th of Hezekiah was the 7th of Hoshea, as stated in 2 Kings xviii 9 and that the 6th of Hezekiah was the 9th of Hoshea, (verse 10) and that this was a third year—the 3rd of the solar cycle—"at the end of three years they took it," (the city of Samaria). Shalmaneser died during the siege and was succeeded by Sargon.

ANOTHER PROOF OF THE EXODUS YEAR.

In 1 Kings vi. 1, we read that the foundation of the Temple was laid by Solomon in his fourth year (which just then began with the sacred year, viz., 2993½), and that it was 480 years after the departure of the Children of Israel from Egypt. This is a plain reference to the Solar Cycle, as the year was the 12th on the cycle. Now 120 years will always reproduce the same year of the cycle. So will three times 120, which are 360, and four times 120 are "480." The exodus year, 2513 was a 12th year, and what the passage means is, that the foundation of the Temple was laid on the same year of the Solar Cycle as that in which the exodus took place.

HOW TO FIND SABBATIC YEARS ON THE CYCLE.

When but one Sabbatic, or Seventh Year, is known, all the others can be easily found by adding or deducting 105 years. Thus, the 3rd year of Saul, 2912 and 105 are 3017. Both these years were Sabbatic. Seventh years of the Solar Cycle are always seventh of the astronomical line of time by Eclipses, Transits, and the Metonic Cycle by dating Creation year as 0. When A.M. years are not used, 1 must be added. This is a simple but splendid way of proving all past time. The month in which the eclipse occurs next to any seventh year, will also keep the line of time for 649 years. There is now no possibility of erroneously enumerating all past years, except by the unlearned.

⊙ Refers to two total solar eclipses, No. 1, Line I, Triple Series.

PERSIAN MONARCHS OF SCRIPTURE HISTORY,
Consecutively and accurately arranged.

The B.C. year is from 3996, the true one, not from the authorised Bible year 4004, A.M. To obtain the latter, add 8. It is time to abandon the old Bible years, which were calculated on the erroneous principle that our Lord was born in 4004.

A.M.	B.C.	Reign.	Year on Sol. Cycle.	A.M.	B.C.	Reign	Year on Sol. Cycle.
3466*	530	1 Darius the	Dan. ix. 1. e	3518	478	36	...l
3467	529	2 Mede	f			1 Xerxes	
3468	528	3	g	3519	477	2	m
		1 Cyrus	Ezra iii. 6.	3520	476	3 Esther i. 3.	n
3469	527	2	h	3521	475	4	o
3470	526	3	...i	3522	474	5 This Xerxes is the	a
3471	525	4	j	3523	473	6 Ahasuerus of Bible.	b
3472	524	5	...k	3524	472	7 Esther ii. 16.	c
3473	523	6	l	3525	471	8	d
3474	522	7	...m	3526	470	9	...e
3475	521	8	n	3527	469	10	f
		1 Cambyses		3528	468	11	...g
3476	520	2 End of 70 Years' Captivity	o	3529	467	12 Esther iii. 7	h
3477	519	3	...a	3530	466	13	... i
3478	518	4	b	3531	465	14	j
3479	517	5	...c	3532	464	15	...k
3480	516	6	d	3533	463	16	l
3481	515	7	...e	3534	462	17	...m
3482	514	8	f	2535	461	18	n
		1 Smerdis ...	...g	3536	460	19	...o
3483	513	1 Darius		3537	459	20	a
3484	512	2 Zech.i.7.; Hag. i.1 to 15.	h	3538	458	21	...b
3485	511	3 and ii . 10.	i			1 Artaxerxes Longimanus	
3486	510	4 Zech. vii. 1.	j	3539	457	2	...e
3487	509	5	k	3540	456	3	d
3488	508	6 Ezra vi. 15.	l	3541	455·	4	...e
3489	507	7	m	3542	454	5	f
3490	506	8	n	3543	453	6 }	...g
3491	505	9 ·	...o	3544	452	7 }	h
3492	504	10	a	3545	451	8	... i
3493	503	11	...b	3546	450	9	j
3494	502	12	c	3547	449	10	...k
3495	501	13	...d	3548	448	11	l
3496	500	14	e	3549	447	12	...m
3497	499	15	...f	3550	446	13	n
3498	498	16	g	3551	445	14	...o
3499	497	17	...h	3552	444	15	a
3500	496	18	i	3553	443	16	...b
3501	495	19	... j	3554	442	17	c
3502	494	20	k	3555	441	18	...d
3503	493	21	...l	3556	440	19	e
3504	492	22	m	3557	439	20 Neh. ii. 1.	...f
3505	491	23	...n	3558	438	21	g
3506	490	24	o	3559	437	22	...h
3507	489	25	...a	3560	436	23	i
3508	488	26	b	3561	435	24	...j
3509	487	27	...c	3562	434	25	k
3510	486	28	d	3563	433	26	...l
3511	485	29	...e	3564	432	27	m
3512	484	30	f	3565	431	28	...n
3513	483	31	...g	3566	430	29	o
3514	482	32	h	3567	429	30	...a
3515	481	33	...i	3568	428	31	b
3516	480	34	j	3569	427	32 Nehemiah xiii. 6.†	c
3517	479	35	..k			His reign continued 10 years more.	

†The 10th and 32nd years are proved by intercalary at c. See margin authorised version.

*Darius the Mede of Daniel ix. 1. is not Darius Hystaspes mentioned by Zechariah and Haggai. He was probably Cyaxares II., or Astyages, his son.

PERSIAN MONARCHS CONTINUED.

3579 Xerxes II. was proclaimed king, but he only reigned 45 days.

3580 Sogdiamus followed and reigned six months.

3580 Ochus I. also called Darius Nothus, reigned 19 years. He gave permission to Sanballat, the Horonite, to build a rival Jewish temple on Mount Gerizim, about 3584, which was probably finished in 3595. Sanballat might be 63 when Ochus Nothus was on the throne. The rival temple was for Manasses, son-in-law to Sanballat, who was chased out of Jerusalem by Nehemiah. See Rollin's Ancient History and Nehemiah xiii. 28.

3599 Arsases, or Artaxerxes Memnon, was king 43 years.

3642 Ochus II. reigned 23 years.

3665 Arses was nearly two years on the throne.

3666 Darius Condomanus, reigned 6 years, but soon after coming to the throne, was badly defeated by the troops of Alexander the Great who began to reign in Greece in the same year that Darius Condomanus began in Persia. There was another battle, in 3672, when Alexander was again victorious and his vanquished foe, the last of his line, died.

END OF THE MEDO-PERSIAN EMPIRE.

With Darius Condomanus the colossal and brilliant Persian Empire ended after lasting 200 years; but it was marked to fall, being the second of the four empires which we find in the Book of Daniel were to continue 1260 years—from $3376\frac{1}{2}$ to $4636\frac{1}{2}$. A more impressive record of history, or a clearer demonstration of the hand of Deity in the rise and fall of empires, cannot engage our attention. As a prophecy it ended centuries after the canon of Scripture was closed, so that it cannot be challenged, neither can we doubt, with such examples before us, that its counterpart—the second 1260 years—will not also be fulfilled with the same majestic precision in $5896\frac{1}{2}$.

The date of the battle which finally laid the Persian empire in ashes is ratified by a total eclipse of the moon which shrouded the heavens in darkness. The night before the struggle was brilliant, but the troops of Alexander became discouraged by seeing the moon obscured. Alexander was alarmed lest his soldiers should decline to fight after such an omen. He had in his camp an Egyptian, who had been a priest, whom he asked to speak to his troops because they knew that the Egyptians understood the mystic movements of the heavens. This priest, instead of explaining the phenomenon, made the superstition of the soldiers an advantage to Alexander by stating that in fact the moon did withdraw her light, but it was in sorrow for the Persians, whose emblem was the moon, whilst their's (the troops of Alexander) was that of the sun. It was, shouted the ex-priest, because the Persians were going to be dreadfully beaten that the moon mourned. This statement revived the spirits of the warriors.

HOW THE ECLIPSE IS FOUND.—First look for the year of the battle, 3672, or the nearest preceding year, in the Triple Eclipse Table. It is 3659. Next turn to the Ancient Hebrew Bird's Eye View of Eclipses, the first line of which is always the year printed in the Triple Eclipse Table. Line I. therefore contains the eclipses of 3659, just mentioned. Now by giving a line to each year, we arrive, by counting them downwards, at Line XIV. for 3672 when the battle was fought. We find in this Line ● the sign of a total eclipse of the moon in the middle of the second month, about end of Oct. History says, "The engagement was fought in the month of October." This was at that time, the second month, owing to the intercalary year.

Of course, the eclipse tables also find the year, when it is not known.

NOTES—In the preceding page it must be understood that as the Hebrew years were hastened by the sacred year beginning at Easter, the 7th of Artaxerxes was partly on 3543 and 3544. The page will also elucidate Ezra iv. 6 7, where Cambyses is called Ahasuerus, and Smerdis (the usurper) is called Artaxerxes. These were titles like that of Pharaoh for Egyptian kings.

Artaxerxes of Ezra vii. and by whose command the walls of Jerusalem were rebuilt, as stated in Neh. ii. 1, was also known as Longimanus, owing to his long hands. It will be noticed that Xerxes I. was husband of Esther.

YEAR 3672   LINE XIV   ✝ ● ⊙   ⊙ ◗

THE ROMAN EMPERORS

IN THE FIRST CENTURY.

It was not until we obtained an accurate knowledge of the years reigned by Roman Emperors that we found the true year of the birth of Jesus Christ, though since then other confirmations have been secured.

In the following table I have not used A.D. years. They were not known till 523, and were not nationally adopted till 1431. If accuracy be wanted it is best not to use them but adhere to the natural A.M. years, particulary as they only are subject to astronomical and all other measurements for proof.

The first year of Imperial Rome began as a colossal Empire.

3970   Cæsar Augustus Octavian was the first Roman Emperor. The senate confirmed his titles in September. He reigned 41 years and died Aug. 16th or 19th, which was near the end of 4010. Jerusalem came under Roman authority in 3970½, and when rebuilt, after its destruction by Titus, continued under the same power till 4636½. The whole period during which the holy city was tributary to Rome thus lasted 666 years.

4011   Tiberius was recognized as Emperor in September. He reigned 23 years and died March 16th, 4034. In St. Luke iii. 23, we read that our Lord was 30 years of age in the 15th of Tiberius, which is mentioned in the 1st verse. Add 15 to 4011 and we have 4026, and when we deduct 30 from it, we find that Jesus Christ was born in 3996. The 15th of Tiberius was nearly the whole of 4026, and as the ministry of our Lord was 3½ years, he was crucified at the passover 4029½, namely, on Friday, the 15th of the 7th month (1st sacred). This is said by all historians to have been in the Emperor's 18th year.

4034½   Caligula was proclaimed on the 16th of March and reigned less than 4 years, as he died on the 24th of Jan., which is the 4th month of the natural year.

4038⅓   Claudius began Jan. 24th, 4038, and died October 13th, 4052. which was the 1st month of the A.M. or natural year. Josephus says Claudius reigned 13 years 8 months and 20 days. He is twice mentioned in the Book of Acts, namely, xi. 28, his 1st year, and xviii, 2, stating that he had commanded all Jews to depart from Rome. He died shortly afterwards, and it is evident by the Book of Acts that the expulsion—which is also mentioned by Suetonis, who lived 50 years afterwards—was in 4051. Suetonis intimates that the expulsion was owing to tumults raised by Jews against Christians.

4052   Nero succeeded Oct. 13th, the beginning of the year, and reigned 13¾ years. He was in Greece on a singing tour when St. Paul arrived in Rome in 4059½, and did not return till much more than a year. In 4061¼ St. Paul completed two years residence waiting for Nero's opportunity, but was burnt out by the great fire which consumed two-thirds of the city, in July, 4061¾. Nero beheaded St. Paul on June 29th, 4063¾, and committed suicide, June 11, 4065.

4065¾   Galba began as Emperor on June 11th, and reigned rather better than 7 months. He was murdered during a conspiracy raised by Otho on Jan. 4th, 4066.

4066¼   Otho was proclaimed by the Guards, Jan. 5th, and reigned three months and five days. He died by his own hand after his troops were defeated by his rival.

4066½   Vitellius chosen by the army on the Rhine, defeated Otho and entered Rome as Emperor in April. He was murdered, Dec. 3rd. Reigned 8 months, 5 days.

4067¾   Vespasian was chosen by the army sent into Palestine, but was tardy in going up to Rome, after learning the fate of his predecessors. But being called by the senate, he left the command of the army to Titus, his son, and after more delay at Alexandria, entered Rome. Titus began the siege of Jerusalem in 4069½, just 40 years after the prophecy of Jesus Christ. Jerusalem was destroyed towards the end of the year, and Vespasian (who went to meet his son) and Titus entered Rome in triumph. Vespasian reigned 10 years.

4077¾   Titus succeeded his father and reigned 2¼ years, from June 23, 4077, to Sept. 18, 4080. Both Titus and his father were good Emperors.

4080   Domitian received the purple about September 20, and reigned 15 years. At his death St. John was liberated from Patmos where he received Revelations.

4095   Nerva began in Sept. and reigned 1 year, 4 months, and 9 days. He died on the 27th of January. He was an aged senator, but disgusted for his parsimony.

4096¼   Trajan was proclaimed on Jan. 27th and reigned 19 years, 6 months and 15 days. He died Aug. 11th, 4115. This completes the Emperors of the 1st century

CONFIRMATIONS OF THE YEARS REIGNED.

If we can clearly fix the year and period of the year when one of the Roman Emperors began to reign, we can fix all of them.

We have good means for proving the year when Tiberius died. In Acts ix. 23, we have a statement of the year when St. Paul was converted. The verse alludes to the intercalary days which occurred at the end of every 3rd year in order to bring lunar time up to solar. The solar cycle shows that the end of 4034 was an intercalary period. St. Paul therefore became a Christian that year. He had been contending with the Jews during a short period, and then escaped from violence, his friends letting him down by the wall in a basket. This would be in the beginning of 4035. In 2 Cor. xi. 32, St. Paul gives additional particulars of importance, as he mentions that " In Damascus the Governor under Aretas, the king, kept the city with a garrison, desirous to apprehend me, but through a window, in a basket, I was let down by the wall and so escaped his hands." This Aretas was king of Arabia, and it seems strange that he was also king of Damascus, the chief city of Syria, which belonged to the Romans. But Josephus says that Aretas defeated the troops of Herod Antipas, upon which Tiberius—who was a friend of Herod—ordered Vetellius, the Roman Governor of Syria, to collect troops and take Aretas prisoner. But before the order could be executed Tiberius died. This sudden respite gave Aretas opportunity to march on Damascus and reduce it to his possession. This then was the period when St. Paul was in Damascus. Tiberius died March 16th. 4034½. We must allow some time for Aretas taking the city and his possession of it, before the Romans expelled him after the affairs of the empire were settled. It seems clear that St. Paul was converted late in 4034, before the intercalary days in September, and that Tiberius died previously in the spring of the same year.

The Emperor Claudius began to reign Jan. 24th, 4038½, and as a reward for the services of Herod Agrippa I., who had assisted him in becoming Emperor, he was made king of Judea. Accordingly we see by Acts xii. 1, that in the following year, 4039, he killed St. James with the sword, namely, at Easter. Herod, however, died two and half years afterwards, during the games, Aug. 2nd, in celebration of the empire.

This same Claudius has the exact period of his reign confirmed by the historian Suetonins who wrote the Life of Claudius 50 years after the Emperor died.

By the Book of Acts we have a confirmation of the years of Nero. St. Paul (Acts xxviii. 30.) "dwelt two whole years in his own hired house" in Rome, from late in the spring of 4059½ to the same period in 4061½, and we find that it was during "more than a year" at that time that Nero, who had resolved on making a tour of his empire to exhibit his abilities as a singer, was absent from Rome. When he returned he was much engaged in his vocal and fiddling profession up to the great fire in the city, by which St. Paul was burnt out in the beginning of summer 4061. These were parts of the 7th and 9th years of Nero. St. Paul after visiting some near cities and wintering at Nicopolis (Titus iii. 12) returned to Rome in 4063, but the Jews having thrown off the Roman yoke, a bitter feeling prevailed against them in Rome, and St. Paul was beheaded on June 29th, 4063¾. The Emperor committed suicide on June 11th, 4065¾.

I may here explain that what has fogged translators is the statement in Acts xxiv. 27, which refers to the intercalary period at the end of 4058, meaning "two full years," as often expressed—when a full lunar and solar year came together—and not a period of 24 months. St. Paul was never two years in prison. All the dates of the following chapter, which I have tabulated elsewhere, also prove that St. Paul was sailing to Rome and was shipwrecked at Malta next month.

DEATH OF AUGUSTUS PROVED BY AN ECLIPSE.

The proof of a year or date by an eclipse is a very simple process. We are informed by history that there was an eclipse of the sun a few days after the death of Augustus, the first emperor. He died on the 19th of Aug. 4010, the last month of the A.M. year. Now all we have to do is to look for the year on the Triple Eclipse Table printed in the section of "Eclipse Line of Time." We there find that the nearest preceding year was 4002. The years of the Table are in series of 18 from creation. This is because an eclipse occurs again after 18 years. We next look at the Ancient Hebrew Bird's Eye View of Eclipses the beginning of which is always the years of the Triple Eclipse Table Hence Line I. was 4002, just mentioned. By counting forward Line IX would be 4010 This would be the year when Augustus died because there was a total eclipse of sun on the first of the last month of the year, that is, lunar time. It would be, by solar time, nearly 30 days later, as the year was an intercalary one, shown at the end of the line.

ANCIENT HEBREW SOLAR CYCLE.

This Cycle of 15 years began with 1722, A.M., thus following the Antediluvian Cycle, the last seven years form of which ended with 1721. We get this fact by the position of the eclipses, for working which it was probably invented. In every respect the cycle is of the best and highest astronomical character, and its working is as true now as it was more than 4,000 years ago. It gives us the date and day of the week of all eclipses.

After the Flood in 1656, all the dates of Scripture, together with their day of the week, are found on this cycle, which seems also to have been in use amongst the Chaldeans.

The A.M. years are obtained by substracting the B.C. years from 4004. Thus, 1491, B.C. was the Exodus year, and when deducted from 4004 gives 2,513 for the A.M. year, which in this case is correct.

ANCIENT HEBREW SOLAR CYCLE.

About.	Hebrew Months.	days.		Civil.	Sacred
Oct.	Tifri, or Enthanim	30	...	1st	vii.
Nov.	Marchesvan or Bul	29	...	2nd	viii.
Dec.	Casleu, or Chisleu	30	...	3rd	ix.
Jan.	Tebeth	29	...	4th	x.
Feb.	Shebat	30	...	5th	xi.
Mar.	Adar	29	...	6th	xii.
Apl.	Nisan, or Abib	30	...	7th	i.
May	Zif, or Jiar	29	...	8th	ii.
June	Sivan	30	...	9th	iii.
July	Thamuz	29	...	10th	iv.
Aug.	Ab, or Lous	30	...	11th	v.
Sep.	Elul	29	...	12th	vi.
Sep. in 3rd year.	Ve Adar	34	...Intercalary		

About.	Hebrew Months.	days.		Civil.	Sacred
Oct.	Tifri, or Enthanim	30	...	1st	vii.
Nov.	Marchesvan or Bul	29	...	2nd	viii.
Dec.	Casleu, or Chisleu	30	...	3rd	ix.
Jan.	Tebeth	29	...	4th	x.
Feb.	Shebat	30	...	5th	xi.
Mar.	Adar	29	...	6th	xii.
Apl.	Nisan, or Abib	30	...	7th	i.
May	Zif, or Jiar	29	...	8th	ii.
June	Sivan	30	...	9th	iii.
July	Thamuz	29	...	10th	iv.
Aug.	Ab, or Lous	30	...	11th	v.
Sep.	Elul	29	...	12th	vi.
Sep. in 3rd year.	Ve Adar	34	...Intercalary		

About.	Hebrew Months.	days.		Civil.	Sacred
Oct.	Tifri, or Enthanim	30	...	1st	vii.
Nov.	Marchesvan or Bul	29	...	2nd	viii.
Dec.	Casleu, or Chisleu	30	...	3rd	ix.
Jan.	Tebeth	29	...	4th	x.
Feb.	Shebat	30	...	5th	xi.
Mar.	Adar	29	...	6th	xii.
Apl.	Nisan, or Abib	30	...	7th	i.
May	Zif, or Jiar	29	...	8th	ii.
June	Sivan	30	...	9th	iii.
July	Thamuz	29	...	10th	iv.
Aug.	Ab, or Lous	30	...	11th	v.
Sep.	Elul	29	...	12th	vi.
Sep. in 3rd year.	Ve Adar	34	...Intercalary		

In using this Solar Cycle for Biblical purposes the 7th month must always be called the 1st of the year (according to Divine command, Exodus xii, 2,) from the exodus of the Israelites in the 7th month 2513, a.m., table 1. Therefore 7th sacred month is the 1st civil month, the 8th sacred month is the 2nd civil month, and so on. The intercalary month had no number. There is no Biblical date upon it, although the dates of scripture run through it with scientific accuracy. As a civil regulation the Jews probably thought it would show a want of obedience to mention an intercalary month, and for this reason also Moses has given us no dates for scripture history prior to the institution of the sacred order of the months, excepting those of the flood.

HOW TO FIND THE YEARS.

The year given in the margin of the Bible is found by subtracting the B.C. year from 4004. Thus 1491 from 4004 is 2513, A.M., the exodus.

The following were first years of this solar cycle of the Ancient Hebrews, that is table a. By knowing this any intervening year is found. If therefore any year wanted is not in the list, take the nearest preceding one; for example, the Israelites marched out of Egypt in the 7th civil month of 2513, as the nearest preceding year in the list is 2502, and, of course, the first on the cycle, we must count forward upon it until we arrive at 2513, which is table l.

*1722	2067	2412	2757	3102	3447	3792
1737	2082	2427	2772	3117	3462	3807
1752	2097	2442	2787	3132	3477	3822
1767	2112	2457	2802	*3147	3492	3837
1782	2127	2472	2817	3162	3507	3852
1797	2142	2487	2832	3177	3522	3867
1812	2157	2502	2847	3192	3537	3882
1827	2172	2517	*2862	3207	3552	3897
1842	2187	2532	2877	3222	3567	3912
1857	2202	2547	2892	3237	3582	3927
1872	2217	2562	2907	3252	3597	3942
1887	2232	*2577	2922	3267	3612	3957
1902	2247	2592	2937	3282	3627	3972
1917	2262	2607	2952	3297	3642	3987
1932	2277	2622	2967	3312	3657	*4002
1947	*2292	2637	2982	3327	3672	4017
1962	2307	2652	2997	3342	3687	4032
1977	2322	2667	3012	3357	3702	4047
1992	2337	2682	3027	3372	*3717	4062
*2007	2352	2697	3042	3387	3732	4077
2022	2367	2712	3057	3402	3747	4092
2037	2382	2727	3072	3417	3762	4107
2052	2397	2742	3087	*3432	3777	4122

Our 1879, A.D. began on Table a, 8th of 4th month, 5887. The sol. cycle and eclipses prove us 1 yr. 9 mnths too fast.

The first 7th day of all these years was the Sabbath, and as 1722 would have been the first year of the Antedi-

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-luvian sol cycle, it is a continuation of the 7th day from Eden. The week has never been broken. The date o all scripture history show this. It is also proved by the lunar cycl- of 285 years marked *. 15 times 19 are 285

The years of the patriarchs from Noah to Abraham—like those from Adam to Noah—are an accurate and most splendid record of solar years. This is easily proved by noticing that the lines of the eclipses they require are not broken by them. In this way science verifies each year.

The way by which we obtain the year 2082, when Abraham left Ur (a 1st year of this cycle) is—

Gen. vii 11. Noah was 600 years at flood,	1658 A.M
xi 10. Arphaxad born after that ...	2 years
" 12. Salah born when Arphaxad was	35 years old
" 14. Eber " Salah "	30
" 16. Peleg " Eber "	34
" 18. Reu " Peleg "	30
" 20. Serug " Reu "	32
" 22. Nahor " Serug "	30
" 24. Terah " Nahor "	29
" 32. Terah died when he was	205
xii 4. Abraham was then 75 ..	
	208?

*Terah left the city of Ur with Abraham on 15th of 7th month, 2082, table a, and died in Haran, 2083 Gen. xi. 31.

HOW THE CYCLE IS PROVED.

1. It is astronomical, being the movements of the moon. 2. It is perpetual and as true to-day as it was 4000 years ago, at Heber's birth. 3. The fifteen Songs of Degrees (Psalms cxx. to cxxxiv. represent the 15 years of the solar cycle. 5. A solar cycle of 15 years, but no other will produce the Biblical dates and periods.

SELFSAME DAYS.

Table a. was 2082, when Abraham left Ur, and table l. was 2513, when the exodus took place. The 7th months are alike in their dates of Sabbath Days, therefore the 15th of both would produce "the selfsame day" of the week (Tuesday) and date of the month. We read in Numbers xxxiii.3. that the Israelites left Egypt on the 15th of the 1st sacred month (7th civil) thus showing in Exod. xii. 41, what Moses meant by "the end of the 430 years" falling then on a selfsame day.

Another selfsame day is found in Ezek. xl 1. In chap. xxxiii. 21, the prophet says the city was smitten in the 12th year of the captivity, on the 5th day (Saturday) of 10th month. The first six months of the captivity years fell on one civil year, and the last six on the next one, as shown on the list of Captivity Years; hence the 10th sacred (4th civil) month fell upon table b. which was 3418 A.M. Turning next to chap. xl. 1. we read that in the 25th year of the captivity, "in the beginning of the year," that is 3431. on the 10th day of the month (1st civil) "in the 14th year after the city was smitten," the hand of the Lord was upon me. This was Saturday again, table o. Both were Sabbath days and scientific.

"In the 3rd (9th civil) month," Exod. xix. 1. table l, the Israelites entered the Wilderness of Sinai on the same day, that is 1st of the month, hence the "third day," when the Law was given, was Tuesday the 3rd day of the week. It was also the 50th day (Pentecost) after the Passover in Egypt. Pentecost means 50th.

Our Lord was born at the end of the 3rd month, in 3996, table j, answering to our Dec.

The common Christian Era began with the 4th month of 4000, table n, which was year 1, A.D. It ought to have started with 4001, then 4002 would have been our 2, and so on. Owing to this blunder our years are 1 before A.M.

The Crucifixion was Friday, 15th of 7th civil (1st sacred) month, table m. 4029, or 30 A.D. The passover was eaten on Thursday evening, 14th. The 16th was Saturday, old Sabbath, and 17th, (Sunday) was resurrection—first Lord's Day.

The rich cluster of dates beginning Acts xx. 6. are 4058, or 59 A.D. table l. See Paul's Journey. Table k. 2nd of 7th civil month (1st sacred) is the date of Luke vi. 1., and should have been translated "2nd of 1st month."

EXPLANATION OF THE SOLAR CYCLE.—A solar cycle means the number of years by which the same day of the week comes round again on the same date of the month. The figures are Saturdays, the seventh days, in each of the 12 months of the 15 years. The Bible years were lunar, 354 days, and the months were always 30 or 29 days alternately. No man could alter this method, because the moon is 29½ days in going round the earth and it was necessary to have a new moon on the first day of every month. But as the lunar year is 11 days shorter than the solar year, an extra month of 34 days was used after every three years, so as to bring the two years together. Three times 11 are 33, but the moon required one day more in three years. Each year has an italic letter above it for the sake of identification. It will be seen in table a that the first Sabbath Day (Saturday) fell on the 7th day of the month. The next Sabbath Days were on the 14th 21st and 28th. As the first month had 30 days, there were two days of the week to carry over into the second month. Therefore as 2 and 5 are 7, the first Seventh Day of the second month fell on the 5th of the month, the others on 12, 19, 26, and so on throughout the cycle, which by being astronomical goes on for ever. Now as this solar cycle started with 1722 A.M., the reader can find any subsequent year by adding 15 to the 1st year a, till he reaches the year he wants, and should it be a year between 15, he must count the years one by one till he reaches the intervening year. All the years of table a end with a figure 2 or 7. The sacred year begins with the 7th month, because the Israelites came out of Egypt in that month. Hence the 7th civil month is always the 1st sacred month, and the 3rd civil is the 9th sacred, and so on.

REFERENCES.—Departure from Egypt. Numbers xxxiii. 3; year 2513, table *l*, the 12th of the cycle. The 1st sacred month is 7th civil. As the date of Saturday was 12th, the 15th was Tuesday. From middle of 2082, 15th of 7th month, table *a*, when Abraham left the city of Ur, to middle of 2513, is the end of 430 years on same day of the week and same date of the month so emphatically referred to by Moses in Exodus xii 41. Observe that the dates of the 12th are Saturday in both years, in the 7th month in tables *a*. and *l*, and hence the 15th day would be Tuesday. The same principle confirms the accuracy of Daniel's prophecies. year 3376 when they began—table *e*—is also 5896 and 5926 when they end, the middle of the year, which in the case of the end of the Gentile times is our 1898 Easter——Joshua iv. 19 Jordan crossed on 10th of 1st sacred month, 7th civil, Friday, 2553, table *g*, 40 years after leaving Egypt.——Death of Aaron in 2552, on 1st of 5th month, Saturday, see table *f*.—— Ezekiel's Visions of God on Sabbath Days. Ezekiel i, 1, 2, table *i* 5th of 4th sacred (10th civil) month, 3410; also viii. I, table *j*, 3411, 5th of 6th month, last month of civil year; also xx. 1, 10th of 5th month (11th civil) 3412, table *k*.—Daniel's Vision in chapter x. 4, 3470½ table *i*, 24th 1st sacred month, Saturday. Notice three weeks fast commencing on the 3rd—— Birth of Christ as given by St Luke, night of 25th-26th of 3rd civil month (our Dec.) table *f*, 3996, night between Friday and Saturday——Crucifixion in 4029½. table *m*, 15th of 1st sacred month was Friday——Luke vi. 1. is 4027½, table *k*, should read Sabbath on the 2nd of 1st month (sacred) There are many other dates and events in the Bible which can be ascertained by this solar cycle and they enlarge our interest in the records. Creation and Flood dates belong to the Antediluvian Solar Cycle and for their beautiful astronomical character are the best history in the world.

THE YEARS OF THE ANCIENT HEBREW SOLAR CYCLE.

As already explained in another section of All Past Time, there is a good method for ensuring the identification of the years of this Cycle by bearing in mind the fact that the first year, as time proceeds, must always end alternatively with a 2 or 7. Thus 2082 begins the cycle, and the next, 15 years later, starts with 2097. It should also be stated that as it is the observance of weeks of seven days that forms a solar cycle by bringing the days of the week round again on the same dates of the month, every solar cycle must consist of an even number of 7 years, such as 7, 14, 21, 28. The Antediluvian cycle was 7 years, and the English is 28. But the Ancient Hebrew cycle is in this respect not perfect. It is 15 years. It is in principle one of 21 years, having 6 years cut out, namely, the 10th, 11th, 12th, 13th and 14th.

The discovery of this fact is a memorable event in my investigation. It was fortunate, I might say providential, that I made an error, which, had it not occurred, I fear that the Ancient Hebrew Solar Cycle would have been yet unknown. I had written out the 15 years as a cycle, taking the date of the beginning and ending of the sojourn of 430 years as my example. After completing this, I was much gratified to find that these 15 years worked the Biblical dates. But one evening, as I was using the intercalary months, I found that I had an error of a day at the foot of the 9th year. I then, with unspeakable grief, saw that my table of 15 years was no solar cycle. I went to bed almost broken-hearted. During the night it occurred to me that as the table was perfect down to the end of the 9th year, I would continue it and see where it ended. I rose and found that the cycle completed itself in 21 years. But it would not work any of the dates of Scripture which extended over 15 years. I soon afterwards found that the cycle had, for some purpose, been amputated, the six years I have mentioned being left out, and that to meet the 10th year, starting with the Sabbath Day on the 1st of the month, 30 days instead of the usual 29 were given to the 12th month in the 9th year. The reason for this clever manipulation subsequently appeared. It is in order to keep up with the motion of the moon and work the cycle on the principle of 360 years. I often rejoice that I made a little error which led to such a useful discovery. By this cycle of 15 years. the solar eclipses are on the 1st day of the month, and the moon is full and eclipsed, when she is in her node, in the middle of the month.

The days of the week do not fall on the same dates on different solar cycles.

THE MARCH OF THE CHILDREN OF ISRAEL FROM EGYPT.

DATE OF THE DELIVERY OF THE LAW, &c.

Year 2513, A.M., Table *l*, the 12th of the Ancient Solar Cycle, 1483 B.C.

1st sacred, or 7th civil month.			2nd sacred, or 8th civil.			3rd sacred, or 9th civil.		
1	Tu	Exodus xii. 2. This or-	1	Th		1	F	Wilderness of Sinai, Ex.
2	W	dered to be the 1st	2	F		2	S	xix. 1.
3	Th	month of the sacred	3	S		3	S	} "To-day and to-mor-
4	F	year.	4	S		4	M	} row." Ex. xix. 10.
5	S		5	M		5	Tu	Delivery of THE LAW
6	S		6	Tu		6	W	on "the third day"
7	M		7	W		7	Th	of the week, being
8	Tu		8	Th		8	F	the 50th, or Pente-
9	W		9	F		9	S	cost, after the Pass-
10	Th	Lamb provided. Exod.	10	S		10	S	over. Verse 11.
11	F	xii. 2.	11	S		11	M	Moses went up into the
12	S		12	M		12	Tu	mount and began
13	S		13	Tu		13	W	the forty days and
14	M	Passover evening, 18,19	14	W	xvi, 1,	14	Th	forty nights, which
15	Tu	March out Egypt, See	15	Th	Wilderness of Sin. Ex.	15	F	ended on the 20th
16	W	Numb. xxxiii, 3 *	16	F	"Murmured."	16	S	of the next month,
17	Th		17	S	Quails at even. xvi. 13.	17	S	Friday. Verse 16.
18	F		18	S	Manna in morning, 15.	18	M	xxiv.
19	S		19	M	Some stale manna. 20.	19	Tu	
20	S		20	Tu		20	W	
21	M		21	W		21	Th	
22	Tu		22	Th	xvi. 22, 23.	22	F	
23	W		23	F	"Sixth day" of week,	23	S	
24	Th		24	S	"Seventh day." 27.	24	S	
25	F		25	S		25	M	
26	S		26	M		26	Tu	
27	S		27	Tu		27	W	
28	M		28	W		28	Th	
29	Tu		29	Th		29	F	
30	W					30	S	

* There are three very important dates on the 15th of this month, viz., the departure of Abram from the City of Ur, in 2082, the march out of Egypt by the Israelites in 2513, and the crucifixion of Jesus Christ in 4029. The first one is obtained by it being "the selfsame day" of the week and date of the month as the date of the Exodus which formed "the end of the 430 years," mentioned in Ex. xii. 41 and 51. The three dates are respectively on tables *a. l.* and *m.* on the Solar Cycle.

It is interesting also to notice that the journey of St. Paul in 4058, from Greece through Macedonia to Palestine, occurred on this same 12th year and three month of the Cycle, the numerous dates of which, as recorded by St Luke commencing Acts xx., are a conclusive proof of the unalterable character of a Solar Cycle of Lunar Years.

The length and character of the Exodus year—an intercalary one—will be seen by looking at Table *l.* the 12th of the Cycle which shows which months had alternately 30 days.

There are no definite means of knowing the day when the Israelites crossed the Red Sea. But it seems to have been about six days after commencing the march.

The quails sent "at even," indicates that this supply was after sunset when the Sabbath was over on the 17th of the 2nd sacred month.

There is yet another point of interest connected with the exodus dates. From the exode to the delivery of the law, and from the setting up of the tabernacle to the lifting up of the cloud, were both fifty days.

The difference between the B.C. given above and that in the margin of the Bible is owing to the latter being taken from 4004 as the year of the birth of our Lord, instead of 3996, which all scholars now admit to be the true year. It is time the erroneous year should be dropped, as it is often misleading.

YEARS OF THE CAPTIVITY.

The B.C. is the true one, that is, from the Nativity in 3996. That of the margin of the Bible will be generally obtained by the addition of 8. It will be observed that the years of the Captivity are on the sacred principle, beginning in the middle of the ordinary year, with the 7th civil month. They are therefore half on one year and half on the next.

A.M.	B.C.			Table of Solar Cycle.	A.M.	B.C.			Table of Solar Cycle
3396	600	1	Jehoiakim, 2 Kings xxiii. 36.	j	3436	560	30-31	Captivity ...	...e
3397	599	2	do. ...	...k	3437	559	31-32	do. ...	...f
3398	598	3	do. ...	... l	3438	558	32-33	do. ...	...g
3399	597	4	do. ...	...m	3439	557	33-34	do. ...	...h
3400	596	5	do. ...	... n	3440	556	34-35	do. ...	... i
3401	595	6	do. ...	... o	3441	555	35-36	do. ...	...j
3402	594	7	do. ...	...a	3442	554	36-37	do. ...	...k
3403	593	8	do. ...	...b	3443	553	37-38	do. ...	... l
3404	592	9	do. ...	...c	3444	552	38-39	do. ...	...m
3405	591	10	do. ...	...d	3445	551	39-40	do. ...	...n
3406	590	11	do. ...	...e	3446	550	40-41	do. ...	...o
			1 Jehoichin, 2 Kings xxiv. 8-16		3447	549	41-42	do. ...	...a
			1 CAPTIVITY do. ...		3448	548	42-43	do. ...	...b
3407	589	1-2	do. ...	... f	3449	547	43-44	do. ...	...c
3408	588	2-3	do. ...	...g	3450	546	44-45	do. ...	...d
3409	587	3-4	do. ...	...h	3451	545	45-46	do. ...	...e
3410	586	4-5	do. Ezekiel i. 1.	... i	3452	544	46-47	do. ...	... f
3411	585	5-6	do. Ezkl. viii. 1.	... j	3453	543	47-48	do. ...	...g
3412	584	6-7	do. Ezkl. xx. 1.	...k	3454	542	48-49	do. ...	...h
3413	583	7-8	do. ...	... l	3455	541	49-50	do. ...	... i
3414	582	8-9	do. ...	...m	3456	540	50-51	do. ...	...j
3415	581	9-10	Ezl. xxiv.1...2Kng.xxv.1	n	3457	539	51-52	do. ...	...k
3416	580	10-11	Ezl. xxvi.1...2Kng.xxv.3,6.	o	3458	538	52-53	do. ...	... l
3417	579	11-12	Captivity ...	...a	3459	537	53-54	do. ...	...m
3418	578	12-13	do. Ezl. xxxiii 21.	...b	3460	536	54-55	do. ...	...n
3419	577	13-14	do. ...	...c	3461	535	55-56	do. ...	...o
3420	576	14-15	do. ...	...d	3462	534	56-57	do. ...	...a
3421	575	15-16	do. ...	...e	3463	533	57-58	do. ...	...b
3422	574	16-17	do. ...	... f	3464	532	58-59	do. ...	...c
3423	573	17-18	do. ...	...g	3465	531	59-60	do. ...	...d
3424	572	18-19	do. ...	...h	3466	530	60-61	do. See Persian Monarchs.	e
3425	571	19-20	do. ...	... i	3467	529	61-62	do. do.	... f
3426	570	20-21	do. ...	... j	3468	528	62-63	do. do.	...g
3427	569	21-22	do. ...	...k	3469	527	63-64	do. do.	...h
3428	568	22-23	do. ...	... l	3470	526	64-65	do. do.	... i
3429	567	23-24	do. ...	...m	3471	525	65-66	do. do.	...j
3430	566	24-25	do. ...	...n	3472	524	66-67	do. do.	...k
3431	565	25-26	do. Ezkl. xl. 1.	...o	3473	522	67-68	do. do.	... l
3432	564	26-27	do. Ezkl. xxix. 17	...a	3474	522	68-69	do, do.	...m
3433	563	27-28	do. ...	...b	3475	521	69-70	do. do.	...n
3434	562	28-29	do, ...	...c	3476	520	70	End of Captivity with	o
3435	561	29-30	do. ...	...d				the 6th civil month.	

The particular years of the Captivity are fully proved by referring to Ezekiel's dates.

The 70 years of Jewish Captivity, so minutely mentioned by Ezekiel, began wrth the 1st sacred, which is the 7th civil, month of 3406, A.M., 590 B.C., table e. of the Ancient Hebrew Solar Cycle. Jehoiachin reigned three months of the same year in Jerusalem, in the first three sacred months, on the completion of which Nebuchadnezzar came up against Jerusalem and carried away the king and the principal men to Babylon. 2 Kings, xxiv. 8.

Nine years afterwards, on the 10th day (Sunday) of the 10th sacred month, 4th civil, year 3415, the 9th of Zedekiah's reign, table n, Nebuchadnezzar pitched against Jerusalem. See 2 Kings xxv. 1, and Ezekiel xxiv. 1. Next year, 3416, table o, on the 9th day of the 4th sacred, 10th civil, month (Friday), the famine prevailed and there was no bread in the city. King Zedekiah fled, but was captured and taken to Babylon. This was 18 months after the siege began. On the 7th of the following month the House of the Lord was burnt. But Jer. lii. 12. speaks cf the 10th day. He classes the kings' house and other buildings with the temple—three days' work. The second temple was also burnt by Titus on the 10th.

THE JUDGES OF ISRAEL,

IN SIX COMPARATIVE SECTIONS.

Historical Table iv.

THE BOOK OF JUDGES, &c.

The following is the chronological order of the Book of Judges. The first col. to the right is the number of years mentioned in scripture, except where no Bible reference is given on the left. The col. on the extreme right is the year of the world from Creation, which is simpler than giving the year before Christ, inasmuch as it shows an unbroken and consecutive line of history; but the true B.C. year for any of the years can be found by deducting 3996, which was the year when our Lord was born. To find the Biblical B.C. year, 4004 must be deducted. The sign ☉ represents the eclipse line of time, which is an unalterable factor and is the total eclipse of the sun Line i., No. 1., or the first eclipse in the chart of 18 years, the occurrence of which is regularly noted in the "List of Astronomical Years."

SECTION A.

			A.M.
Num.xxxiii.3 The Exodus on Tuesday, 15th of 1st sacred month, 2513 ... —		☉	2513
Deuter. i. 3 Forty years in the wilderness...	... 40	more	2553
Joshua died aged 110, after judging 20 years	... 20	do.	2573
Judges iii. 8. The Chusan oppression period...	... 8	do.	2581
„ iii. 11. Othniel delivered Israel, and 40 years of rest followed	... 40	do.	2621
„ iii. 14. Moabite oppression by Eglon who was slain by Ehud	... 18	do.	2639
„ iii. 30. Eighty years of rest	... 80	do.	2719
,, iv. 3. Canaanite oppression. Deborah and Barak deliverers	... 20	do.	2739
„ vi. 1. Median oppression	... 7	do.	2746
„ viii. 28. Gideon, also called Jerubbaal, was judge ...	... 40	do.	2786
,, ix. 22. Abimelech's cruel usurpation ...	... 3	do.	2789
„ x. 2. Tolu was judge ...	... 23	do.	2812
„ x. 3. Jair was judge ...	... 22	do.	2834
„ x. 8. Amorite oppression, End of 300 years in 2852* (Judg. xi.25) 18	do.		2852
,, xii. 7. Jephthah a judge in North East. (Eli in S.W.) See sec. B. 6	do.		2858
,, xii. 9. Ibzan do. do. Period of Book of Ruth 7	do.		2865
„ xii. 11. Elon do. do. (Eli in S.W.) See sec. C. 10	do.		2875
,, xii. 14. Abdon do. do. (Eli in S.W.) See secs. B. C. 8	do.		2883
Eli judge in South West; his last 7 years. See secs. B.C.E. 7	do.		2890
Samuel succeeded Eli in 2890, and after ruling his first 20 years, annointed Saul king in 2910. Secs. B.C.E. 20	do.	☉	2910
Acts xiii. 21. Saul died in 2950, having reigned 40 years, during which Samuel was priest 38 years, as he died about 2 years before Saul. See sections B. C. and E. ...	... 40	do.	2950
2 Sam. v. 4. David succeeded Saul in 2950 and reigned 40 years	... 40	do.	2990
1 Kings iv. 6. Solomon succeeded David in 2990 and after reigning three years, laid the foundation of the temple in his fourth...	3	do.	2993

Total of years ... 480   2993

Thus from the exodus in 2513, to the foundation of Solomon's temple in 2993, are the 480 years mentioned in 1 Kings vi. 1. "In the 480th year after the Children of Israel were come out of Egypt, in the fourth year of Solomon, the House of the Lord began to be built." That the year 2513 and 2993 are correct, we have a host of proofs, but the Solar Cycle, which is astronomical time, determined also by eclipses and transits, sets the question at rest. Table l of the Ancient Hebrew Solar Cycle gives Tuesday, 15th of 1st sacred (7th civil) month for the exodus, and Friday, 2nd of 2nd sacred month, 2993, also table l, for laying the foundation of the temple. We cannot alter these dates without displacing the orbs of the solar system.

The Book of Judges appears to be a straight-forward book ending with chapter xii, the subsequent chapters belonging to another and earlier part of history. This chapter xii. leaves us at 2883, as the above table and the scripture references show. All students of the Bible allow 20 years, or rather more, for the period of Joshua's rule. We must therefore complete the interval of 27 years for which we have no direct scripture reference, as indicated at the left side of the section. This we can do by dissecting the period as related in other parts of the Bible. The reader must therefore notice sections B. C. E. used for this purpose.

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* The conquest of Heshbon was in 2552, one year before entering the promised land, therefore the 300 years end with 2852. See Numb. xxi. 25 and 32.

SECTION B.

A.M. 2850 Eli began to rule.
1 Sam. iv. 8.   40 Eli ruled 40 years.
——   Sections
2890 Eli died... ...   A. C. E.
„ vii. 2.   20 Ark at Kirjath and
——   Samuel judge.
„ vii. 13 2910 Philistines subdued, and
Saul made king   A.C.E.
Acts xiii. 21.   40 Saul reigned, and
——   Samuel priest 38. A.C.E
2950 David succeeded. A.C.E.
2 Sam. v. 4.   40 David's reign.

2990 Solomon king   A.C.E.
1 Kings vi.1.   3 His 3rd yr. ended. A.C.E.

2993 Temple began in 4th.
We are certain that the temple of Solo-
mon was dedicated in the year 3000, because
the days and dates do not accord with the
form of any other year than table d. See
Dedication of Solomon's Temple in the 1st
month, called 7th sacred of that year. as
shown under " Chronology" authenticated.
We are told that the building was finished
in 7 years (1 Kings vi. 37), therefore to find
the year when Eli began to rule, and there-
by complete the breach in section A., we
have only to tabulate the Bible references.
As Eli lived 98 years (1 Sam. iv. 15), and
ruled 40 (verse 18), he was 58 when made a
judge, and would be born in 2792.
We shall, by continuing to use the A.M.
year, see how all these facts are consecu-
tively worked out by other sections, and
find as he died in 2890, what his last 7 were.

SECTION C.

2834 Death of Jair.   A.
16 of the 18 Amorite opprsn.
——   and Samson judge.
2850 Eli made judge.   B.
2 Last 2 of oppression.   B.

2852 Jephthah N E. judge. A.
38 Remainder of Eli's 40.

2890 Samuel after Eli. A.B.F.
20 Samuel's first 20 years.
—— Samuel annointed
2910   Saul king.   A.B.C.
Acts xiii. 21.   40 Saul's 40, Samuel died
——   in 38th year. A.B.C.
2950 David succeeded. A.B.C.
2 Sam. v. 4.   40 David's reign.

2990 Solomon succeeded, A.B.
1 Kings vi, 1.   3 Solomon ended first 3.
—— Solomon began his 4th
2993 year, temple foundation.
Samuel was born at the end of the inter-
calary year 2852, table f. and died aged 96.

SECTION D.

2834 Death of Jair.   See sec. A.
20 Samson's 20 years "in the days of
——   the Philistines."
2854 Eli succeeded Samson, but as in-
timated by Usher, as a civil
judge only at first, and that
Judg. xvi. 31 is not another 20.
Usher places the commencement of Sam-
son's rule in 2843, but in that case there
was no judge in Israel after the death of
Jair, in 2834, (up to which period the line
of rulers was complete) to 2850 when Eli
began to take authority.   It is evident
from Judges xv. 20 that Samson's twenty
years were during the Philistine domina-
tion which rose with that of the Ammon-
ites when Jair died, and was a fittting pe-
riod for a man of Samson's powers to annoy
the alian rulers.

SECTION E.

Line of time without North East Judges.
Judges x. 3. 2834 Death of Jair   A.C.D.
16 of the 18 Amorite opprsn.
——   and Samson judge.
2850 Eli's rule began.   B.C.
1 Sam iv. 18.   40 He ruled 40 years,   B.C.

2890 Samuel succeeded.   B.C.
20 Ruled his first 20

2910 Annointed Saul.   A.B C,
Acts xiii. 21.   40 Saul reigned 40, dying
——   2 yrs. after Saml. A.B.C.
2950 David succeeds Saul.
2 Sam. vi. 1.   40 David's reign

2990 Solomon succeeded

SECTION F.

In Acts xiii. 20 we read that Judges
lasted 450 years. They began 2513, the ex-
odus year, and ceased when tue Everlast-
ing Kingdom was appointed, having new
officials. See 2 Sam. vii and viii. 14—18.
Exod. xviii. 25   2513 Judges appointed.
377
2890 Saml. began, see A E
20 Samuel continued
2910 Saul made king, A E
38 Samuel continued.
1 Sam. xxv. 1   2948 Samuel died, age 96
2 Saul continued
2950 David king, A B E
13 Nathan
2 Sam. vii.   2963 Everlastig. kingdom
Saul was rejected, Samuel therefore con-
tinued and was followed by Nathan until
the end of 450 years when the Everlasting
Kingdom began, half-way from 0 to 5926.

THE EVERLASTING KINGDOM.

This splendid subject is connected with the 450 years of the rule of Judges, but owing to the obscurity of translations of Acts xiii and 2 Sam. vii., &c., it has not received the attention it deserves. There is something very special in the message which came to Nathan "that night," after he had been in conversation with David. The king was told that the Lord would establish his house and kingdom for ever! This was in the year 2963 and it is a very beautiful prophecy, the fulfilment being found in Scripture, connected with the end of the Jewish Times and Millennium. The following are examples:

The end of the Jewish Times of 2520 years from the Captivity in 3406, is 5926. The prophecy of the Everlasting Kingdom reaches this and is half way from creation.

The prophecy	2963	Captivity ...	3406
Period repeated	2963	Jewish Times	2520
Fulfilment	5926	Fulfilment	5926

The following is another impressive example by Abraham offering Isaac, who previously asked, "Where is the lamb?" Abraham replied, "God will provide a Lamb," namely in 4029½, the crucifixion.

| Isaac offered... | ... ... | 2132½ |
| The first period | ... ... | 1897 |

| Lamb provided—Crucifixion | 4029½ |
| The period repeated ... ... | 1897 |

| Everlasting Kingdom... ... | 5926½ |

We have by these beautiful examples the revived Everlasting Kingdom (before which the temple will be built with splendour in Jerusalem), the end of the Jewish Times and the Millennium. 5926 is 1928.

There are two or three other points of interest connected with the Book of Judges. Reference has been made in Section A. to the 300 years alluded to by Jephthah in Judges xi. 25. He is speaking of the conquest of Hesbon by Moses one year before the Israelites crossed Jordan. The conquest was therefore in 2552, and the 300 years ended in 2852 which the solar cycle shows was an intercalary year. Now the 4th verse or margin, which is the Hebrew interpretation, alludes to the intercalary period, and therefore enables us to put a finger upon the 300th year in the same way as systematic chronology enabled us to ascertain what was the 20th year of Artaxerxes respecting which there used to be so much discussion.

Judges xvii to end of the book details incidents at the close of chap. ii.

CROSSING JORDAN.

The importance of the period of the Judges is seen by the date of crossing the Jordan in 2553, when Moses died, which is the last year on Historical Table III. By referring to the Solar Cycle of the Ancient Hebrews it will be seen that 2553 was the 7th year, table g, of the cycle. In Joshua iv. 19. we read that Jordan was crossed on the 10th day of the 1st (sacred) month. As the 11th was Saturday, the Israelites crossed on Friday so that their first complete day in the Land of Rest was the Day of Rest. All the figures of the cycle are seventh days—Saturday.

Such dates, proved by the Solar Cycle, are a confirmation of history. But Biblical dates are planetary motion, and are also proved by all astronomical lines of time, such as the Transits of the planet Mercury and the Metonic Cycle. There is no other history proved in this way.

SEVENTY KINGS and THIRTY-TWO KINGS IN ONE COUNTRY.

The Book of Judges, like other portion of ancient history, throws immense light on the system of government before population was large enough to form nations. In this way we see in a moment how three or four Egyptian dynasties existed at one time. In Judges i. 7, we read of Adoni-bezek having three-score and ten kings gathering their meat under his table after having been subdued by his superior arms. In like manner Joshua slew thirty-two kings (Joshua xii. 7—14) whose united territory did not exceed that of Scotland. The fact is, in that period of the world population was so sparce—the flood having taken place but 860 years previously—that government was often only of a tribal character. Every little city had a king. But when population increased dominion was naturally extended. With so many examples of petty dominion before us, it is manifest folly to suppose that the early dynasties of Egypt were consecutive. As I have stated elsewhere, Brugsch says five of them were collateral; Bunsen says seven, and Wilkinson and another says twelve existed at one time in various parts of the country. It must be granted, however that owing to independence of rain, Egypt would attract population, but there is no evidence that the country was united under one rule till the empire began in 2235 by Aahmes, who was also called Amosis I, the founder of the 18th dynasty, 41 years before Joseph was sold into Egypt. It is always wise to compare the history of one country with others.

SUN STANDING STILL.

Herodotus tells us that the priests of Egypt showed him a record of a long day. This was probably the day in which the sun "stood still" in Joshua's time. We have another record of the same singular phenomenon found in the Chinese writings, which say that in the reign of Yeo, the sun did not set for the space of ten days (probably ten hours as then understood). At all events the reign of Yeo was contemporary with the period when Joshua flourished. We therefore seem to have three records of this event first mentioned in Joshua x. 13. A chronologist hopes that the same event which we read as "written in the book of Jasher," will be found, and thus become a fourth, which it really is, because Jasher did not write the Book of Joshua. Some, however do not regard Jasher as a man, but a collection of general and historical events referred to by the Seventy translators in the time of Ptolemy Philadelphus.

THE SABBATH DAY NOT OF HEBREW ORIGIN.

As all the Antediluvian dates, and also those during the time of the postdiluvian patriarchs, form into solar cycles, we have uncontrovertible evidence that weeks of seven days were observed from the first seventh day mentioned in Gen. ii. Every man acquainted with scientific chronology knows that there is no solar cycle without weeks, and this is why our own dates come round again by bringing the same day of the week upon the same date of the month as at a known previous period, viz., after 28 years. That is to say, as Sunday was the 5th of Jan. in 1868, it must of necessity fall on the same date in 1896. See the Solar Cycle of the Christian Era. This fact would occur after seven years, did we not break the chain of dates every fourth year by having a leap year, which lengthens our solar cycle to 4 times 7. Now let the reader look at the Antediluvian Solar Cycle where he will find that the 17th day of the 2nd month falls on the seventh day, Saturday, in the 5th year of that cycle. This we are told in Gen. vii. 11, was the date of the Flood, and by compiling the births of the patriarchs given in Gen. v. (See the table given in the page of the cycle in question), we learn that the year was 1656. Let the reader work out the cycle by sevens and he will find that the year No. 5, containing the Flood dates, was 1656, hence we see that weeks of seven days have been observed by the Antediluvians from the first Sabbath of year 0 to 1656. The table of first years of cycle given in the following page will help him to prove this, otherwise it is easily done

by dividing 1656 by 7, and, of course, allowing the first year to be 0, as when we reckon the first of our life. This however, is but one method of proving the observance of weeks of seven days by the Antediluvians. The application of the Lunar Cycle is a most powerful scientific test and is a triumphant proof of the same fact. The eclipse line of time is a third and the two transit lines of Mercury and Venus are others. So that he who says the Sabbath is of Hebrew origin is a very ignorant man. In like manner the emphatic expression of Moses in Exodus xii. 41, relative to the end of 430 years, could not fall on the same day of the week and date of the month, before the delivery of the Sabbath law without a continued observance of weeks of seven days. Indeed we have indubitable evidence that the seventh day has never ceased to be observed. Great scientific facts show us that the Sabbath was kept 2513 years before the law from Sinai, 1516 by the Jews from thence to the resurrection of Christ in 4029, and 1853 years in the Christian era up to 1883, when these lines were written. The three periods may be thus represented:—

Before the law—————— ——————2513
By Hebrews —————————— 1516
By Christians ———————————— 1853

Total of years 5882

The Sabbath has thus been a Jewish institution for the shortest period !

THE LONG LIVES OF THE PATRIARCHS.

There are three or four great scientific facts, which are irresistible to chronological astronomers, respecting the long lives of the antediluvian patriarchs, viz. unless the precise periods of time be allowed for their lives, as stated in the Hebrew chronology of the Genesis, the ten dates of the flood could not have occurred in 1656, the year by Usher in Gen. v. ; neither would it be found possible to have eclipses and transits at the times we now see them, or to have the ancient records of eclipses. To doubt the accuracy of chronological periods without testing them by some reliable scientific process, is possible, but it is now palpable evidence of ignorance. Men must allow the time claimed by Biblical history, viz. 3996 solar years before Christ, whatever they please to think of the incidents recorded, though as dates are not mentioned in a primary sense, and could not all be correct if invented, it is hard to doubt the events which dates are used to record. Mr. Darwin may be regarded as an able man, but he is now in the position of Tycho Brahe in respect to modern astronomy.

PROPHETIC PERIODS.

There are eight important Prophetical Periods in the Old Testament, four of which have been fulfilled, as we now see, with most wonderful precision. They are :

I.—120 years from the date of the announcement of the Flood to the date of the day when it began ...   . 1536 to 1656

II.—430 years from the day of the week and date of the month when Abraham left the City of Ur, to the selfsame day of the week and date of the month when the Israelites marched out of Egypt   ...   . 2082 to 2513

III.—472 years from the month Nisan, in 3557, which was the 20th of Artaxerxes, to the same month in 4029, when our Lord was crucified   ... 3557 to 4029

IV.—70 years Captivity. The greater of the two periods   ...   ... 3406 to 3476

UNFULFILLED.

V.—2300 years to the Cleansing of the Sanctuary (Dan. viii. 14)   ...

VI.—1260 days to the completion of the scattering of the power of the holy people (Dan. xii. 7.)   ...   .

VII.—1290 days (30 more) verse 11.   ...   .

VIII.—1335 days (45 more) verse 12.   ...   .

The following are some details of each of the eight periods, and now that we have the means of accurately dealing with time and history by a system of measurements which are also controlled and proved by astronomical cycles, we ought to give our attention to these periods if we wish to have a correct view of their importance.

I.—THE DELUGE.

120 Years to the Flood in 1656.

Noah mentions in Gen. vii. 13. that the flood came on the earth on " the selfsame day," that is, he entered the ark on the same day of the week and same date of the month as occurred at some special previous period.   On looking at the Antediluvian Solar Cycle, the 5th of the 7 years, we see that " the 17th of the 2nd month," when he entered the ark, was Saturday, the old Sabbath Day, in the year 1656, and that the same date fell on the same day of the week 120 years previously, viz., in 1536.* Thus the remarkable period of waiting for the repentance of the Antediluvians, mentioned in Gen. vi. 3, was completed to a day.

It is the Solar Cycle which brings round the date of the month on the same day of the week, as is the case with ours, but without the use of weeks of seven days no Solar Cycle exists.   I therefore look upon this date of the Flood as the first proof that the Sabbath Day was kept up from its institution in year 0.   There are numerous proofs of this character, and I would particularly impress upon public writers, if they wish to preserve the reputation of their names, not to theorise with Scripture history.   In how many books have we been told that the Sabbath Day was a Jewish institution ? In how many volumes do we read of the flood as having occurred at a period contradictory to all proper investigation and Scripture testimony.   Such men might more to their advantage be engaged in stone-breaking tnan teaching the science of chronology, of which they know nothing—not even so much as a simple Solar Cycle !

The prophecy of a flood cannot be disassociated from the year 1656, because we see that nine of the ten dates, expressed or implied, in the diary of Noah, are dates of that year and first two months of the next.

As the dates are on the 5th year of the cycle, it is a simple process of multiplication to see if the repetition of the solar cycle of seven years produces them for the fifth year and whether it was 1656.   This was the first test which I made of the accuracy of a Biblical date, and when I saw how it could be done, I began the investigation with some hesitation, for fear I should detect an error and thereby supply means for rejecting the years given for the birth of all the Antediluvian Patriarchs, and the unbroken observance of the Seventh Day.   In fact I knew that the detection of an error, if it existed, would destroy all Biblical chronology   My joy was great when when I saw that the consecutive repetition of 236 cycles made the 1st year of the cycle 1652, hence the 5th year of the same cycle was 1656, the very year we obtain in Gen. v. when we add the birth of the patriarchs to the 600th year of Noah, when the Flood occurred, This is most marvellous.   More so when, as I afterwards saw, that the same accuracy was strictly supported by the Metonic, or lunar cycle, by the eclipse and two transit cycles.   To these I invite the reader's attention, and here I wish also to state that I have never found an error in Biblical years. I am certain that if those men who doubt Scripture Chronology would only investigate it by the light of advanced science, they would endorse the whole of it.   Let no man make assertions he cannot prove.

* There are other instances in Scripture History of this significant completion of periods of time.

II.—THE SOJOURN.

"430 years" sojourn of the Children of Israel. Exodus xii, 40. It informs us that the sojourn of the children of Israel was 430 years, and "at the end of 430 years, even the selfsame day it came to pass that the hosts of the Lord went out from the land of Egypt."

The solar cycle of the Ancient Hebrews shows us that the 15th of the 7th month, was Tuesday, when the Israelites left Egypt, in 2513, and the beginning of 430 years before that date was also Tuesday the 15th of the 7th month, in the year 2082. As Abraham left the City Ur in this 2082, the words of Moses plainly refer to these two incidents forming the beginning and the end of the "sojourn." The period was thus completed to a day, called "the self-same day," because it was the same date of the month and the same day of the week. This marvellous precision is still more clear to us when we observe that to add 430 years to 2082 is 2512. But Moses says "to the end of 430 years." Now as the 7th month is the middle of 2082, that year is only six months of the 430, and hence the period of the sojourn must run to the middle of the next year 2513, to form the end of 430 years. Otherwise the exodus would have been in 2512. The fact is one year of the 430 is but six months of 2082, and six months of 2513. If the reader looks at the solar cycle he will see this at a glance. Table a. is 2082 and table l. is 2513. In both these years Saturday, the Sabbath Day, in the 7th month was 12th, therefore Tuesday was 15th. Compare Exodus xii, 41, 51, with Numbers xxxiii 3, and bear in mind that the 7th month was called the 1st month after the exodus.

III.—THE CRUCIFIXION, 4029.

This is the most important of all the fulfilled periods.

It was not till the summer of 1883 that the full meaning of this very impressive prophecy was discovered, viz., by Dr. Alder Smith, of Christ's Hospital, London, to whom the religious world will for ever be indebted. He has certainly accomplished in a few lines what eminent Divines have been endeavouring during many centuries to arrange. This eminent scholar found that the years represented by days were not solar, but lunar.

Dan. ix, 25-"From the going forth of the commandment to restore and to build Jerusalem unto the Messiah, the Prince, shall be seven weeks and three score and two weeks." (69 weeks)

"He shall confirm the covenant with many for one week, and in the midst of the week he shall cause the sacrifice and the oblation to cease." (Midst of a week is half a week.)

Result—The 69½ weeks of Daniel ix, are 486½ lunar years, which are equal to 472 solar years. The commandment went forth in the middle of Nisan, the 7th civil month, and Jesus Christ was crucified in the middle of the 7th civil month, early on Friday the 15th, the day after the passover. See table m. of the Ancient Hebrew Solar Cycle, also the years of the reigns of the Persian monarchs, showing that the 20th of Artaxerxes was 3557.

Thus, 69 weeks, verses 25 and 26.
7 multiplied into days.

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483 called years.
3½ "midst of a week," verse 27.

Total 486½ lunar years are 472 solar years.

472 years from the 20th year of Artaxerxes (Neh. ii, 1,) which was 3557, A.M., to 4029, when our Lord was crucified.

Hence we have date of command to restore and build Jerusalem:—
3557, the 20th of Artaxerxes.
472 the above solar years.

4029 A.M., year of crucifixion which was our A.D., 30.

It will be seen by the Solar Cycle that table m is 4029, and that it must be the crucifixion year, because Friday is the 15th of the 7th month, as shown by Saturday, the old Sabbath Day, being the 16th. The Passover was eaten "in the 14th day of the month, at even" (Numbers ix. 3.) and hence our Lord partook of it on Thursday evening, the 14th, being the night before his crucifixion. I showed these facts to Dr. Alder Smith, who, although he had found that 472 solar years formed the period of Daniel's great prophecy, was at that time unacquainted with the power of solar cycles for determining the day of the week on which dates fall, and also the true year of any event. I also showed him how the 20th year of Artaxerxes was certainly 3557, by consecutive counting from all other years of Persian monarchs mentioned in Scripture, more particularly the fact that the margin of Nehemiah xiii. 6. states that the 32nd year of Artaxerxes was an intercalary one having extra days added to it, as shown by the words "at the end of days," the same fact being also shown by the solar cycle, (See table c, year 3569) and hence we have several proofs that table f, the 20th year, was 3557.

The reader must look for himself at all these interesting details.

The foregoing shows us that the half week (or the 3½ day-years) of the 70 weeks mentioned in Daniel ix. 24, are yet in the future, the present period being an interval formed in the midst of the 70th week.

We also find, when compared with Section II., that:

1. Abraham left Ur on 15th of 7th mnth.
2. Israelites left Egypt 15th of 7th mnth.
3. Jesus was crucified 15th of 7th mnth.

Therefore every intelligent man, whether Jew or Christian, must see that Jesus is the Son of God, the date of his crucifixion being allied to the call of Abraham and the Exodus.

If the reader wishes to see more into the value of Daniel's 70 weeks, the following proof will be interesting. I have shown that 69 weeks multiplied by 7 produce 483 days, called prophetic years. To prove them to be lunar we must multiply the 483 by 354, which is the number of days in a lunar year. The product is 170,982 days, which turned into solar years of 365 days each, come to only 468½ years. This is all we can make of them. Thus

3557, the 20th of Artaxerxes, Neh. ii. 1.
468½ solar years, as above.

4025½ A.M.
3½ the first half of the 70th week.

4029 A.M., Crucifixion.

Here we see that 468½ solar years contain the 486½ lunar years on the previous page, thus proving that the 69 weeks when multiplied by 7 to obtain the number of day-years (483) are lunar years. They are also 26 eclipse cycles of 18 years.

It is interesting to notice that there was another representation of the 69 weeks of Daniel in the building of this second temple, which was finished in 3488. Ezr. vi.15. Thus, 3488 temple completed.
Add 69 weeks to represent years.

3557 the 20th of Artaxerxes when he ordered the restoration of the city.

The following is the lunar and solar analysis, and proves that the prophecy began in 3557 and ended in 4029. With the half week added they are 69½ weeks and comprise 486½ lunar years, which are equal to 472 solar years :

Lunar					Solar
3557	date of command				3557
(a) 49	years for 7 weeks are...				47½ (d)
(b) 434	years for 62 weeks are...				421 (e)
(c) 3½	years for ½ week are...				3½ (f)

69½ weeks end 4029 A.M.

(a)	49	...	...	...	47½(d) solar
(b)	434	...	...	...	421 (e) do.
	483				468½
(c)	3½	...	...	...	3½ (f)

486½ lunar years equal to 472 solar.

CRUCIFIXION—SEVENTY WEEKS.

Certainly the best way of proving the prophecy of the crucifixion is by using the 70 weeks of Daniel on the solar year principle. It is short and simple :

3543 the 7th of Artaxerxes. Ezra vii. 7.
49 the 7 weeks, being 7 times 7.
434 the 62 weeks multiplied by 7.

4026 "The time is fulfilled." Mark i. 15.
3½ Half week confirming covenant by the Lord's 3½ years' ministry.
4029½ Messiah cut off, oblation ceased.

Respecting this 4029½, the 15th of the 1st sacred month was Friday. See Hebrew Solar Cycle, table m, middle of the year, which has Saturday for the 16th. On " the 14th at evening," the Jews are repeatedly told to eat the sacrificial lamb. The 14th was Thursday. Let me also say that the 15th of this 1st sacred month is throughout Scripture a great date. On it Abraham was going to offer up his only son Isaac, the 430 years sojourn began by Abraham leaving the city of Ur, and ended on the same date (Numbers xxxiii. 3,) &c. All this is majestic and imperishable.

IV.—THE CAPTIVITY.

The first captivity period began in 3395 when Pharaoh Necho carried Jehoahaz captive to Egypt, as recorded in 2 Kings xxiii. 31 to 36, and ended in 3466. To add 70 to 3395 makes only 3465 ; but it began in the middle of the year, and therefore runs to the end of the first half of 3466, which was the 1st of Darius the Mede. Accordingly Daniel, who was carried captive with others in a first deportation of Hebrews to Babylon, by Nebuchadnezzar in 3398, seems to have expected the fulfilment in the 1st year of Darius, 3466, and prayed to God (See Dan. ix. 2.)

The second, or greater period of the captivity, began in 3406, which was 11 yrs. after the first period commenced, viz. when the second deportation was effected by Nebuchadnezzar (2 Kings xxiv. 8—16). It ended in 3476, a period of 70 years. It is easy to find each of these 70 years, because Exekiel dates from them. See " Years of the Captivity" in this book, and "Ezekiel's Dates," and notice them on the Solar Cycle which proves them and shows the day of the week.

THE YEAR WHEN ABRAHAM WAS BORN.

It is important to know the year when Abraham, a prominent person in history, was born, but we must not go for it to such a passage as Gen. xi. 6, because Abraham was the youngest of Terah's three sons. We must get Abraham's age where it is definitely given, viz., Gen. xii. 4. where we are told that "Abraham was 75 when he departed out of Haran." This was where his father died in 20⁸3, the year after leaving Ur. We read in Gen. xi. 32, that Terah lived 205 years, so that we have simply to deduct 75 from 2083, and we have 2008, the year when Abraham was born, namely when Terah was 130. This agrees with all other statements, such as Gen. xxi. 5, where we are told that Abraham was 100 when Isaac was born. I have already stated that the date when Abraham left Ur with his father is astronomical and of the highest scientific character, which no man can disturb without dislodging the earth and the moon from their orbits. The date was Tuesday, 15th of the 7th month, 2082, and from it to the end of 430 years, as stated by Moses in Exod. xii. 41, was again Tuesday, 15th of the 7th month, 2513. See Hebrew Solar Cycle. table a, which was 2082½, and same month in table l, 2513½. Saturday in both cases being the 12th of the 7th month, Tuesday was the 15th, the day when the Israelites left Egypt (Numbers xxxiii. 3). It is gratifying that by the advancement of our knowledge the sciences are coming up to revelation. Yet there are some men left who are in the rear with their methods of teaching history and astronomy.

FOUR PLANETS SEEN DURING A SOLAR ECLIPSE.

The total eclipse of the sun on Wednesday, the 18th of July, 1860, was remarkable, owing to the opportunity which it afforded for seeing several stars of the 1st magnitude, together with four planets, near the sun, all of which would have been invisible had not the body of the moon entirely covered the great luminary of day. The annexed cut illustrates what has just been said, giving the view as seen in North Spain, where the eclipse was total at 14 o'clock (2 in the afternoon). The four planets are represented by small plain discs, as seen through a telescope, and the stars are pointed as they appear to the naked eye. The uppermost planet is Saturn, that under it is Mercury. Jupiter is close to the sun and Venus below him. The top star to left, near Saturn, is Regulus, a handsome star in the constellation of the Lion. That in the left corner below is Alphord. The lowest star in the centre is Procyon, and the two on the right, near the sun, are Castor and Pollux, belonging to the constellation of the twins (Gemini). The classification of the solar eclipse known to astronomical chronologists for purposes of measuring the lapse of time, is No. 69, Line xviii. See Bird's Eye View of Eclipses of English Years, July, the bottom line. It occurs every 18 years, and in the course of 649 years, travels from one end of the line to the other. This explains how we know by the position or date of an eclipse, what is the true year of the world when an eclipse occurs. Thus it first took place in July, year 18, to which add 9 cycles of 649 years (its repeating date in July) 5841, Total number of years 5859, which was our 1860. This is making astronomy useful, which is the special work of the British Chronological and Astronomical Association, and for which it is deservedly commended.
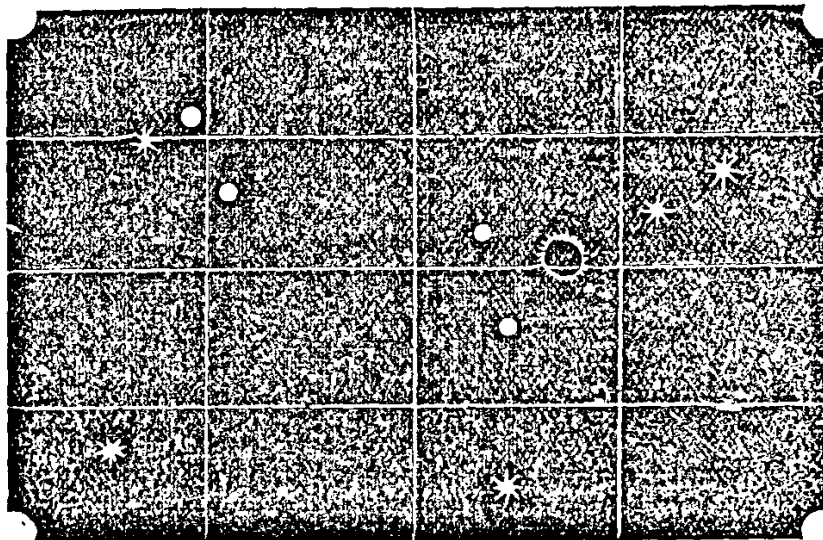
ALL PAST TIME.

"It would be difficult to explain in a book," said the late Lord Chelmsford, "what a clock is and what is its practical use, unless numerous diagrams were employed. But when the knowledge is obtained—supposing it had not been received early in life—the learner would smile at the simplicity of the construction, and be thankful all the days of his life for the useful information he had obtained." This is a good illustration of the position of every person who has unfortunately no knowledge of time as pointed out day by day by the revolving orbs of heaven, which are, by the precision of their movements, the originators and umpires of the moments and numbers of years; and when, after a few simple words of explanation, the learner comprehends the grand dial formed by the mechanism of the skies; when, indeed, the thought flashes into his mind which gives him the power to discern their common movements as he does the hands of a clock, and to listen to the voice of their periodical phenomena, such as eclipses and transits, as the repeating chimes from the belfry of heaven, he will feel that he has acquired a vast amount of practical information, that scales of ignorance fall from his eyes, and all history—hitherto unsystemised, or perhaps regarded as doubtful—will be pourtrayed as pictures before his admiring mind. He will regret that so much useful information has not been taught when at college or school, and that after all he has learned, his education in common and practical things, has been without a basis and incomplete. It is to give that information that the pages of this book have been written, the object of which is to teach, even to ordinary minds, that all past time can be known by astronomical measurements or periodical cycles. When these are pointed out—which are as simple as the dial of a parish clock—the reader will find that the statement that "this is an age of scepticism," is only such because it is an age of ignorance—that the human mind having obtained an imperfect view of the domain of one or two of the higher sciences, has unnecessarily swerved from the lines of history. This is a common mistake, but we now find by the higher achievements of modern science, that what were supposed to be history's weakest points, have become its strongest forts. Chronology has been an imperfect science, as was formerly the old system of astronomy, but it is now the most exact of all sciences, and instead of being dependant upon individual judgment, it is systematised by measurements as unalterable and arbitrary as the multiplication table. The result is the same products are obtained by all men, and history has become a science. Astronomy has also been largely benefited by this accession. It is now as much applicable to time as to objects of distance, and by the classification of eclipses and transits,—which could not have been accomplished without the correct knowledge of time supplied by Chronology—its domain has been extended 4,000 additional years

EXPLANATION.

There are three Solar Cycles in this book. No other has existed. They are—1. Antediluvian, giving the years from 0 to the end of 1721, A.M. formed of seven years. 2. Ancient Hebrew, from 1722 to the end of 3999, A.M, formed of 15 years. 3. Christian Era, from 4000 A.M., which we compute as 1 A.D., to present time, formed of 28 years. There is no Solar Cycle without weeks of seven days, and their existence proves that unbroken weeks have come down to us from year 0. They are formed by the dates found in history, two or three of which are quite sufficient to construct them by a natural enumeration of the seventh days in each of the 12 months of the year. They are really clocks. A Cycle is a wheel. Hence we speak of a "bi-cycle," a vehicle of two wheels. Applied to time, a cycle is a complete revolution, when the point of commencement comes round again. It is formed by the precise number of years which brings the same day of the week on the same day of the Month. Hence it is not possible to write eight Antediluvian years, because the eighth year would be like the first, having the same dates of the month on the same days of the week. Like the 1st year (See Antediluvian Solar Cycle) an 8th year would be written 7, 14, 21, 28, as the dates of the seventh, or Sabbath, days. It would be the same with every month, and the whole seven years of the Solar Cycle. Hence we have the evidence of arithmetical testimony that the Antediluvian Solar Cycle was a continued repetition of seven years, as ours is of 28 years. We obtain its commencement, Saturday, on the 7th of the 1st month, from Gen. ii. 2, 3. as the first seventh or Sabbath day.

These seven years as written are the dates of Sabbath or seven days consecutively produced by counting 7. Thus 7 must be followed by 14, and so on. To prove that all the dates written for the 12 months of each year, are Sabbath Days, we have only to remember that there can be no more nor less than 354 days in lunar years, which was the ancient year, because it is formed by the moon. As the moon revolves round the earth in 29½ days, the 12 months of the year must alternately possess 30 and 29 days in order to keep up with her movements—12 lunations, or months (moon-eths), in a year. This is a system now followed by the Jews, Turks, and Chinese, who use the original lunar year, the months of which are more astronomical than our pagan solar year, which, although a perfect measure of time, can begin and end any where, and have months of irregular length. The lunar year, and each month of the year, must begin with a new moon. If we, then, notice the alternate months of a lunar year,—always 30 or 29 days—we must write the dates as given in the Solar Cycle. Thus 7, 14, 21, 28, for the first month. As there are 30 days in that month, we have 2 left; therefore, as 2 and 5 are seven, the first Sabbath or seventh day of the second month fell on the 5th (See the Antediluvian Cycle). Then as this second month had the dates of the Sabbath as 5, 12, 19, 26, and contained 29 days, there are 3 days left. These 3 and 4 more make the first Sabbath of the third month to fall on the 4th of that month, and so on to the end of the year and Cycle. As the Cycle ends with 29, and there are no more days in the month, the point for beginning another Solar Cycle of 7 years is reached. It will hence be plain that as the years proceeded in sevens, and we have the dates of the Flood on the 5th year of the Cycle, the year of the Flood falls on 1656, when taken in sevens and adding 5. This is the year supplied in Gen. v., as shown at the foot of the Cycle. Of course the first year is reckoned 0.

The next thing to be noticed is that intercalary or extra days were required to make lunar years, which are formed of 354 days, equal to 365, which is the length of solar years. It is clear that this was always done by the Antediluvians by using 77 days at the end of the Cycle—7 times 11 are 77—that is 11 weeks. The lunar year is 11 days short of the solar. This plan would not disturb the Sabbath day. When it did, a week would be taken, because we find Biblical time has all been made solar. The lunar year was divided by the ancients into weeks and days, but not the solar, which was to them as a period; but if they had omitted to bring up the shorter lunar year of 354 days by taking up 11 exrta to make it up to 365, the seasons of the year would have soon been reversed. That these extra days were most carefully observed by the Antediluvians is proved by the application of the Lunar Cycle hereafter explained, and that such intercalary days were used at the end of the Solar Cycle of seven repeating years, is evident from the dates of the Flood. Noah went into the ark on the 1st day of the solar period, which in the 5th lunar year—the solar having begun 11 days later in the 2nd, 3rd, 4th and 5th,—had got so late as to begin that 5th year on " the 17th of the 2nd month." It is very interesting to observe this. We get a peep into Antediluvian affairs. The time would doubtless be one of great festivity. It was also a Sabbath day, and Noah left the ark at the end of the solar year. By using 77 extra days at the end of the Cycle its dates were never disturbed, and the lunar and solar years began on the same day with the commencement of each solar cycle. In this way also the dates of Creation were re-instated, viz., Sunday the first day, and Saturday the seventh. That the dates of the Sabbath Days were always the same as those on the Solar Cycle— indeed men cannot alter lunar years without moving the moon from her orbit—is proved by the previous 120th year occurring on the " selfsame day," that is of the week and date of the month, as Noah's diary informs us (Gen. vii. 13.). These are all matters of history.

These explanations are applicable to the Ancient Hebrew Solar Cycle of 15 years, one reason for the introduction of which was probably to keep the solar and lunar years more closely together. It adjusts the two years at the end of each third year, by the use of 34 intercalary days. The third year is frequently referred to in scripture history.

Like the Line of History, all the Lines of Astronomical Time were formed by working backwards from the present period. They could be obtained in no other way. Much could be said of their power and companionship for proving that nothing can be added or taken away from the years of history. For instance, if an eclipse takes place on May 10th, it indicates that a certain number of years has occurred to bring it up to that date. But if it occurred on 10th of June, we should know that 42 years had been omitted by history, because the date would not coincide with the year. Again, we cannot run away with the eclipses without taking the transits with us. To add a month to an eclipse, we should have to push the earth forward in her orbit in order to reach the only place opposite to the node of Venus where we can see her in transit, and Venus also would have to be driven onward with an accelerated motion to reach her node. In fact we cannot take an hour out of one of the Five Astronomical Lines of Time without disturbing every orb in the universe. Before these lines of time all history must bow and every man be dumb.

SABBATIC OR SEVENTH YEARS.
GREAT CHRONOLOGICAL TRIUMPHS.
CREATION YEAR ABSOLUTELY PROVED BY SEVENTH YEARS.
END OF ALL CONTROVERSY.
POWERFUL APPLICATION OF THE METONIC CYCLE.

"Six years thou shalt sow thy field, and six years thou shalt prune thy vineyard, and gather in the fruit thereof; but the seventh year shall be a sabbath of rest unto the land, thou shalt neither sow thy field nor prune thy vineyard." Levit. xxv. 3, 4.

The Hebrews divided the A.M. year straight from Creation in order to obtain their seventh or Sabbatic years, and as we find that they were also the seventh years of all the astronomical lines of time by planetary motion—whether from eclipses, transits, solar cycles, and the Metonic cycle,—it is plain that the Biblical line of years is absolutely correct, and we may remark that if the men who state that "much of Scripture history is legendary and its years and time erroneous," would supply proofs of their idle assertions, they might save their reputation and avoid ridicule.

Seventh years are obtained from four sources. 1. Biblical statements. 2. History of the Maccabees, the dates of the months and days of the week being a continuation of the Hebrew solar cycle. 3. The writings of Josephus. 4. By all the astronomical tables. But there are really five of the latter and the testimony of each is independent.

HOW IS THE WORK DONE?

A simple tale is soon told. We could prove no seventh years unless the chain of time by which they are produced starts from Creation year, as will be seen by the fact that we can divide nothing unless we have a number greater than the divisor. The divisor in the case in question is 7. But where is the number? It is the number of years from Creation in respect to Biblical seventh years, for example the year when the Israelites left Egypt was 2513, and it was a Sabbatic year. Divide the number 2513 by 7 and there is nothing over. This is the proof of Creation year, because we could not have 2513 without it. It is also the proof of the exodus year. It is more. This 2513 must also be a seventh year from all subsequent seventh years, though they are recorded as such nearly two thousand years afterwards. It must be more than all this. The year 2513 of Scripture must be 2513 of each of the astronomical lines of time and a seventh of all of them. These arrange themselves into sevens, for not only can there be no solar cycle of the revolutions of the earth without seventh years, the eclipse cycle begins afresh after seven cycles, each of 649 natural years, have transpired, each cycle beginning with one of the days of the week consecutively, and therefore can be separately identified.

The subject in question is yet far from being exhausted. This 2513 must be from a year which was marked by various physical evidences that its initial year was 1. It must not start anywhere. It must be a year when the solar and lunar years began together. It must also be when the sun was on the equinoctial colure, so that the great autumnal equinox was "the fourth day" of the solar year, producing equal day and night all over the world. It must be a year physically marked by the two nodes of the moon being in the centre of that year. It must be a year when the positions of the earth and the moon correspond in their respective orbits, otherwise the eclipses would not take place at the dates we see them occur. All these astronomical and geometrical phenomena must characterise the first year of 2513, otherwise it could not be a seventh year from Creation or a seventh from all other Sabbatical years.

The following are seventh years recorded in history:—

2562 Year following Joshua's division of land. Joshua xxi. 43, 44.
2912 When Saul "had reigned two years." 1 Sam. xiii. 1.
3207 Sennacherib overthrown. 2 Kings xix. 29.
3416 Nebuchadnezzar burnt the city. Jer. xxxiv.
3822 "The seventh year." 1 Maccabees vi. 49, and 53.
3850 Simon slain. 1 Mac. xvi. 16. (JOSEPHUS).
3962 Siege of Jerusalem by Herod. (Do.)

The Metonic cycle, which for its importance was inscribed by the Grecians in letters of gold, starts from Creation. It is a period of 19 years, and as the Antediluvian solar cycle is formed of 7 years, the two square in 133 years (7 times 19). This all-powerful table is printed in "All Past Time," having a * against every 133rd year to show that it is a 7th by the Metonic cycle from Creation, such year being of the same form, that is, beginning with Sunday. Accordingly, we find that by the Metonic Cycle, when the first seven lunar years of the Antediluvians are brought down by 133 years to Sunday, Sept. 20th, 1846, to Saturday, July 17th, 1852, both inclusive, that the moon in this period was new on the SAME days of the week as in the first seven years following Creation! When will men cease to slander Scripture?

We have thus seven references to Sabbatic years, and as some persons are unacquainted with the determination of years by solar cycles, eclipses, and transits, they can use the simple cycle of Sabbatic years, and obtain the same results.

1 particularly mention this because there is, or was, a very small section of chronologists, so-called, who allege that Usher's chronology was erroneous, and that "two gaps" in the history recorded in the Book of Judges had not been accounted for. One of these gentlemen wrote to me saying he did not understand the application of astronomy to years of history, but his investigations showed him that the years laid down by the British Chronological and Astronomical Association were not correct. I, and others, patiently examined his system, but always saw his errors, just as a banker weighing his gold knows what number of sovereigns he has delivered for a cheque presented at his counter. To convince this querist, however, I worked out the above simple Sabbatic cycle, which, without the use of astronomy, is conclusive to every intelligent and humble mind.

It appears from the foregoing instances that the Sabbatic Cycle observed by the Jews was the same as the Hebdomatic Cycle of seven years from Creation, and consequently is a grand means of determining the first year of the world, though we have other unquestionable means of knowing this, such as the Solar Cycle of the Antediluvian years, which cannot be mistaken. It might be expected that as the Jews were commanded to "remember the Sabbath Day," so would the years of "Rest" come from the same exemplary principle.—

With all these means of determining the precise years of the world, no man can question the accuracy of the computation without proclaiming his ignorance of common things, as well as his want of understanding the transits of Mercury and Venus. I have always marvelled that men, though learned on other subjects, and even eminent in some of the sciences, should challenge the Biblical record of Creation, when they know nothing about astronomical chronology. Ignorance is always the parent of error and superstition, but it is remarkable that a man like Darwin should have propounded theories which will not stand a moment before the facts obtained from a rigid scientific investigation of time; and let it be observed, these investigations are as simple as they are correct. All that has to done in proving years is to see how they divide by 7. They should do this from Creation,

DATES BY THE PROPHETS.

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EZEKIEL, EZRA, ZECHARIAH, HAGGAI, ESTHER AND JEREMIAH.

———

These dates are drawn up for easy reference to the Ancient Hebrew Solar Cycle, by which they are proved.

The B.C. year is obtained by substracting the years from 4004.

EZEKIEL'S DATES.

Ezekiel uses the Captivity years for his dates. They all commenced with the 7th civil month of the common year, and therefore the captivity years were half on one civil year and half on another. He begins with the 5th year of the captivity which was the last six months of table *i* and first six of table *j* of the Ancient Hebrew Solar Cycle. It is very interesting to read the dates of Ezekiel in the Bible and look at them on the Cycle, because they prove the A.M. years; the cycle being formed of 15 years, must always begin its first years (table *a*) alternately with a number ending with 2 or 7, for example 3402, 3417.

The B.O. year given below is the correct one from 3996. The Bible margin is from 4004.

Reference.	Captivity Year.	Date.	Sacred Month.	Day.	A.M.	B.C.	Cycle Table.	Civil Month.	Subject.
Ezekiel ...i. 1.	... 5th	 5	4	......Sabbath	...3410	586...	*i* ...	10...	
viii. 1.	... 6th	 5	6	......Sabbath	...3411	585...	*j* ...	12...	See note *
xx. 1.	... 7th	10	5	......Sabbath	...3412	584...	*k* ...	11...	
xxiv. 1.	... 9th	10	10	......Sunday	...3415	581...	*n* ...	4...	See note †
xxvi. 1.	...11th	 1	1	......Sabbath	...3416	580...	*o* ...	7...	

Concerning Egypt and Babylon;

xxix. 1	...10th	12	10	......Sabbath	...3416	580...	*o* ...	4...Egypt. ‡	
xxix. 17	...27th	 1	1	......Tuesday	...3432	564...	*a* ...	7...Babylon.	
xxx. 20	...11th	 7	1	......Friday	...3416	580...	*o* ...	7...Egypt.	
xxxi. 1	...11th	 1	3	......Tuesday	...3416	580...	*o* ...	9...Egppt.	
xxxii. 1	...12th	 1	12	......Friday	...3418	578...	*b* ...	6...Egypt.	
xxxii. 17	...12th	15		......Friday	...3418	578...	*b* ...	6...Same month.	

The Prophet returns to Hebrew affairs.

xxxiii. 21	...12th	 5	10	......Sabbath	...3418	578...	*b* ...	4...	
xl. 1	...25th	10	§	......Thursday	3430	566...	*n* ...	7...	

* The 390 days for Israel and the 40 for Judah (total 430, which amount to the same number as years of the sojourn in Egypt, a day representing a year,) Ezekiel iv. 5, 6, were now accomplished, and the prophet was seated in his house. ⊕

† Sunday because it was the " same day" that " the king of Babylon set himself against Jerusalem." (2 Kings xxv. 1. and Jer. lii. 4).

‡ Sabbath because the prophecy was a judgment pronounced on Pharaoh for his great treachery towards Israel.

§ " The beginning of the year," evidently refers to the first sacred month, 3430, table *n*, and the reason why Thursday is the day is, because the angel had to perform secular work by measuring the city, otherwise the vision would have been on Sabbath Day. By the term "selfsame day," pointed allusion is made to the fact that the date of the month was the same as when the city was smitten fourteen years ago, viz. on 10th of the 4th sacred month, table *o*., 3416.

It is interesting to notice the exaltation given to the Sabbath Day by the Divine communications to Ezekiel when they concern Israel. The list compares well with the nine dates of Noah on Sabbath Days in his diary of the Flood. We also see that the Solar Cycle of the Ancient Hebrews was never broken up. as ours is. As such it is a valuable table of history and astronomical science and ought to be in every school and printed in the Bible.

THE SCIENTIFIC CHARACTER OF EZEKIEL'S DATES.

1—There were in Ezekiel's time—3410 to 3441—just 354 days in a lunar year, as now.

2—As a lunar year begins when the moon is new and an eclipse of the sun cannot take place unless the moon is new, or an eclipse of the moon except the moon be full, there was precisely the same time between eclipses in Ezekiel's time as now.

3—Hence the moon and the earth had the same orbits as now, and accomplished their revolutions in the same time; and as Ezekiel's years were the same length as during the Flood period and year 0, there has been no variation of the motions of the earth and the moon since the institution of time at Creation period.

It is the " selfsame" days of the week falling on the same dates of the month which determine these grand facts, and thus although there are no eclipses mentioned in Biblical history, yet the dates given supply us easily with them all, and when taken from the point of time known as Creation, they fall correctly on every recorded eclipse and accurately reach those we now witness. This is exceedingly interesting and conclusively proves that scripture history is astronomical time of unquestionable precision.

DATES OF EZRA.
END OF THE FIRST SEVENTY YEARS OF CAPTIVITY.
PROUD BABYLON FALLS.
THE SECOND TEMPLE IS BUILT AND PROPHECIES FULFILLED.

The history written in the Book of Ezra is a marvellous record of astronomical time and possesses an imperishable interest all its own. Babylon—the haughty city built by Nebuchadnezzar, whose troops held Assyria and all the world in subjection—fell before the sword of Cyrus in 3466½ whilst Belshazzar, the king, was feasting with a thousand of his lords and drinking wine out of the golden and silver vessels brought from Jerusalem. In that night, yea, "in the same hour," came forth a mysterious hand which wrote upon the wall, "Thy kingdom is divided and given to the Medes and Persians."

The Book of Ezra commences with the 1st year of Cyrus, 3468, which is a continuation of 2nd Chron., and it was not till 75 years after the end of the first captivity in that year, and the subsequent completion of the building of the second temple, that Ezra followed those who had returned to Jerusalem in the 1st year of Cyrus. Ezra went up in the 7th year of Artaxerxes, (3543½) with some of the priests and singers. (vii. 6)

There were two captivities. The first began early in 3398, when Nebuchadnezzar carried Daniel and his companions, and the costly vessels of the Temple to Babylon, and the second began in 3406½, eight years later, when he exported the youthful king Jehoiachin and all the chief people. Both captivities were 70 years, ending in 3468 and 3476½.

The following will show the consecutive order of the events referred to :

3398 First captivity began. See 2 Chron. xxxvi & Dan. i. 70 ―――― 3468 End of first captivity. 75½ years more ―――― 3543½ Ezra went up to Jerusalem in 7th Artaxerxes. See Ezra vii. and xiii. 31.	**3406½** The greater captivity began. 70 2 Chron. xxxvi. 9, 10. ―――― 3476½ Captivity ended. 67 years more ―――― 3543½ Ezra went up to Jerusalem. 7th Artaxerxes. 14 years more. ―――― 3557½ Nehemiah went to Jerusalem. 20th Artaxerxes 12 He remained there. Neh. v. 14. ―――― 3569½ Returned at intercalary in 32nd of Artaxerxes

	Sacred				Solar			
	Day.	Month			A.M.	Cycle	Stated Year.	Subject.
Ezra* iii. 1	1st of	7th	Friday	...3469	*h*	1st Cyrus (3468-9)	Began to offer sacrifices
vi. 15	3rd of	6th	Friday	...3488	*l*	6th of Darius	House finished.
vii. 9	1st of	1st	Wednsdy.	3543	*g*	7th of Artaxerxes	Prepare to leave Persia
viii. 31	12th of	1st	Sunday	...3543	*g*	Do.	Departure
vii. 9	1st of	5th	Tuesday	3543	*g*	Do.	Arrived at Jerusalem
x. 9	20th of	9th	Sabbath	3544	*h*		Gathered within 3 days †
x. 16	1st of	10th	Wednsdy.	3544	*h*		Investigate genealogy
x. 17	1st of	1st	Sunday	...3544	*h*		End of examination.

The 7th of Artaxerxes, 3543-4, is the starting point of Daniel's 70 Weeks.

* The Jews had been waiting for the civil year. Temple finished 20 years afterwards.

EZRA'S FIRST SABBATH IN JERUSALEM.

† On arriving at Jerusalem, Ezra and his company assembled three days afterwards, with the resident Jews, in the new Temple on the 20th day of the 9th month, which the solar cycle shows was Saturday (Sabbath), but the gold and silver were not weighed till the fourth day, as such work on the Sabbath would be a desecration.

DATES OF NEHEMIAH.

Neh. ii. 1		1st		3557	*f* 20th Artaxerxes	Command to build Walls
vi. 15	25th of 6th	Thursday	...3557	*f*		Walls finished ‡
viii. 2	1st of 7th	Monday	3558	*g*		Law read in the street
viii. 13	2nd of 7th	Tuesday	...3558	*g*		Open air service.
ix. 1	24th of 7th	Wednesday	3558	*g*		Solemn Assembly
xiii. 6	The Intercalary month	3569	*c*	32nd Artaxerxes	Nehemiah returned. §

‡ This date shows that the "52 days" of building the walls began on Tuesday, the 4th of the 5th sacred month. We never find anything seccular done on the Sabbath.

AN IMPORTANT AND USEFUL DATE OVERLOOKED.

§ A splendid and valuable date. The margin is the best interpretation showing that the 32nd year of Artaxerxes was an intercalary one, and therefore the 20th was also one of the same character. Both were 3rd years, *f* and *c* on the solar cycle. This ends all argument as to what year was the king's 20th so that the method of proving the crucifixion by Daniel's 70 weeks is complete.

DATES OF ZECHARIAH AND HAGGAI.

The prophets Zechariah and Haggai with stirring words encouraged Zerubbabel and the high priest, Jeshua, in building the second Temple.

	Day Month		A.M.	Stated Year.	Subject.
Zech. i. 7	24th of 11th	Sabbath......3484	*h*	2nd of Darius II. ...	Vision of the horses.
vii. 1	4th of 9th	Friday 3486	*j*	4th of Darius II. ...	Word of the Lord.
Hagg. i. 1	1st of 6th	Monday......3484	*h*	2nd of Darius II....	Word of the Lord.
i. 15	24th of 6th	Wednesday 3484	*h*	Do.	.. Building work.
ii. 1	21st of 7th	Monday......3485	*i*		...Word of the Lord.
ii. 10	24th of 9th	Wednesday 3484	*h*	2nd of Darius II. ...	Word of the Lord.
ii. 18	24th of 9th	Wednesday 3484	*h*		...Word of the Lord.
ii. 20	24th of 9th	Wednesday 3484	*h*		...Word of the Lord.

DATES OF ESTHER.

The period of the book of Queen Esther was about 48 years after the end of the great captivity and nearly 20 before Ezra went up to Jerusalem. All the Jews did not return to their own country when the period of their captivity expired, which was 10 years after the fall of Babylon, but their history in Persia was of a marked character.

Esther i. 3			3520 *n*	3rd of Xerxes...Ahasuerus made a feast.
ii. 16	10th		3524 *c*	7th of Xerxes...Esther taken to the king*
iii. 7	1st		3529 *h*	12th of Xerx. ...Pur cast against the Jews
iii. 12	13th of 1st	Friday ...	3529 *h*	...Scribes called in.
iii. 13	13th of 12th	Monday ...	3530 *i*	...1st decree—to slay Jews †
viii. 9	23rd of 3rd	Thursday	3529 *h*	...Scribes again called in
viii. 12	13th of 12th	Monday ...	3530 *i*	...2nd decree slaying by Jews
ix. 1	13th of 12th	Monday ...	3530 *i*	...1st decree inoperative
ix. 15	14th of 12th	Tuesday ...	3530 *i*	...2nd decree gets into action
ix. 17	13th of 12th	Monday ...	3530 *i*	...Jews rested in provinces
ix. 18	15th of 12th	Wednesday	3530 *i*	...Jews rested in Shusan

A BRIGHT CONSTELLATION OF DATES.

* This date is remarkable for being the same sacred period, and just 472 solar years before the birth of Christ in the year 3996, as Nehemiah's commission in 3557 was 472 years before the crucifixion. Esther's date of her exaltation has thus a connection :—1. with the offering up of Isaac.—2, with Daniel's 70 weeks (3454, or part of 7th of Artaxerxes, and 472 reach the Lord's baptism and commencement of his covenant with the Jews in 4026).—3, with Nehemia's commission, which is the lunar period.—and 4, with the splendid date of Ezekiel iv. 5, 6. We have here again a galaxy of stars of the first magnitude. But Chronological Astronomy, like Nautical Astronomy, is a system of measurement and is rich in all such work, and teems with examples showing that although the books of Scripture were written at periods far apart, yet, like the orbs of heaven, they are members of the same firmament and have but one Author.

HOW A MALICIOUS DEVICE WAS OVERRULED.

† The first decree (verse 12) was made on the 13th day of the 1st month, 3529½, to destroy the Jews, young and old, women and children, on the 13th day of the 12th month, 3530½, just one year afterwards—the period was thus the last half of the year marked *h* on the solar cycle and the first half of *i*. The dates fit no other period. According to the laws of the Medes and Persians the decree could not be withdrawn, but by singular circumstances, Esther, the beautiful Jewess, had become Queen, and was in high favour with the king, who made a second and independent decree on the 23rd of the 3rd month—three months later—giving the Jews the opportunity to stand up in defence of their own lives on the day in which they were to be destroyed, and also to slay all those who would assault them. Accordingly when the day arrived in which both decrees could take effect, no man dared to touch the Jews, but owing to the fear of what had befallen Haman, whose tragic death they regarded as typical of their own, they did not so much as breathe a word against the heaven-protected race ; and so it proved, the impending sword fell upon them on the day when they expected to see the Jews destroyed. With surprising heroism, the Hebrews slew 500 Persians in their own city, and 75,000 others fell in the provinces. The event is unparalleled in history and may yet be repeated within the life-span of present generations.

EZEKIEL'S IMPORTANT DATE.

3544 7th of Artaxerxes (3543-4) 52 days as years building wall 390 Ezek. iv. 5. for Israel. } 40 Do. 6, for Judah. } 430 4026 " Time is fulfilled" Mark i.	3543½ 7th Artaxerxes 52 Nehemiah vi. 15. 434 the 62 weeks Dan. ix. 26 ———— 4029½ Date of crucifixion.	The 430 was sojourn, and 3 times 430 are 1290 of Dan. xii. 11,

DATES OF JEREMIAH.

BABYLONIAN TIME

SYNCHRONIZED WITH BIBLICAL YEARS.

The B.C. is the true year from 3996.   The small letters are the Solar Cycle tables.

A.M.	B.C.	Neb.	Jehokm.	Zedk.	Cptvty.	Subject.
3396 j	600		1			
3397 k	599		1-2			
3398 l	598	1	2-3			
3399 m	597	1-2	3-4			Jer. xxv. 1.: the 3rd & 4th Jehoichim was 1st
3400 n	596	2-3	4-5			year of Nebuchadnezzar, and siege by him
3401 o	595	3-4	5-6			of Jerusalem. Dan i. 1.
3402 a	594	4-5	6-7			
3403 b	593	5-6	7-8			
3404 c	592	6-7	8-9			2 Kings xxiv. 12.: the 8th of Jehoiachim was
3405 d	591	7-8	9-10			7th of Nebuchadnzr. Jer. lii. 28.
3406 e	590	8-9	10-11	1	1	See Captivity Years.
3407 f	589	9-10		1-2	1-2	
3408 g	588	10-11		2-3	2-3	
3409 h	587	11-12		3-4	3-4	
3410 i	586	12-13		4-5	4-5	
3411 j	585	13-14		5-6	5-6	
3412 k	584	14-15		6-7	6-7	
3413 l	583	15-16		7-8	7-8	
3414 m	582	16-17		8-9	8-9	
3415 n	581	17-18		9-10	9-10	2 Kings xxv. 1.: Neb. pitched agnst. Jrslm.
3416 o	580	18-19		10-11	10-11	2 Kings xxv. 2, 8.: City besieged and House
3417 a	579	19-20			11-12	of the Lord burnt. Jer. lii. 12, 29. See
3418 b	578	20-21			12-13	also (a) Ezekiel xxxiii. 21. City smitten.
3419 c	577	21-22			13-14	
3420 d	576	22-23			14-15	
3421 e	575	23-24			15-16	Jer. lii. 30. Nebchudnzr. 23rd year.

And so on to 3434 c 562, for 36-37 of Neb. and 28-29 of Captivity, reaching Nebuchadnezzar's Dream of a Tree.   Dan. iv. an important point of prophecy.

From the above we find that Nebuchadnezzar ascended in the latter half of the year.

HEBREW MONTHS SYNCHRONIZED WITH OURS.

1	civil is	vii.	sacred,	named	Tifri, Tishri, or Enthanim	-	-	-	October.
2	do.	viii.	do.	do.	Marchesvan, or Bul	-	-	-	November.
3	do.	ix.	do.	do.	Caslcu, Kislu, or Chisleu	-	-	-	December.
4	do.	x.	do.	do.	Teboth	-	-	-	January.
5	do.	xi.	do.	do.	Shebat	-	-	-	February.
6	do.	xii.	do.	do.	Adar	-	-	-	March.
7	do.	i.	do.	do.	Nisan, or Abib	-	-	-	April.
8	do.	ii.	do.	do.	Jiar, or Zif	-	-	-	May.
9	do.	iii.	do.	do.	Sivan	-	-	-	June.
10	do.	iv.	do.	do.	Tamus, or Pauemus	-	-	-	July.
11	do.	v.	do.	do.	Ab, or Lous	-	-	-	August.
12	do.	vi.	do.	do.	Elul	-	-	-	September.

When the ancient Hebrew year is one after an intercalary period our year (Jan. 1st) begins on the 30th, or last day of the 3rd month.   Our two following years each begin eleven days later, that is about the 11th and 23rd of the 4th month.   The intercalary or extra days (34) at the end of each third lunar year then restore the order as above. Our 1884 is table f of the Ancient Hebrew Solar Cycle, which it will be seen is an intercalary year, having 13 months.   Our 1885 begins with Thursday, the 30th, or last day, of the 3rd month, table g.

CHRONOLOGICAL ORDER OF THE BOOKS OF SCRIPTURE.

The best way to test the historical accuracy of the books of Scripture is by their dates. By this method we find that each book belongs to the period it represents, the chronological order in which each began being as follows:

Genesis ...	... A.M.	0	Amos ...	... A.M.	3217	2 Corrinthians	A.M.	4058
Generations of Adam		0	Hosea ...	...	3219	Romans ...	...	4058¼
Generations of Shem	1658		Isaiah ...	...	3238	St. Luke's Gospel	...	4059
Exodus... ...	...	2298	Micha ...	...	3254	Philippians ...	...	4059½
Job	...	2363	Nahum ...	...	3300	Galatians ...	...	4059¾
Leviticus ...	...	2514	Zephaniah ...	...	3374	Ephesians ...	...	4060
Numbers ...	...	2514	Habbakuk ...	...	3376	Colossians ...	...	4060
Deuteronomy	...	2553	Jeremiah ...	..	3377	Philemon ...	...	4060
Joshua... ...	...	2553	Daniel... ...	...	3398	St. James's Epistle		4060
Judges... ...	...	2573	Ezekiel... ...	...	3410	Acts	...	4061
Ruth	...	2845	Lamentations...	...	3416	1 Timothy ...	...	4061½
1 Samuel ...	...	2851	Obadiah ...	...	3417	Titus... ...	...	4061½
2 Samuel ...	...	2950	Ezra	...	3468	Hebrews ...	...	4062
Psalms began...	...	2950	Zechariah ...	...	3484	2 Timothy ...	...	4062½
1 Chronicles ...	...	2951	Haggai ...	...	3484	1 St. Peter ...	...	4063
1 Kings ...	...	2989	Esther... ...	...	3520	St. Mark's Gospel	...	4063
2 Chronicles ...	...	2990	Nehemiah ...	...	3557	2 St. Peter ...	...	4064
Song of Solomon	...	2990	Malachi	...	3607	St. Jude ...	...	4066
Proverbs ...	...	3000				St. John's Gospel	...	4078
Ecclesiastes ...	...	3003	St. Matthew's Gospel	4040		1 St. John ...	...	4089
2 Kings ...	...	3109	1 Thessalonians...		4052½	2 St. John ...	...	4089
Jonah	...	3134	2 Thessalonians...		4053	3 St. John ...	...	4089
Joel	...	3204	1 Corrinthians	...	4057	Revelation ...	...	4094½

The dates in Acts show that the two years lived by St. Paul in his own hired house in Rome were from 4059¾ to 4061¾, therefore his epistles written there must be within that period. He could not have a hearing before Nero owing to the Emperor's lengthy absence on a musical tour round Greece and soon afterwards the great fire occurred by which the Apostle was burnt out. The short hearing stood adjourned for about a year and St Paul wintered in Nccapolis, (Titus iii. 12). When he returned the Jews had revolted and he suffered martyrdom through malice in June 4063. As Babylon was not then subject to Rome, Peter went there and from thence wrote his 2nd epistle, and instructed Mark in writing a gospel. 2 Peter iii. 15 alludes to St. Paul's death (See Greek).

EXACT YEAR WHEN ALEXANDER ENTERED BABYLON.

We now obtain the exact year when Alexander the Great entered Babylon by the years in the Books of Maccabees. The history in these books is of the same pure astronomical character as that in the canon of Scripture, and dates from the Ancient Hebrew Solar Cycle. The years are called " Years of the Kingdom of Greece." commencing with 3672 A.M., when Alexander finally subdued Darius Condomanus and entered Babylon.

The following is the proof. In 1 Macc. i. 10, " the 137th year" is 3809, table c of the Solar Cycle, and verse 20, "the 143rd year," is 3815 i. which the cycle shows was an intercalary year. This is confirmed by verse 29 which speaks of " two full years." This is one of the ordinary intercalary expressions, meaning a full lunar and full solar year.

There are other proofs. In 1 Macc. vi. 20, we read of " the 150th year." Add this to the above 3672 and the product is 3822, which is stated to have been a seventh or Sabbatic Year. Divide 3822 by 7 and there is nothing over.

THE TIME WHEN HEROD THE GREAT DIED.

All argument respecting the time when Herod the Great died is settled by the eclipse of the moon (in 3988), which Josephus says occurred during the rage of Herod a few weeks before he died. From the same historian we also learn that Herod was buried about six or seven weeks before the Passover at the end of March. On looking at the Triple Eclipse Table, we see that the nearest year to 3998 when the team of 70 eclipses began was 3984, which would be Line I. Add 14 more lines or years, and we have Line XV. for year 3998. Here on the Hebrew Bird's Eye View of Eclipses we have the total eclipse ● of the moon in the middle of the second month (end of our November). Hence Herod died about the end of January, the 4th month of 3998. Besides this, we know that the infants were slain by Herod in Bethlehem when our Lord, who was born in 3996¼, was 2 years old, nearly the end of December. Herod therefore must have died about the end of January, the 4th month of 3998.

INTERCALARY PERIODS OF SCRIPTURE.

It will be seen by the Ancient Hebrew Solar Cycle that the intercalary, or extra 34 days, occurred at the end of every third year. They are therefore often as useful as an eclipse in determining the actual year when an event occurred. The expressions used in referring to them in Scripture are "The end of days," after "certain days," "after two full years."

INTERCALARY PERIODS OF SCRIPTURE.

The intercalary, or extra days of scripture history, employed to lengthen the short lunar years to the solar period of 365 days, were 77 days at the end of each solar cycle of seven lunar years during the continuance of the Antediluvian cycle, as will be seen by the fact that 7 times 11 are 77, the lunar year being 11 days shorter than the solar. But when the Ancient Hebrew solar cycle of 15 years came into use in the time of Heber, beginning with the year 1722, the intercalary period comprised 34 days at the end of each third year. As this cycle continued to the end of New Testament history and is a splendid measure of astronomical time, it is allowed by chronologists to continue because it forms and continues the Anno Mundi years. That these intercalary periods were always employed, and with remarkable scientific precision, is proved by the application of the lunar cycle test. So that when some other adjustment was required by the accumulation of fractional excess or loss or time, an extra week was taken or thrown off at the end of the middle intercalary period (table i.) of the Ancient Hebrew Solar Cycle, arising from the necessity of using there 35 instead of 34 days.

The modern Jews, owing to the loss of the Ancient Solar Cycle, and the subsequent adoption of others, one after the other, have greatly erred by using their intercalary days in the middle of the civil year, which is the end of their sacred year. That this is an error is very plain from the reference to them in Jeremiah xxvii, also Elijah at the brook. But modern Jews observe the same number of intercalary days after three years.

The phraseology of scriptural language, referring to intercalary periods, is varied, such as "At the end of days." "After two years fully expired." "At the return of the year." "When days were multiplied." "In process of time, after the end of two years." But the variations are often the result of ignorance of the chronological reference and have in two instances led to amusing mistranslations, particulary concerning a supposed two years' imprisonment of St. Paul.

The occurrence of references to intercalary periods in scripture history are of great value, and are sometimes as good as an eclipse. By them we obtain means for proving exact years of events and the continued verification of the chain and system of time.

The following are examples, and classical readers should refer to the original text ;—

THE DEATH OF ABEL.

Gen. iv. 3. intercalary days of year 125, A.M. or 3871 B.C., given us as the death of Abel. The margin is the best and ought to form the English text. It would have done so had the translators had the assistance of a scientific chronologist. By this date we learn that Abel was slain at the end of the intercalary days, and as Seth was born in the year 130, the preceding intercalary period, which the observance of the twelve other dates of the Antediluvian age shows to have been placed at the end of each 7th year, was necessarily 125. That this expression does not refer to the end of the year is plain because the word "days," and not year is mentioned either in the Greek Septuagint or the Hebrew. Nor could it do so, as the year had expired ten weeks previously, and there would be no fruits to form "an offering unto the Lord" until "the end" of the intercalary "days." The literal Hebrew denotes "And it was in the end of days." The Greek is equally clear "And it came to pass in the days of the years' end." Neither is there any mention of week. It is a pure calendar expression like our Whitsuntide, or, more correctly, Christmas. Therefore the suggestion that it denotes a Sabbath day is erroneous. Writers who have seized upon this passage with a view of proving the observance of the Sabbath should have known that there are actually thousands of indisputable evidences of the continued observance of the regular seventh day without straining after this. For instance there is no such a thing as a solar cycle unless unbroken weeks of seven days are kept. Dates cannot come round again upon the same day of the week without keeping time in weeks, still more impossible would be the occurrence of "selfsame days" occurring after long periods of years. A man had better try to square 20 shillings to a pound, when his shillings are composed sometimes of 11d or 13d, as try to form a solar cycle having one week in a 10,000 years short of a day or longer. If two of the dates of the Antediluvian period showed the existence of a solar cycle they would be sufficient to prove the continued observance of weeks of seven days ; but every date of the series proves it, and the years obtained by the revolution of the cycle are ratified by the progression of eclipses. Oh! how ignorant have men been about the science of chronology. The passage in question is precisely the same as the allusion to another intercalary period when Elijah was at the brook in 3098 (See 1 Kings xvii. 7.) For some reason, ever since Cain obtained a repreive in the intercalary period toleration has been claimed, and judges did not sit.

Gen. xxxviii, 12.   Death of Judah's wife in the intercalary days of 2294, on solar cycle table c., being 1702 before Christ.   Here again the margin is the proper reading, viz. "When the days were multiplied," that is by taking up intercalary days.   There is nothing in the margin to warrant the words supplied by translators, " And in process of time."   It is, as in several other places, an invention and hides the historical evidence of the genuineness of scripture.

DATE OF PHARAOH'S DREAM.

Gen. xli. 1.   This is the plain record of the date of Pharaoh's dream in or just after the intercalary days of 2288, table l. of the Ancient Hebrew Solar Cycle, which was 1708 before Christ who was born in 3996.   The Greek Septuagint is, "It came to pass within (or after) two years of days."   It is the same as Acts xxiv. 27. which most erroneously has led to the belief that Paul was imprisoned two years, though a Roman, without having a hearing,   The words by no means denotes the lapse of two years of time. As the intercalary days were taken up at the end of each third year to bring the short lunar years abreast with the solar period, the first of the triple series would run on with the solar year, but the " two" forming the second and third would increasingly get behind and therefore require to be made "full" by adding or "mutiplying" days. This seems to be the meaning of the chronological expression ; or it may be taken as referring to the time when there were " two full years" a full lunar and solar year. Which ever way we take this peculiar expression, it only occurs at the intercalary period.   Fortunately for us, we now clearly find by Egyptian monumental history that Thothmes III. was the Pharaoh referred to (See Pharaohs of Scripture and Egyptian Dynasties), and that he had just ascended the throne when he had this dream.   The meaning therefore of the words of the text is not that Joseph was two years in prison after Thothmes II. had hanged the baker, but that the date of the dream was the intercalary days of 2288, A.M. Joseph was apparently about a year in prison after the chief butler was restored to favour by Thothmes II. who had only a short reign of six years, and it is evident that the Pharaoh addressed by the butler (Gen. xli, 13.) could not be the monarch who hanged the baker.   The royal dreamer reigned 34 years.   It is interesting to see how recently discovered monumental history confirms scripture, and it is very gratifying that Biblical records enable us to thread together the Egyptian Dynasties and assign to them their true place in history measured off by five astronomical lines of time.   But O what rubbish has been used by theorising men in their attempts to spoil the lines and records of antiquity !

ELIJAH AT THE BROOK.

1 Kings xvii. 7.   Here we have an allusion to the intercalary days at the end of the year 3098, A.M., which was 898 before Christ.   The subject is Elijah at the Brook, and the margin of the narrative is the correct reading.   The Hebrew expression is precisely the same as that recording the date of Cain slaying Abel, " at the end of days."   Though the intercalary periods were not the same—that concerning Elijah being the shorter number of days at the end of every third year of the Ancient Hebrew Solar Cycle, (table i.) and that referring to Abel being the 77 days at the end of the Antediluvian Solar Cycle of seven years—yet there is no variation of phrasiology.   By references of this kind we have the splendid advantage of finding the true year.   The chronology shows us that Elijah was about six months at the brook Cherith, being there fed by ravens, and when the water dried up in the intercalary days which fell always in the hot season, (during Sept.) he went to dwell at the house of a widow at Zarephta, and in the middle of the " third year" afterwards, presented himself to Ahab, when fire came down from heaven and subsequently much rain.   The duration of the drought seems to have been the typical period of 1260 days.

1 Chron. xx. 1.   The siege of Rabbah. " The return of the year" is an allusion to the expiration of the intercalary days of year 2969, table c.   This will be obvious by comparing the passage with other events in 1. Kings xx. 22 and 26.   See also 2 Sam. xi. 1. These references to intercalary periods enable us to fix the true year of events.

1 Kings xx. 22 and 26.   Syrians fighting against Ahab after the intercalary period at end of year 3104, table c.   This is a very clear reference.

2 Chron. xviii. 2.   See margin.   End of 3107, table f., and exactly three years after the events of 1 Kings xx. 22, 26.   Beautiful astronomical time.   Jehosaphat's affinity with Ahab, by which we obtain the year of the death of the latter, early in 3108, and this settles an event in Asyrian history.

1 Sam. i. 20.   Birth of Samuel in intercalary days at the end of year 2852. table f. He died in the intercalary days of 2918. aged 96.   See feast 1 Sam. xxv, 1, 2, &c.

2 Chron. xxiv. 23. Joash spoiled by the Syrians in the intercalary days of the year 3164, table *c.* of the Ancient Hebrew Solar Cycle. The margin is the true Hebrew reading.

2 Chron. xxi. 19. Infamous death of King Jehoram in the intercalary days at the end of year 3119, table *c.* In this passage the intercalary period is clearly expressed.

Jer. xxviii. 3. Death of the false prophet Hananiah. By verse 1. of this chapter we learn that the false prophecy was spoken in the 5th sacred month (the 11th civil) of the 4th year of Zedikiah, viz., 3410, table *i.* and the time which this wicked prophet set for the fulfilment of his words was the intercalary period of the same year, "Within two years of days," as the margin states. That would be from the time he spoke in the 11th civil month, rather less than three months. In the seventh month, which was the first civil month of the year 3411, Jeremiah said to him "This year thou shalt die," (*i.e.* this same sacred year). "So Hananiah the prophet died the same year in the seventh month" (Chap. xxviii. 17). He died within four months of the utterance of his prophecy, and probably but a few days after Jeremiah delivered the warning. The whole record is very valuable to chronologists, inasmuch as it proves that the intercalary days were placed at the end of the civil year, and not at the termination of the sacred year, where the Jews now place them, viz. at end of the 12th sacred month.

Amos iv. 4. This is the last allusion in the Old Testament to intercalary days, viz. at the end of the year 3218 table 1. "The feast of ingathering" of the fruits of the earth was necessarily "at the end of the year," as we read Ex. xxiii. 16. The end of the Hebrew year, which is the true historical year, answers to our September. Grapes and other fruit are then ripe and fit for gathering, but at no other season. A careful notice of the intercalary periods about the end of our September, shows that there was a special feast at the end of every third or intercalary year, and in the passage in question (Amos iv. 4.) we have the words "after three years," and in the margin "three years of days," or more correctly in English phrase, the days at the end of three years. In Ex. xxx. 22. we also read of "the feast of ingathering at the year's end" with a marginal reading of "revolution of the year." We have therefore in Amos iv. 4. another explicit statement respecting the period and season of the intercalary days.

CONVERSION OF ST. PAUL.

Acts ix. 19. Conversion of St. Paul, just before or in the intercalary days at the end of the year 4034, A.M., table *c,* which was three months before 36 A.D. began, reckoning from 3996 when our Lord was born. We read that when St. Paul was baptised he "was certain days with the disciples which were at Damascus." Then we read, verse 23, "And after that many days were fulfilled the Jews took counsel to kill him." This is a reference to the intercalary days, but not expressed in the same way as in the Old Testament, because the Book of Acts was written not only for Jews but also Gentiles who kept solar time according to the Roman year which we use. St. Luke begins his history of St. Paul with the intercalary period of table o, the last year of the Ancient Hebrew Solar Cycle, year 4031, and ends it on the same table, after a period of 30 years, viz. in 4061, a fact which partly explains his rather abrupt termination of the Apostle's ministry. St. Luke indeed was a good chronologist and his numerous references to periods and dates of the Ancient Hebrew Solar Cycle are very interesting and form a remarkable proof of the genuineness of his writings. But to see them properly, his gospel and Book of Acts should be read in Greek. From the 20th chapter of Acts to the end of the book, his dates are numerous and it is a great pity that our translators have not understood them.

Acts xxv. 1. begins the intercalary period at the end of 4058 table 1. In these same days St. Paul sailed in the ship in which he was wrecked. See table of his journey from Greece through Macedonia to Palestine and continue by reading the notes in the following page. In the 7th verse of chap. xxvii. the ship was sailing slowly in the intercalary days, and in the 10th verse there is a reference to the "fast" on the 10th of the 1st civil month of the next year, which was the "day of atonement" on the 10th of the 7th sacred month, commanded to be observed in Lev. xxiii. 27. 29. It is plain by the mention of this fast on the 10th day of the first month of the new civil year, that the intercalary days were just over. The period therefore during which St. Paul was left bound in charge of the centurion, but having liberty, was about four months, not "two years," which is merely a reference to the two years requiring intercalary days.

1. Maccabees i. 29. The dates in the Books of Maccabees are from the Solar Cycle of the Ancient Hebrews, and are therefore astronomical like those of the canon of Scripture. The passage in question is a reference to the intercalary period of 3815, which was the 143rd year (verse 20) of Greece. The importance of the date is that it gives us the year of the final victory of Alexander the Great over Darius Condimanus as 3672. By deducting 143 from 3815 we have 3672. The solar cycle shows that 3815 was intercalary, table *i*. Having got this 143rd year on the solar cycle we have all the others, such as the setting up of the abomination, and the 7th year of vi. 53.

DANIEL AND THE KING'S MEAT.

Dan. i. 5. This passage is one of the most ludicrous errors of our translators and its continuance in all versions, as well as comments and pulpit allusions, shows what darkness and error exist in the minds of professors in our colleges, when they know nothing about the measurement of time by which history is placed on a natural and scientific basis. The reference is to the 34 intercalary days at the end of three years, which at this juncture was 3398, when Nebuchadnezzar began to reign, table *l*. This is plain from ii. 1, but it would be manifest folly to place three growing lads (Daniel was 17) under a dietary regimen extending over three years, in order to find out what flesh they had gained. In the natural course of three years they would become bearded men. It was a diet of one month at the end of three years to which they were put.

Exodus ii. 23. Here again the words, "in process of time," are no part of the original. The reading is, 'After those many days, the king of Egypt died," namely, Ramses II., the great oppressor of the children of Israel. It is a similar phrase to that in Luke ii. 1. and alludes to the intercalary period of 2507, which completed the 400 years during which "the seed" of Abraham were to be in subjection (See the words Gen. xv 13.) consequently the prophecy did not begin till Isaac was born in 2108. It has been usual to consider these 400 years as the same "in round numbers," as the period of the sojourn, which was 430 years. But they are two distinct periods, each having a fulfilment remarkable for their precision. Loose expressions, such as round numbers, have no place in the Bible! The 430 years of sojourn began with Abraham leaving the city of Ur, on Tuesday, 15th of 7th civil month, 2082½, and thus ended on the same day of the week and same date of the month, Tuesday, 15th of the 7th civil month, 2513½. See tables *a* and *l*. The 400 could not begin till Sarah had a son.

THE TEN TRIBES CARRIED AWAY.

2 Kings xviii. 10. This "end of three years" was 3284, the 3rd of the solar cycle, which was the usual intercalary year. The Assyrians were not three years besieging Samaria, but it fell at the end of a triple set of years. Shalmaneser IV. began the siege, but died before it ended, and was succeeded by Sargon II. Ptolemy tells us that there were two total eclipses of the moon, seen in Babylon, during this time. These and a transit of the planet Mercury in 3281, enable us to fix the year.

ANOTHER MISTRANSLATION.

Luke ix. 51. Translators and commentators have been much puzzled about this verse, and for want of proper knowledge—which the revisors refused to accept—the passage remains, to add to the list of mis-translations, one of the greatest errors in the Revised Version. It was not our Lord that was taken up, but the intercalary days at the end of the year 4028, in order to lengthen lunar to solar time. See the Greek, which reads "And it came to pass, when the days were fully completed that were taken up, he set his face steadfastly towards Jerusalem." He was not crucified till six and half months later, and after this it was 40 days before he ascended. I will fairly admit that one word has been tampered with in the Greek, showing that the copyist has not understood the passage, but it is of such a small character that it does not preclude the meaning of the original text. Of course this passage is very useful inasmuch as it proves that the year which followed was 4029 when our Lord was crucified. I mean 4029 from Creation, all the 7th years of which are also the 7th years of all planetary motion, whether obtained by the transits of Mercury or Venus, or those derived from the eclipse line of time with which mortal man cannot interfere.

There are a few other intercalary periods in Scripture, such as the death of Shimei, upon whose guilty head the sword fell more swiftly than our translators have represented in 1 Kings ii. 36—46. The words, "at the end of three years," do not mean after three years. They refer to the end of that year, 2990, when Solomon began to reign, and which will be seen by table *i*, was the completion of a triple series of years.

Before leaving the intercalary subject, I should say that this period is represented in Scripture by several different expressions; but this shows that when the Bible was translated into Greek, the 70 translators were divided into companies sitting apart.

INTERCALARY PERIODS OF SCRIPTURE.

Gen. xxxi. 22. Jacob's flight from Laban, intercalary days, 2264, table c. The weight of evidence in proof of Jacob's fleeing in the intercalary days is in the character of "the third day." That it was Sabbath day when Laban was informed of what had occurred appears from the following reasons. 1st that he pursued after Jacob seven days. He would not journey on the Sabbath day. He was a worshipper of God. Hence the 3rd day was the Sabbath day and the 3rd of the 1st month of the new civil year as the solar cycle shows. 2nd. As Laban was at a distance (verse 19) shearing his sheep it was when he returned for Sabbath ordinances and met with some of his servants from the region where Jacob had been located, that he was told that Jacob had fled. 3rd. Unless there had been intercalary days the same week, Sabbath day would not have fallen on the 3rd day. But beyond even these evidences we know that Jacob fled at the end of the year 2264, which was an intercalary year. The "gods" which Rachael carried off were probably image calendars.

Judges xix. i. Events connected with a civil war in Israel. The verse refers to the intercalary days at the end of the year 2597, table f. The "four whole months" include the first four months of 2598, table g. (see verse 2. and margin) In the 4th verse the "three days" are the first three of the fifth civil month. The "fourth day" was 4th of the month and also the fourth day of the week, Wednesday. Verse 8. mentions the 5th day, Thursday. The Levite would not tarry longer as he wished to be in the House of the Lord on the 7th (Saturday.) The 6th day is mentioned in verse 27., and the gathering together on the first Sabbath of the new civil year at Mizpeh, is the meaning of the 1st verse of the next chapter. The two foregoing intercalary references are important in fixing events during the period of the Book of Judges.

Judges xi. 4. War between Ammonite and Israel in the intercalary days of 2852, table f. The margin "after days," but more correctly within days, is the intercalary expression.

1 Samuel xxv. 2. Nabal's feast. Intercalary days of 2949, table i. The servants of David had rendered great service to the churlish Nabal whilst shearing his sheep and celebrating the "feast of ingathering at the end of the year," after which David's servants called upon Nabal on New Year's Day for a gift (See verse 8). On the latter part of the same day (verse 36) Nabal was drunk. The "feast of ingathering" was in accordance with the Divine command. See Ex. xxxiv. 22. for year's end or revolution of the year (margin) showing that the year had turned, or "after three years" in Amos iv 4. Also Ex. xxiii. 16. where this feast is more expressly stated.

2. Samuel xiii. 23. Absalom's feast, in the intercalary days of 2948, table l. Here is recorded the old intercalary expression "two full years," and in connection with sheep shearing.

Nehemiah xiii. 6. Nehemiah obtained leave of Artaxerxes, King of Babylon, to return to Jerusalem in the intercalary days at the end of 3569, table c. of the Ancient Hebrew Solar Cycle. The marginal reference distinctly states that it was in the intercalary days, and it should be noticed that the settlement of the true year of this event is one of great importance concerning the building of the walls of Jerusalem. It was the "32nd year" of Artaxerxes Longimanus, as the verse states; consequently the "20th year" of this King, which is a point of great importance in connection with chap. v. 14., must be the year 3557, table f. another intercalary year, indeed that from which Daniel's 69½ weeks are dated. 69½ weeks are 486½ lunar years, or 472 solar years. Add 472 to 3557 and we have 4029, when Christ was crucified.

BIRTH OF JESUS CHRIST.

Luke ii. 1. Refers to the beginning of a third year after the intercalary days of table i. in year 3995., from which we learn that our Lord was born in the end of the 3rd month of 3996, about our Dec. 25th.

INTERCALARY PERIODS. ST. PAUL'S SHIPWRECK.

The following is a continuation of the tables setting forth the history of St. Paul's journey from Greece through Macedonia to Palestine, given elsewhere.

Year 4058, A.M., table *l.*, three last months and the intercalary days.

10th Month.		11th.		12th.			Intercalary month.
1 S		1 M		1 W		1 Th	Festus arrives, xxv. i., at Cæsarea
2 M		2 Tu		2 Th		2 F	
3 Tu		3 W		3 F		3 S	Does not travel on Sabbath.
4 W		4 Th		4 S		4 S	After three days, goes to Jerusalem
5 Th		5 F		5 S		5 M	and hears the charge of the Jews
6 F		6 S		6 M		6 Tu	against Paul on Monday, verse 17.
7 S		7 S		7 Tu		7 W	
8 S		8 M		8 W		8 Th	
9 M		9 Tu		9 Th		9 F	
10 Tu		10 W		10 F		10 S	Festus's 10th day, verse 6.
11 W		11 Th		11 S		11 S	Returns to Cæsarea. "Next day"
12 Th		12 F		12 S		12 M	is court day, Monday, when Fes-
13 F		13 S		13 M		13 Tu	tus sent Paul to Cæsar at Rome,
14 S		14 S		14 Tu		14 W	verse 12.
15 S		15 M		15 W		15 Th	
16 M		16 Tu		16 Th		16 F	
17 Tu		17 W		17 F		17 S	"Certain days", about, verse 13.
18 W		18 Th		18 S		18 S	
19 Th		19 F		19 S		19 M	
20 F		20 S		20 M		20 Tu	
21 S		21 S		21 Tu		21 W	
22 S		22 M		22 W		22 Th	
23 M		23 Tu		23 Th		23 F	After many days (verse 14) Festus
24 Tu		24 W		24 F		24 S	declared Paul's care to King
25 W		25 Th		25 S		25 S	Agrippa.
26 Th		26 F		26 S		26 M	"The morrow," verse 23. Paul's de-
27 F		27 S		27 M End of		27 Tu	fence. He is ordered to Rome.
28 S		28 S		28 Tu the Lunar		28 W	
29 S		29 M		29 W year.		29 Th	Embarked.
		30 Tu		verse 27.		30 F	"Next day," xxvii. 3.
						31 S	
						32 S	
						33 M	"Sailing slowly," verse 7.
						34 Tu	

(10th Month vertical note:) St. Paul left in the keeping of a centurion but having "liberty." Acts xxiv. 23.

(11th vertical note:) St. Paul in charge of the centurion, but having "liberty."

(12th vertical note:) St. Paul in charge, and sent for by Felix.

The above 10th, 11th and 12th civil months would be the 4th, 5th and 6th sacred.

The intercalary days ended at a time answering to the middle of our October, because the third lunar year would run out about the 12th of our September. The 10th of the new year—day of atonement, or "fast," referred to in Acts xxvii. 9. would be about 25th of our October : rough weather when sailing became "dangerous."

It is evident from the allusion to the " 3rd " and " 10th," two Sabbath days in which there would be no travelling in Palestine—that the time indicated was the intercalary days, a fact which is again confirmed by a reference to the 10th day of the 1st month of the new civil year—"the Fast." There are certainly two Sabbath days on the 3rd and 10th of the 1st month two years later, but the 10th in chap. xxv. 6. cannot also be the 10th in chap. xxvii. 9 : Besides this Roman history will not allow us to travel so fast by throwing the dates into year 4060, which was 65 years after the birth of Christ. In addition to this, the reference to the two full years so common in scripture for the intercalary period, and the use of the Greek word "ikanais" and "ikanow" unquestionably settle the point. The sense of the word being "sufficient" and "complete," as in the passage "Whose shoes I am not sufficient or worthy to unloose" See Mark i. 7. and (Greek.) There is sometimes great violence done to scripture when the sense, which is the guide to the correct translation of words of more than one meaning, is misunderstood.

The Apostle appears to have been shipwrecked at Malta on Friday. the 24th of the 1st civil month, table *m.* The 14th night, including the fast, was Thursday night the 23rd, see verses 27 and 33. He wintered three months on the island, and after sailing again, touched at Syracuse and Rhegium, and landed at Puteoli about the 6th of the 5th month, tarrying with the brethren till the 13th (xxviii. 14). He resumed his journey on land, reaching Rome towards the end of the following week, the 18th.

THE TRANSIT INSTRUMENT.

Chronologists who wish to obtain accurate time should use Latimer Clark's Patent Transit Instrument, which has been so modified and improved that any person may now by a single observation obtain time to almost any degree of accuracy, a knowledge of astronomy being in no way essential to those who may not have studied that science.

The instrument is easily fixed and by the aid of Tables which are published annually, giving the time of transit of about Twenty Stars for each evening of the year, all calculation of any kind is rendered unnecessary. The instrument finds its own stars and corrects its own errors.

The great price of Transit Instruments hitherto, the difficulty of using them, and the necessity of troublesome calculations, have prevented them from in any way becoming popular, although they are a necessary adjunct to every observatory.

Mr Latimer Clark has for many years given great attention to the subject, and has at length been able to produce an instrument of great precision and of very high quality at a price less than one third of those usually sold, and containing improvements which facilitate the use of the instrument by those who have no knowledge whatever of the subject. The instruments which are manufactured by Mr. Alfred Frost, of 6, Westminster Chambers, Victoria Street, London, and cost from £7 10s to £13 13s, have been so well spoken of by the highest authorities that we recommend our readers who desire to obtain their time in the most scientific manner to obtain particulars of them.
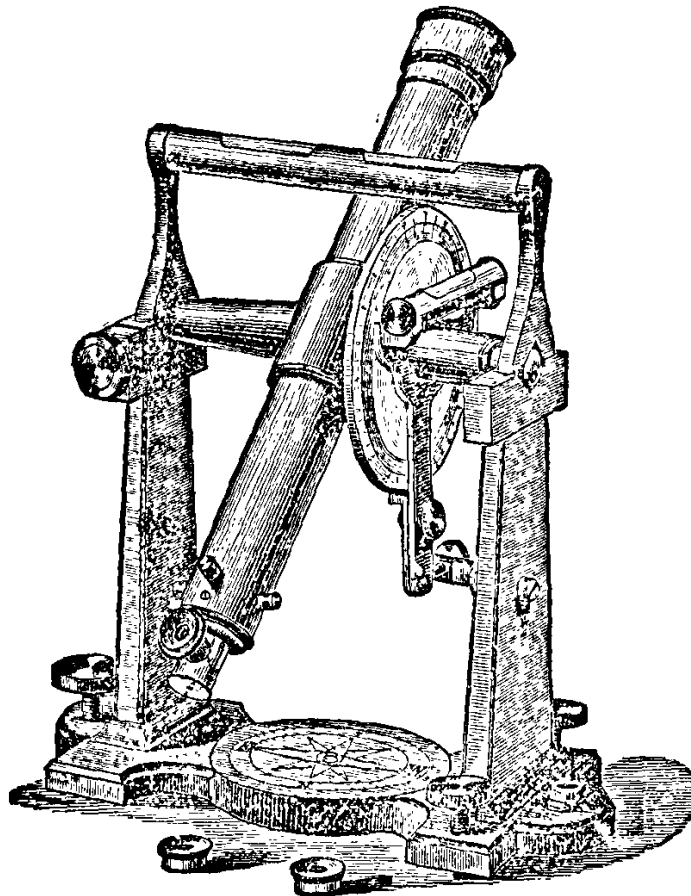
As will be seen by the illustration, this elegant and interesting instrument consists of a telescope fastened on a horizontal axis, the ends of which are towards the east and west points of the horizon, consequently the observer looks direct to the meridian line in the heavens, and sees the stars pass over it, thus giving him the exact moment of true time by observations of the simplest yet highest scientific character Astronomers, Chronologists, or indeed any person, can resort to this instrument to ascertain their exact time, and thereby correct their clocks. Such observations are very interesting.

DATE OF THE

BIRTH OF JESUS CHRIST,

THE STAR OF BETHLEHEM

AND

DATE OF THE LORD'S RESURRECTION.

SHOWING

WHEN AND BY WHOM THE SABBATH DAY WAS CHANGED.

DATE OF THE BIRTH OF OUR LORD JESUS CHRIST.

There are few events of history, the date of which can now be more accurately determined than the birth of Jesus Christ. The reason of this is because we have several good incidents to guide us, and also because we now have better means for using them. Hitherto, owing to our ignorance of the science of time, and the absence of methods for making astronomy of practical service, the useful statements of history have tended to lead us into error, and to create controversy, rather than to guide us to the realization of accurate conclusions. Therefore in investigating the date of the birth of our Lord, we may dismiss all prior conclusions and consider afresh the facts which history supplies. All these will be found to accord with the history and traditions of Christianity.

Investigations show the date to be the night between Friday and Saturday, the 25th and 26th of the 3rd month, 3996, A.M., which would be the old Sabbath Day, beginning at sun-set on Friday evening and ending at the same time on Saturday evening. This date synchronizes with our 25th of December, 4 years before 4000, or common account called Anno Domini, as stated in the margin of Matt. ii. i., and 8 years before 4004, or the old date of the nativity erroneously adopted.

The first method used for obtaining the date is from the Gospels, to understand which I will place before the reader the form of the two years 3995, in which John the Baptist was born, and 3996, when the Lord was born. These two years can be seen on the solar cycle of the Ancient Hebrews, they being the 9th and 10th of the cycle marked *i* and *j*.

Months			3995.					3996.				
1st civil,	vii.	sacred	5	12	19	26		1	8	15	22	29
2nd	viii.	do.	3	10	17	24		6	13	20	27	
3rd	ix.	do.	2	9	16	23	80	5	12	19	26	
4th	x.	do.	7	14	21	28		3	10	17	24	
5th	xi.	do.	6	13	20	27		2	9	16	23	30
6th	xii.	do.	4	11	18	25		7	14	21	28	
7th	i.	do.	3	10	17	24		6	13	20	27	
8th	ii.	do.	1	8	15	22	29	4	11	18	25	
9th	iii.	do.	7	14	21	28		3	10	17	24	
10th	iv.	do.	5	12	19	26		1	8	15	22	29
11th	v.	do.	4	11	18	25		7	14	21	28	
12th	vi.	do.	2	9	16	23		5	12	19	26	
Intercalary month			1	8	15	22	29					

Before pointing out St. Luke's dates on the above two years, let me show that they are 3995 and 3996. This will be done by stating a simple fact. As the cycle from which they are taken consists of 15 years, the last figure of every first year of the cycle will alternately be 7 or 2. Thus, the first year of the cycle from which the above two are taken was 3987; so that the 9th and 10th must be 3995 and 3996. Of course these years are found on the cycle by other methods, one of which is the line of eclipses, but the direction given is simple. I may further state that the figures in each of the months are Saturdays, the seventh day, and that the months of the lunar, or Biblical year, were always 30 or 29 days alternately. This was because the moon revolves round the earth in 29½ days. This half day was always borrowed for the preceding months, and so they went on through the year, the first month having 30 days, the second 29, and so on. By thus having the length of the month the same as the period of the moon, the moon was like a clock, by being new at the beginning of the months. No man therefore could alter the dates of the month without disturbing the motions of the earth and moon.

We can now proceed. In Luke i. 5, we read that Zacharias, the father of John the Baptist, was a priest of the order of Abia. If we turn to 1 Chron. xxiv. 10 and 19, we find that the course or order of Abia or Abija was the eighth. Each course officiated a week in the temple, consequently, on the first Sabbath or week of the year, the first course ministered and was relieved in the second week by the second course. Hence the eighth course, that of Abija, began with the eighth week of the year. Now if the reader looks at the above year 3995, he will see that the 8th Sabbath of the year was the 24th of the 2nd month. This was the day when the angel Gabriel appeared to Zacharias when he was ministering in the temple. Subsequent parts of the gospel will prove it. In the 10th verse we read of "the whole multitude praying at the time of incense." Thus, as Bentley and others tell us, on no other day than the Sabbath can the worshippers deserve such a definition. Besides this I find that great spiritual events took place on the Sabbath Day, which was in agreement with the statement that "God blessed (exalted) the seventh day and sanctified it." (set it apart for religious purposes). Divine communications to the prophets and visions were on Sabbath Days,

Now, allowing nine months for natural gestation, John the Baptist would be born about the 25th of the 11th month (Sabbath Day, see the table of the year 3995). Not later, for we are closely pressed by other facts mentioned by the Evangelists, starting with the birth of our Lord, and which must have their place in the interval between the birth of John and that of Jesus Christ. Hence, when in verse 26th of Luke i. we read of 6th month of Elizabeth's time, and again in verse 36, that Gabriel told the Virgin Mary that "this is the 6th month with her" (Elizabeth), it would be the Sabbath Day, on 24th of 7th month, called 1st sacred month in Scripture. I do not mean 6th month completed, for it appears to have begun with Elizabeth but a few days. Here let me also explain, by way of confirmation, that this Sabbath Day, the 24th of the 1st sacred month (7th civil) which seems to have been the annunciation, is an important date of Scripture. It was the same month, date of the month, day of the week, and same year on the solar cycle (9th) that Gabriel appeared to Daniel in the year 3470. That is to say, the same year came round again with every repetition of the cycle, (for the form and dates of the years of the Bible are astronomical and cannot alter) until it was 3995. If the reader turns to Dan. x. 4, he will read this date, and by the 2nd and 3rd verses he will see that Daniel fasted "three whole weeks," namely from the 3rd to the 10th, from thence to the 17th, and then to the 24th.

Now let me return from this digression—though the sublime event is worthy of it—and proceed with the incidents of the nativity. It is well to observe that after the salutation of Gabriel to Mary, who was told that the 6th month of Elizabeth's time had come, Mary went to reside with her cousin Elizabeth, and abode with her three months (verse 56), before John the Baptist was born. By this statement we cannot consider the salutation of Mary to be later than the 24th of the 7th civil month, nor, owing to the period when the 6th month of Elizabeth began, can we assign an earlier date for Gabriel's appearance.

Here comes out the date of the birth of our Lord, namely, nine months after the 24th of the 7th month 3995, which ended on the 25th of the 3rd month, 3996. This was our 25th of December. The proof of this is that the natural and Biblical solar year begins with the 20th of Sept. three days before the autumnal equinox, so that the same period in Dec. ends the 3rd month of the year, and every solar year which is preceded by the intercalary month of 34 days (See bottom of 3995) begins with the Hebrew lunar year. In other words, as the intercalary month was required at the end of every three years in order to make them equal to three solar, the lunar and solar years after this started together. This is frequently alluded to in the Scriptures. Often as "two full years," that is a full solar and lunar.* If we had no knowledge of the intercalary month at the end of the year 3995, the words of St. Luke would have been of no use to us in finding the date of the nativity.

"THE TIME IS FULFILLED."—Mark i. 15.

There are other means for proving the date of the birth of David's son and Lord than those I have just given. As the years of the Chaldeans and Ancient Hebrews came round again in 15 years with the same dates of the month for the Sabbath Days, they also did so after 30 years, and as John the Baptist and our Lord, according to Hebrew custom could not begin their mission until they were 30 years old, the foregoing table would also be years 4025, when John began preaching in the wilderness, and 4026 when Jesus Christ came preaching and saying "the time is fulfilled." Every good Greek scholar understands this by the emphatic character of the words "In those days came John the Baptist." I am sorry that in our New Testament justice has not been done to the phenomenal character of these words and others which are "coloured" by their association with intercalary periods. But what time was it that was fulfilled? It was the time prophesied by Daniel. The solar cycle gives the year 3543-4 for the 7th of Artaxerxes, to which when 49 years (seven weeks), and 434 (sixty-two weeks) are added, we reach this 4026, when our Lord was baptized and began his ministry of 3½ years.

Now as John the Baptist was not commissioned to recognize the Divinity of Jesus till he saw the Holy Spirit descending upon him, which he did at the Lord's baptism, in 4026, "the 15th year of Tiberius," (See Roman history in All Past Time), we have to allow time for the incidents between the baptism and the passover in the middle of the same year mentioned in John ii. 13. These are 40 days in the wilderness, the calling of the disciples, the marriage in Cana of Galilee, and his preaching in Capernaum. For these we must allow more than two months. We thus again arrive at the same period.

* Unfortunately these and other words referring to the intercalary period in the Bible, have proved a pitfall to our translators in about 100 instances. In Acts xxiv. 27. the words are translated as a period of 24 months, so that it is common to hear from the pulpit and to read in books, written by men from Universities (!) that St. Paul was two years in prison, instead of a detention of three or four weeks. In Luke ix. 51, instead of taking up the intercalary days at the end of 4028, the translators take the Lord up to heaven six months before crucifixion. In Daniel i. we have a youth of 17 fed three years on the king's meat to see how he improved! It should be the days at the end of three years. When will our Universities appoint Professors of the science of Time,

Now as our Lord was born in the 3rd month of 3996 (our Dec.), he was 30 in 4026 at the same period. In proof of this we know that his ministry lasted nearly 3½ years, so that he was crucified at the passover, 4029½, the middle of the natural year. We have only to look at this year on the solar cycle, and we then see that it was the 13th on the cycle, table *m*. The 7th month (called 1st sacred) has 16th day for Saturday, the old Sabbath Day. Hence the 14th, when the supper is appointed to be eaten, was Thursday, and the 15th was Friday—Good Friday. It will be seen that Friday could not always fall on the 15th of the month. The date is a cardinal one in Scripture.

Abraham left Chaldea on the ... ... 15th of the 7th month, 2082.
Abraham was offering up Isaac on 15th of the 7th month, 2132.
Israelites marched out of Egypt on 15th of the 7th month, 2513.
Jesus Christ was Crucified on ... ... 15th of the 7th month, 4029.

This is conclusive. The reason why some men—and I doubt not good men—attempt to show that the Lord was crucified on some other day is that they want to overturn the Lord's Day. But they never show what "the Lord's Day" in the New Testament is if it is not the day of his resurrection, nor do they try to show us why the disciples came together to break bread on "the first day of the week," or why it is so prominent.

BAPTISM TO PASSOVER—He "stood up to Read" o 16th of 5th month.

26th of 3rd	After his Baptism— on completing his 30th year—he was 40 days in the wilderness. These were the same days and dates as Mary's purification, 30 years previously, ending on 7th of 5th month—Thursday—one of the days of fasting. This explains why Anna who served God at the fastings—2nd and 5th days—was in the temple
9th of 5th.	Returned to Jerusalem. John having fulfilled his mission was now in prison. The Lord proceeded to his home at Nazareth in Galilee) Matthew iv. 12, and Mark i. 14.
16th of 5th. month	The Lord was in the synagogue at Nazareth on the following Sabbath, where Luke informs us that he stood up to read Isaiah 61, afterwards saying "This day is this scripture fulfilled in your ears," He at this time announced himself to be the Messiah in accordance with the Divine testimony at his baptism. The date is well fixed by the table at the end of Vander Hooght's Hebrew Bible, where Isaiah 61 is section 50 for the Sabbatical readings. One section was read each Sabbath. We see that by counting the Sabbaths from the beginning of the sacred year with the 7th month (1st sacred) in 3995. we reach the 50th on the 16th of the 5th month: This is a good confirmation of the chronology and settles the time of all the incidents in question;
17th to 23rd	He called his disciples this week. Mark i. 16; Matthew iv. 18; John i. 42 says same and adds that on the 3rd day (of the week) he with his disciples was at the marriage in Cana of Galilee As his mission had come, and he was proclaimed as the Son of God, he said to his mother, "What art thou now to me?"
7th of 6th	He then went down to Capernaum which he adopted as his future residence, and to which he returned from all his tours. It was 20 miles from Cana. The man possessed with an unclean spirit (Mark i. 21) in the synagogue would be on 7th of 6th civil month. The Lord was three weeks at Capernaum at least, because Luke (iv 31) says "he taught them on the Sabbath Days." Various miracles are recorded for this time.
1st of 7th;	Leaving Capernaum at the end of the 6th month, he was at Jerusalem in the early part of the 7th month, which was passover month. He overthrew the tables of the money changers, and drove the oxen away
15th of 7th;	The Lord was at the Passover John ii. 23. As Jesus Christ was crucified at the Passover 4029, there would be four passovers from the commencement of his ministry early in 4026? the four are mentioned by St. John in chapters ii 13; v. 1; vi 1; vi 4 and xi. 8

The total eclipse of the moon ● mentioned by Josephus determines the period of the birth of Christ. He tells us that during the rage of Herod, (which seems to have been a few weeks before he died) he put a priest to death, and " that very night there was an eclipse of the moon." We also learn that a little later he shut up some eminent men in the hippodrome, ordering them to be killed as soon as he died. He also slew his son, Antipater. It is very probable that the children in Bethlehem were slain whilst Herod was in this rage. Now we have good evidence that he died in the 4th month of 3998, (about the end of our January). If we look at the Triple Eclipse Table we see that the nearest year when No. 1 eclipse, the leader of the team of 70 began, was 3984. Add 14 and we have Line xv for 3998. Looking at the Bird's Eye View of Eclipses in Natural Years, we see a total Eclipse of the moon ● in the middle of the 2nd month (end of our Nov.), so that the massacre of infants would be when our Lord was nearly 2 years old.

There are a few historical facts to notice. In "Haydn's Dates" we read that "the birth-day of Jesus Christ was kept on the 25th of Dec. in the year 98." This was in the life-time of St. John. Again, in the year 127, Telesphorus, the Bishop of Rome, speaks of a feast on 25th Dec. because Christ was born on that date. In 284 we also read that the nativity was celebrated on 25th of Dec. Some men who oppose all this testimony of history say the Lord could not be born at this time just because the shepherds were watching over their flocks by night. The men who lived in the years just quoted would know these words more than we do. But Josephus says Bethlehem was a great place for sheep, and that at the passover 250,000 were required. These could not be kept in the back-yards of Bethlehem. Like our flocks, they would be folded in thousands in the country and watched over, otherwise many might be destroyed or stolen.

Again as the enrolment would take place at the beginning of the Roman year on 1st of January, would not Joseph and Mary arrive in Bethlehem a few days before it.

But beyond all these incidents of corroboration, there was a beautiful and significant event in Jerusalem on the 25th of the 3rd month which would fix the date of the nativity in the minds of all the followers of the Lord. It was the Feast of Dedication (See John x. 22) It was also called the "Feast of Lights," because that night, every year, all Jerusalem was illuminated as a sign of rejoicing. How appropriate was this also of the nativity of Him who is "the Light of the World!"

THE STAR OF BETHLEHEM.

One of the interesting events connected with the birth of Jesus Christ was the Star of Bethlehem recorded in Matt. ii. Many writers have attempted to account for this beautiful and impressive object in the sky by referring it to some natural phenomenon of the heavens, such as a conjunction of two planets, or a sudden appearance of a meteoric luminary, but all these efforts have been ludicrous failures, for there can be no doubt from the description by St. Matthew of its singular position and motion, as well as its appearance at special times, that the star which induced the Magi, who were learned men, to undertake a long and costly journey from Babylonia or northern Persia to Jerusalem, was a supernatural object. To illustrate the subject and the opinions of various writers, the annexed diagrams are given.

Figure A. is a representation of the constellation of Cassiopea in which a brilliant star has sometimes appeared after intervals of about 325 years. Such stars are believed to be the result of meteoric combustion; but as this luminary, known as "Pilgrim," never moved from its relat ve position to others near it. having no change of place but that which is common to all celestial objects as they bodily travel from east to west, it does not answer the description in the gospel. Neither could any others of its class. Besides which "Pilgrim" could not appear in or near the nativity year.

Figure B. is an illustration of a conjunction of two planets—Venus and Jupiter— which some say the Star of Bethlehem may have been. Both these well-known planets move in one direction, from left to right, but Jupiter has a slower motion, so that Venus, (top left corner,) travelling at a quicker pace, gains upon him. Let the four positions represent say a month. In the top row the two planets are pretty wide apart, but a few nights afterwards they are seen as in the second row, Venus being nearer to Jupiter and slightly below his line. A few nights still later their positions are in the third row, and lastly they are close together, and are in conjunction, although Jupiter may be more than 200 millions of miles beyond Venus. Now as the ancients would be as familiar with such a phenomenon as ourselves, it is not reasonable to suppose that the Magi, who were learned men, would come to Jerusalem because of a conjunction of two well-known planets. Besides this there was no conjunction near that time.

Figure C. contains a representation of what the Star of Bethlehem seems to have been according to what is recorded in Matt. ii., namely, the plain disc at the top like a small moon, or one of the superior planets seen through a telescope of low power. The splendid star-group on the left and right is a double view of the magnificent constellation of Orion as explained under figure C. It is probable that owing to the Star of Bethlehem not moving with the luminaries of the firmament, and not being on the star maps, one of which was made by Hipparchus 150 years before Christ, that the Magi were impressed. The time when they arrived in Jerusalem would be about 12 days after the nativity.

Now concerning this star we have to bear in mind that it was seen to move, having a sensible motion, for we read that as the Magi journeyed to Bethlehem, "the star which they saw in the east went before them till it came and stood over where the young child was." It is to be hoped that the reader will not think that two planets in conjunction could do this. But some men seem to think so. Yet there was a special star; for we cannot think that St. Matthew, who had occupied a public position requiring education and influence to obtain, would have been so simple as to write of an event as one which "troubled all Jerusalem," he knowing that, when he wrote his book, there were many men living in Jerusalem who saw the star, and thousands of men who could verify the trouble of Herod and his courtiers. That, notwithstanding all this, there was much foolish prejudice, as it is plain there is now, is not a matter of surprise. The world has never lacked its "generation of vipers."

There is reason to believe that of this star there was a prophecy which has not reached us through the Hebrew Scriptures, just as is the case concerning the prophecy by Enoch about the Lord coming with ten thousands of his saints. The patriarchal church would have many writings. All religious history before Moses seems to be brief extracts from the sacred writings of the Patriarchal Church, taken to show the connection of the Hebrews with Adam and the beginning.

Finally, let me say, that had the Science of Time been taught in our universities, men would not have doubted the date of the birth of the Son of God or the star which heralded the notable event, the knowledge of which, independent of history, has come down to us from generation to generation. But, unhappily, it is the same with these as with others. Many of the great facts of Biblical history are accounted as "legendary" rather than attested realities of Chronological Astronomy. But such is the unfathomable depths of darkness of the human mind, that men unblushingly presume to deny what others by proper investigation find to be irresistible facts.

THE STAR OF BETHLEHEM.
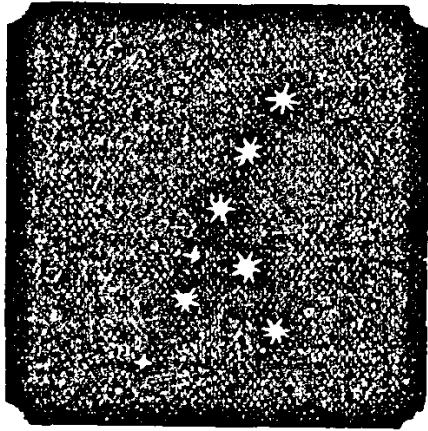
FIG. A.
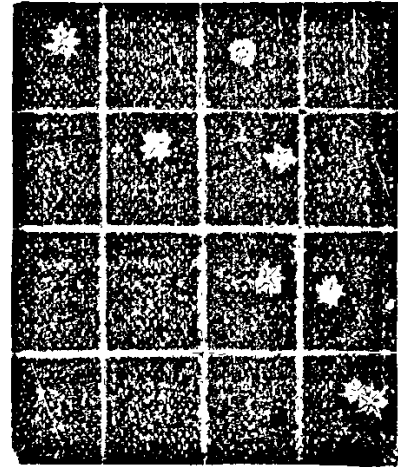
FIG. B.
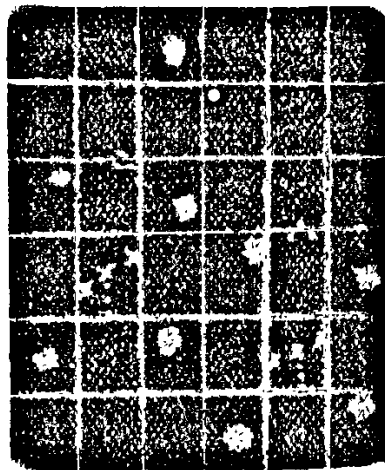
F.G C.

The top plain luminary in Figure C. is supposed to be the Star of Bethlehem, and the central perpendicular line, close to it, divides two views of the constellation of Orion, that to the right being the position of the constellation two hours afterwards, and lower down. These two views of Orion are given because, like all the other stars, this constellation would have a direct motion in consequence of rising in the east and setting in the west, whilst the Star of Bethlehem, by being a near luminary, would remain stationary over Jerusalem. This would be the most attractive character of the strange and wonderful star and could not fail to arouse the attention of the astronomers or Magi, and induce them to undertake a costly journey to Jerusalem.

Figures A. and B. are explained in the adjoining page.

DATES OF THE CRUCIFIXION AND RESURRECTION OF JESUS CHRIST, ASCENSION AND PENTECOST DAYS.

By looking at the Solar Cycle of the Ancient Hebrews, 4029, which is the Crucifixion year, marked *m*, the reader will see that the following table consists of the 1st, 2nd, and 3rd sacred months, which start from the middle of the year. They will be recognized by the figures, which are the Sabbath Days. Thus 2 9 16 23 30 in 1st sacred month.

Day		Day		Day	
1 F		1 S	3rd appearance, Jon. xxi	1 M	
2 ♄	Saturday, Sabbath Day	2 M		2 Tu	
3 S		3 Tu		3 W	
4 M		4 W		4 Th	
5 Tu		5 Th		5 F	
6 W		6 F		6 ♄	
7 Th		7 ♄		7 S	Pentecost, anniversry
8 F	John xii. 1.	8 S	Seen by 500 brethren,	8 M	of delivery of law
9 ♄	Christ at Bethany	9 M	1 Cor. xv. 6	9 Tu	and 50 days after
10 S	Annointed by Mary	10 Ti		10 W	the crucifixion.
11 M	Entry into Jerusalem	11 W		11 Th	
12 Tu		12 Th		12 F	
13 W		13 F		13 ♄	
14 Th	Passover "at even."*	14 ♄		14 S	
15 F	CRUCIFIXION.	15 S	"After that, by James"	15 M	
16 ♄	In the Sepulchre.	16 M	1 Cor. xv. 7.	16 Tu	
17 S	Resurrection on 3rd day	17 Tu		17 W	
18 M	and first seen.	18 W		18 Th	
19 Tu		19 Th		19 F	
20 W		20 F		20 ♄	
21 Th		21 ♄		21 S	
22 F		22 S	"Then by all apostles."	22 M	
23 ♄		23 M	1 Cor. xv. 7	23 Tu	
24 S	2nd time seen, Jn. xx. 26	24 Tu		24 W	
25 M		25 W		25 Th	
26 Tu		26 Th	Ascension on 40th day.	26 F	
27 W		27 F	Acts i. 3.	27 ♄	
28 Th		28 ♄		28 S	
29 F		29 S		29 M	
30 ♄				30 Tu	

* Three or four passages state that the passover was to be eaten at even on the 14th. Our Lord and his disciples obeyed the command, as Thursday the night before the crucifixion was the 14th. The Israelites left Egypt on the 15th (Num. xxxiii. 3).

I place the third appearance of the risen Lord, as narrated in John xxi, on Sunday for the following reasons.

1. In the old dispensation, all spiritual work, and particularly visions of the Divine presence, or words of the Lord to the prophets, were on Saturday the Seventh day; but commencing with the triumphant resurrection of Jesus Christ, such occurrences took place on the Lord's Day. The observance runs through the New Testament. 2. St. John connects this appearance on the shore of the Sea of Tiberias with the two previous Sundays. 3. St. Peter after the removal of Jesus Christ, naturally thought of resuming his old occupation, and hence after the Sabbath, which expired at the setting of the sun on Saturday, he purposed to begin with the new week. He and other disciples who were fishermen, had no idea of the work they had to do. The step was wrong and so they "caught nothing." 4. I see no reason why the Greek word *proias*, translated morning, should not imply the morning of the first. We have *prota* and other forms of the word indicating the first or fore-part of a ship, &c. and there seems a natural use of the word to translate it, morning of the first day of the week when Jesus stood on the shore.

The priority of this appearance of the Lord to that when 500 brethren were present, is supported by Bede, who was born in 673. He gives a quotation from an ancient poet, to the effect that when St. Peter followed the Lord he was instructed to tell all the disciples when they would see him. On hearing of this they assembled in large numbers. St. Paul tells us (1 Cor. xv. 7). that after being seen by 500 brethren, the Lord showed himself to James, and then to the apostles. We must not crowd these incidents too much. The apostle to the Gentiles seems to have had the last three Lord's days, before the ascension, in his mind, and as it was Sunday when Peter saw the Lord, it was the same day of the week when James saw him on a special occasion.

The crucifixion was at the beginning of 31. A.D. Our year then began on 21st March. It was 1½ years too fast, and when Parliament, in 1752, ordered the next year to begin with January (which was going in the wrong direction), we got 1¾ before A.M.

It will be seen by this table of the "40 days" and the Pentecost on the 50th day, that we have conclusive evidence that our Lord was crucified on a Friday. There are however, a few persons who say that Wednesday was the day. In this case, as Mark states that the Saviour rose on the first day of the week, he would have been in the tomb five days! Luke xxiv states early on the first day of the week (Sunday) the sepulchre was visited by the women who were told by some angels that the Lord had risen. The evangelist also tells us that on "the same day" (verse 13), two disciples were walking towards Emmaus when they were joined by the risen Lord who enquired why they were so sad. They explained and added (21) "this is the third day since these things (the crucifixion) were done." The other evangelists are equally plain.

But the best way to disprove the statements of men who suppose the followers of Christ have not piously preserved the day of the week when Christ was on the cross, is the record in Acts i. where we read that the Lord was seen by the disciples during 40 days after his passion, and that on the day of Pentecost the Holy Ghost was given. This was Sunday and it has since been observed as Whit-Sunday. Pentecost means the 50th day, and it was observed by the Jews, as Josephus tells us, as the anniversary of the delivery of the Law on Sinai on the 50th day after the Israelites left Egypt on the 15th of the 1st sacred month. But how could Pentecost fall on Sunday unless the day of crucifixion was Friday and the 15th of the month? (See the table).

WHEN AND BY WHOM WAS THE SABBATH DAY CHANGED?

This question was asked by a correspondent, and the reply given was that it was changed by the Lord himself in the year 4029, when he rose from the dead. As already remarked, all great spiritual events took place on Saturday, the seventh day of the week, before the resurrection of Christ, but on and after his victory over death and the grave, they all occurred on Sunday. There seems great probability that the events on the six Sundays, set out on the table of the Dates of the Crucifixion and Resurrection, are correct. We know that three of them are.

DATES IN THE NEW TESTAMENT.

ST. PAUL'S JOURNEYS, &c.

DATES IN THE NEW TESTAMENT.

Matt: iii. 1. "In those days came John the Baptist preaching." The words have no connection with what precedes them, and are altogether indefinite without noticing their special reference to the intercalary days to which they belong, when John was 30. The solar cycle is 15 years, so that two cycles are 30 years, thus having a repetition of the same period of time. Hence "in those days." But the words are demonstrative, as in other parts of Scripture, showing that the period which had now come round again was the intercalary days at the end of 4025, table *i* of the solar cycle (our Sept.). Without admitting this, the strain of ambiguity is so great as to mislead an ordinary English reader.

Mark i. 15. "The time is fulfilled." The early part of 4026, *j*, when our Lord began his ministry, he being about 30 years of age. The time fulfilled refers to Daniel's 69 weeks (Dan. ix,) As 69 multiplied by 7 represents 483 years, they, when deducted from 4026, leave 3543, which was most certainly the 7th of Artaxerxes mentioned in Ezra vii. where we have also the full text of the king's proclamation.

Luke ii. 11. This is the date when our Saviour was born, in the night between Friday and Saturday, the 25th-26th of the 3rd month, 3996, table *j* of the Ancient Hebrew Solar Cycle. Hence he was born on the Sabbath Day which began at sun-set on Friday evening. See "Date of the Birth of our Lord Jesus Christ."

Luke ii. 42. In the year 4008, table *g*, our Lord was 12 years old. He was at the Passover, in Jerusalem, which it will be seen by the solar cycle began that year on Wednesday. as it was the 15th of the 1st sacred (7th civil) month. The 7 days of the feast ended on the following Tuesday, the 21st, and next day, Wednesday, Joseph and Mary were on their return journey. They returned and in 3 days found Jesus in the temple. This was Saturday, Sabbath Day, 25th of the month.

Luke iii. 1. The 15th year of Tiberius was 4026, *j*. See Roman Emperors.

Luke iv. 16. The Saviour stood up to read in the Synagogue at Nazareth on the 50th Sabbath of the sacred year, which was the 16th of the 11th sacred (5th civil) month, 4026, *j*. Isaiah lxi., which he read, is the 50th section in the table of Van Hooten's Hebrew Bible, one of which was read each Sabbath Day.

Luke vi. i. This was Sabbath Day on the 2nd of the 1st sacred month, 4027, table *k*, Look at the cycle. "The second Sabbath after the first," is not English.

Luke ix. 51. A very incorrect translation. The original states that when the days were fully completed that were taken up, our Lord set his face steadfastly towards Jerusalem. The words refer to the "days," of the intercalary period at the end of 4028, table *l* of the Ancient Hebrew solar cycle, and not to Jesus Christ who was not taken up till nearly nine months afterwards.

Luke xi. 1. The Greek text says "on the 9th," which was, after sun-set, Thursday, the 1st civil month of 4029, table *m*. For the meaning of this consult Levit. xxiii. 32.

Luke xxiv. 1. Sunday, the 17th of 1st sacred month, 4029½, *m*. See the Resurrection.

John ii. 1. This "third day," marriage in Cana, seems to have been Tuesday, the third day of the week, 1st sacred month, 4026½, *j*, which followed the temptation.

John ii. 13. The first of the four passovers during the ministry of Jesus Christ, 4026½ table *j*, Monday, the 15th of 1st sacred month. The second, 4027½, *k*. Saturday, chap. v. 1. The third, 4028½, *l*, was Tuesday. chap. vi. 4. The fourth, 4029½, *m*., was on Friday (crucifixion day), chapter xii. 1.

Acts ii. 1. Pentecost, on Sunday, 7th of 9th civil month, table *m*, the 50th day after the crucifixion, 4029¾. It is the anniversary of the giving of the Law. See Resurrection.

Acts ix. 23. Conversion of St. Paul, end of 4034, *c*. See Intercalary Periods.

Acts xx. 2, 3, &c, St. Paul's journey through Macedonia to Palestine. Consult printed table of dates and places, 4058, *l*.

Acts xxiv. 27. St. Paul was not two years in prison. The passage refers to the intercalary days at end of 4058, *l*, when two full years—a solar and lunar—occurred. Consult Intercalary Periods.

Acts xxviii. 30. St. Paul dwelt two whole years in his own hired house in Rome, from 4059½ to 4061½, tables *m*, *n*, *o*, of the solar cycle. The Apostle could not have a hearing before Nero owing to the Emperor's absence more than a year on a singing tour in Greece, and was subsequently burnt out by the great fire in 4061.

ST. PAUL'S JOURNEY FROM GREECE THROUGH MACEDONIA TO PALESTINE

Year 4058, A.M., or 59, A.D., the 12th of the Solar Cycle,
being the 7th, 8th, and 9th civil, or 1st, 2nd and 3rd sacred months.

This is the same year of the Cycle as the Exodus.   The A.D. year is from 4000, A.M., the commencement of the Christian Era, not the birth of Christ, 3996, which would be 62.

1	Tu		1	Th	5th day.
2	W		2	F	6th day.
3	Th		3	≅	7th day, Jewish Sab.
4	F	St. Paul was in Greece	4	S	Preached 'till midnight.
5	≅	at the commence-	5	M	Luke sailed to Assos. 13
6	S	ment of the month.	6	Tu	Paul at Chios 'next day'
7	M	Acts xx. 2, 3.	7	W	'Next day' at Samos.
8	Tu		8	Th	'Day after' at Miletus.
9	W		9	F	Sent for Ephn. elders.
10	Th		10	≅	Paul's charge to elders.
11	F		11	S	At Coos, xxi. 1.
12	≅	Jewish Sabbath, Sat.	12	M	At Rhodes 'next day.
13	S	Lord's Day, Sunday	13	Tu	
14	M	Passover at even	14	W	
15	Tu		15	Th	At Tyre, xxi. 3.
16	W		16	F	
17	Th		17	≅	
18	F	Seven days unleavened	18	S	Tarried 7 days, verse 4.
19	≅	bread. verse 6.	19	M	
20	S		20	Tu	
21	M		21	W	Knelt down on beach.
22	Tu	Sailed from Philippi.	22	Th	Ptolemais one day. 7.
23	W		23	F	
24	Th	Five days' sail.	24	≅	
25	F		25	S	'Some days' at Cæsarea
26	≅	Came to Troas.	26	M	with Philip, 9 & 10.
27	S	1st day—Abode 7 days.	27	Tu	
28	M	2nd day.	28	W	
29	Tu	3rd day.	29	Th	
30	W	4th day.			

1	F	9th day with Phillip.
2	≅	At Jerusalem, xxi. 15.
3	S	'The day following,' 18.
4	M	'Next day.' verse 2?.
5	Tu	Pentecost ; 7 days *
6	W	'The morrow.' xxii. 30.
7	Th	'When it was day.' 12.
8	F	At Cæsarea before Felix
9	≅	
10	S	
11	M	'After 5 days.,' xxiv. 1.
12	Tu	
13	W	
14	Th	'12 days since," ver. 11.
15	F	
16	≅	
17	S	
18	M	
19	Tu	
20	W	
21	Th	
22	F	St. Paul was kept in
23	≅	charge at this pe-
24	S	riod, xxiv. 23
25	M	
26	Tu	
27	W	
28	Th	
29	F	
30	≅	

* Seven days' of purification of the four men, Acts xxiv. 23 and 27.

St. Paul could not abide seven days at Troas and then preach till midnight on the First day of the week, ready to depart on the morrow, if the year was the 9th, 10th, 11th, or 13th.   The events will not fit such years, and it must be borne in mind that lunar years being formed by the revolutions of the moon, over which there is no human control, the months must alternately possess 30 or 29 days, thus giving perpetuity to' the Solar Cycle. If the above events be placed on the 9th or 11th years of the Cycle the end of seven days from the arrival of St. Paul at Troas would require him to be preaching on Tuesday midnight, or if the 10th year, on Friday midnight.

A GREAT ERROR OF THE ENGLISH NEW TESTAMENT CORRECTED.

The next point in connection with the events of the dates belonging to Acts xx - xxiv. is an important one in respect to our historical knowledge of St. Paul's travels.   It will be seen that by xxiv. 22, 23, that Felix adjourned St. Paul's case, and then, "after certain days," (24) probably to another court day, Felix came with Drusilla, his wife, who was a Jewess, and sent for St. Paul in order to hear more of the Christian faith.   This act was repeated during the remaining three months of the year.

But in the 27th verse we are told that "when two years were fulfilled," Felix was succeeded by Festus.   This must be an erroneous translation.   It is worse, however, in the authorised version, where it says, "But after two years."   What the original states is, "When two years were completed," that is, not two years from the adjournment of the case, but when the period arrived in Jewish time requiring two lunar years to receive the additional intercalary days.   The Jewish years were triple in character, having 34 intercalary days at the end of each 3rd year.   During the first one lunar and solar time were together, but lunar years having only 354 days, the 2nd year began 11 days before the solar, and the 3rd year was 22 days in advance of the solar.   Consequently at the end of these " two years," the intercalary days were required to prevent the next year from being 33, but really 34 days, in advance.   This is the meaning of Acts xxiv. 27.

Now for the proof. The next chapter tells us that "after three days" Festus went up to Jerusalem. If the reader looks at the ancient Hebrew Solar Cycle, he will see that the 3rd intercalary day of this twelfth year we have been speaking of, was Sabbath Day. So that as Festus would not travel in Judæa on the day of rest, he would wait till after the third day, which St. Luke here particularises. Then again, in verse 6th, the next Sabbath Day is spoken of, namely the 10th, and this clears up the jumble in the margin of the authorised version. Festus seems again to have waited till the Sabbath was over before returning to Cæsarea. These two Sabbath Days, 3rd and 10th, could not be any other than those in the intercalary days at the foot of the 12th year of the cycle. They could not be those in the first month of the 15th year, because the 10th day was "the Fast," mentioned in xxvii. 9.

In addition to this we have evidence of the Apostle being at sea in the intercalary period. The word IKANAIS in the 7th, and a repetition of it, the 9th verse, alludes to this particular time, in the sense of great, adapted, sufficient. It is commonly used in a demonstrative sense in connection with the intercalary period. It forms the date of St. Paul's conversion (Acts ix. 23.) and of St. Peter's sojourn at Joppa (verse 43), both alluding to the intercalary period of 4034, A.M., which was 35 A.D., the 3rd year on the Ancient Hebrew Cycle. It is found in the same three senses, though not in relation to time, in Mark i. 7, Luke iii. 16, 2 Cor. ii. 6, 16. &c. I would therefore read "And when we had sailed slowly in intercalary days." "When intercalary time was gone through (not spent) and the voyage was now dangerous, because the Fast was now already gone by," &c.

I have not space to enlarge on the subject here, but I do not like the English translation of the last chapters of the Acts at all. Let it however be remarked that St. Luke finishes the history of St. Paul where he began it, in the end of the 3rd year of the cycle—forming altogether 27 years, as is seen by the additional two whole years (xxviii. 30)—and this explains the somewhat abrupt termination of the narrative.

I do not mean to say that the Greek word ικανος always refers to intercalary days. But it does when associated with that period. It is more than 30 years since my tutor taught me to read Greek, but Parkhurst was my first guide to a knowledge of this important word, and I would refer the reader to his copious citations.

ANOTHER MISTRANSLATION.

In the authorised version, Luke vi. 1. we read "On the second Sabbath after the first." No one can understand what this means. But in the revised version, instead of properly mending the Greek, δευτεροπρώτω is ignored and the verse reads "a Sabbath"! There is a marginal note stating "Many ancient authorities insert second-first." Indeed I have never seen any copies without the Greek words. But the fact is this verse gives us one of the most definite dates of the history of our Lord's ministry. It reads "The Sabbath on the 2nd of the 1st month." A glance at the Ancient Hebrew Solar Cycle shows that the Sabbath days of the first sacred (seventh civil) month, eleventh year of the cycle, fell on the 2nd, 9th, 16th, 23rd, and 30th days. Why should the historical evidence of the veractity of ancient writings be destroyed by mistranslations of this kind? Before the revised version was published an official letter was sent to the revisers mentioning the names of two gentlemen who were able to assist them in the translation of chronological expressions, but beyond a courteous acknowledgement of this letter, nothing more was heard of it. The result of this indifference is in the hands of every intelligent reader, because just as the simple use of the multiplication table in every school in England ensures the correct adding up of any amount of numbers, so does the application of a system of astronomical measurement provide the accurate determination of periods of time all over the world.

I regret the necessity for speaking so plainly of a work to which I looked forward with gladsome anticipations, but to be silent in noticing so much error, and to allow the New Testament to go down to posterity stripped of the great scientific testimonies which no other historical work possesses, would, in my case, be unpardonable. There is not a date or period of time in the Old or New Testament which is not in perfect accord with the astronomical lines of scientific time derived from eclipses or the transits of the planets, Mercury and Venus, or which is not also determined by the stern application of the Metonic or lunar cycle, and therefore to obliterate the testimony of authenticity in the Scriptures, or to make them state what was never written, is to impugn their veracity and allow cavillers to place them on an equality with spurious writings. The religion of the Bible, it should also be stated, is the only one which has a genuine history and is corroborated by the deductions of science, I therefore protest against the public reading in churches of a version which has been sent to press regardless of its historical evidence. The Bible is a far greater book than has been supposed. It teams with science, and we ought not to allow sceptical men the opportunity of placing a finger upon its pages.

THE DEATH OF ABEL—At the end of Intercalary Days of Year 125.

The Bible being the oldest writings in the world, we must use it to verify all the years since time was instituted. The date given in the Scriptures for the death of Abel is an interesting confirmation of the eleven weeks of 77 intercalary or extra days used by the antediluvians at the end of each seventh year for making the lunar and solar year again start together on the same day. We find the date of Abel's death in the following simple way: The margin reading of Gen. iv. 3. reads "and at the end of days" it came to pass, &c. The real literal Hebrew is "and it was at the end of days." The meaning of this peculiar phrase is plain. It refers to the days at the end of the solar cycle of seven years. To prove this we may turn to 1 Kings xvii 7, where we have the same Hebrew expression in the margin used in connection with a year (3095) which had intercalary, days, though they were in Elijah's time less in number, as will afterwards be explained in reference to Table i. (See Ancient Hebrew solar cycle) ; and it is worthy of notice that these intercalary days are on two or three other occasions, when the year of the Hebrews fell on Table i, associated with sheep-shearing and feasting. The churlish Nabal got drunk at this "feast of ingathering" of the fruits when he also sheared his sheep at the end of days in the year 2945 (See 1 Sam. xxv. 36, and also compare 2 Sam. xiii. 23) There seems abundant evidence that there was a great similarity between the patriarchal and Hebrew customs. But beyond this fact, we may further observe that the fruits of the earth at none of the end of the lunar years assigned by chronologists as the period when Cain slew Abel could be ripe, seeing that the solar year was getting two to three months late. We see, then, that these intercalary days, falling next in precedence to the birth of Seth in the year 130, were those at the end of the year 125 The date of the sad catastrophe would be in "the *end* of the days," probably the 77th—a great Sabbath Day—actually ending the solar year, but before the sun was down the earth was reddened with Abel's blood.

The most interesting chronological point is the proof of the 77 intercalary days, and I think that Lamech's words, associated with Cain's great crime in the end of these 77 days, have some historical connection with them, seeing that he expresses their number in a proverbial sense—"seventy and sevenfold." Gen. iv. 24.

REMARKS CONCERNING YEARS

I use the chronology of our English Bible in this work, that is what is known as the "Hebrew text." The "Samaritan" and "Septuagint" are not astronomical, and therefore not worth a straw. Hales greatly erred by using them. This is a very important statement, but no more than 365 days can be put into a year, or more than 7, 15, or 28 years in a solar cycle, and 19 years in a lunar cycle. These are stern astronomical facts which no man can alter, and all the dates of the Bible work upon them preserving in the whole narratives the character of the Seventh Day.

HOW TO FIND ANY YEAR ON THE SOLAR CYCLES.

In the present edition of the Bible (King James's, 1879) the B.C. year given in the margin of the Old Testament is on the supposition that our Lord was born in 4004, A.M., therefore to find the year of the world that year must be used instead of 3996, which all chronologists now admit to be the correct one.

Example :—To obtain the year of the departure of the Israelites from Egypt, the margin of the Bible at Exodus xii. gives 1491. Subtract this from 4004

<div align="right">

4004
1491

</div>

This is the Exodus year admitted by commentators 2513 A.M.
To find this 2513 on the Ancient Hebrew Solar Cycle, look at the list of the first years (that is those which always were table *a*) of the cycle. It will be seen that the nearest preceding year is 2502—which commenced the cycle. Now count forward and 2513 will be Table *l.* All the dates in the Bible are found in this way, except a few marginal inaccuracies, which let us hope the present revisers will rectify.

In noticing the dates in the Bible, the reader must bear in mind, what is stated more than once in this work, that the months are always used by the Hebrews in their sacred order. The 7th month being that in which the Israelites left Egypt, it begins the sacred year, and is called the 1st month. By this way the 12th civil is the 6th sacred, and the 1st civil the 7th sacred month, Example, Daniel's vision recorded in chapter x 4, Table *i,* the 24th of the 1st month (sabbath day) being the 7th proper or civil month of the year.

For the New Testament dates, the Crucifixion was Table *m,* which is 4029, A.M. or 30 A.D. Our Lord was crucified on Friday, 15th of 1st sacred or 7th civil month, His body was in the tomb on the 16th (sabbath day) and the 17th—Sunday—was the first Lord's Day, his resurrection

DATE OF THE DEATH OF AARON.

To be born on the Sabbath Day, or to be carried by angels to the place of the blessed on that day was esteemed as a great honour by the Jews. Our Lord was born on the night of Friday, which after sun-set was the Sabbath, and St. Paul speaks of being circumcised on the eighth day, thus showing that he was born on the day which God exalted and blessed in Eden. Aaron had the honour of dying on the Sabbath Day. In Numbers xxxiii. 38, we read that he died on Mount Hor, at the commandment of the Lord, in the fortieth year, after the children of Israel were come out of the land of Egypt, on the 1st day of the 5th month (sacred). As the Biblical years were planetary motion, running in unbroken weeks of seven days, we can soon find what was the day of the week when, without suffering or weakness, this high priest of God, laid down his body and his charge. The exodus was in the middle of 2513, so that the 40th year would be from 2552½ to 2553½. Looking at the solar cycle, we see that 2552 was sixth year of the cycle, and the 1st of the 5th sacred month was Sabbath Day. What a grand and impressive procession in the sight of saints and angels. Perhaps not a tear was shed, whilst every heart was sustained. It was not a procession from the cell to the platform, made sad by the tolling bell; but one in which the departing figure was the high-priest in his robes and with a mitre on his brow. We might ask, Were the trumpets sounded, and were the singers there as the procession began at the door of the sanctuary, witnessed this Sabbath morning by every eye? Was "sweet incense burnt," and were the standards of Reuben and Ephraim there to cheer the eyes of Aaron before he met the banners borne by the hosts of heaven?

THREE SYSTEMS OF ASTRONOMY,
THE THIRD BY MR. JAMES GILLESPIE, OF DUMFRIES.

Although there are three systems of Astronomy, none of them affect Astronomical Chronology, which can be claimed by each. The first is that held at Observatories, viz. that the earth is spherical, rotating on its axis, and travelling round a stationary sun in 365¼ days. The second is that of which the late Mr. John Hampden was the chief in England. Mr. John Williams, 32, Bankside, London, S.E. is the Secretary, and the publications of the Society maintain that the earth is not a globe, and that the sun travels above it in a circular course. Mr. Albert Smith, B.A., is the editor. The third system of astronomy is taught by Mr. James Gillespie, of 105, St. Michael Street, Dumfries, in Scotland. His book "The Triumph of Philosophy, or the True System of the Universe," is published at 2s. 6d. and is profusely illustrated. Mr. Gillespie is a gifted man and his book has won much attention. He teaches that the earth is a globe, but immoveable. He says the sun apparently revolves above the earth in a path similar to the figure 8. The neck of the figure forms the two equinoxes, and in this way by the sun working down the figure, the vernal equinox occurs by the sun crossing the neck. The autumnal equinox is caused by the sun returning and working upwards, re-crossing at the same point. Of course there is equal day and night on both occasions. Mr. Gillespie admits the rotatory motion of the earth, but refuses to acknowledge that it is a planet. He also cannot see how planetary motion can be subject to legislative years.

ERRORS OF DATING BY MODERN JEWS.

The Jews in London celebrated Monday, 11th of September, 1893, as the first day of their new year, 5654. It was truly the commencement of a new lunar year, and the moon was new; but there is nothing—either by history or astronomy—to show that it was the beginning of 5654. Every method we know proves that nine days later, viz., the 20th of September was the beginning of 5892, A.M.. The position of the eclipse of the sun, which travels through the solar year, by stages of 18 years, in 649 years, is sufficient to prove this. We saw the sun eclipsed on the 16th of April—which is the the 6th month of the natural year—in 5891 (1893); but if the year was only 5654. the eclipse would have occurred in the 12th month, six months previously. The Jews are to be commended for using natural A.M. years, starting from September, as did all the ancients, but this simple system ought to show them how to obtain a true enumeration of the years of the world. They lost their year after the destruction of Jerusalem by the Romans. They adopted another about two centuries afterwards, but abandoned it about 400 years ago for the very ludicrous system they now use.

B.C. YEARS AND HOW MADE A.M.

The B.C. year is made A.M. by deducting from 4004, but this will not work when the years are connected with the birth of Christ, because he was born in 3996. Example: 1491, B.C., in the margin of Exodus xii., deducted from 4004, is 2513, the true exodus year. But many of the years in the margin of Scripture are not accurate. Usher was a Biblical man of great genius, but his work, which otherwise would have been all simple A.M. years, was spoilt by listening to Joseph Scaliger, and others.

SECOND LINE OF TIME.

THE ENGLISH SOLAR CYCLE

AND

ERRONEOUS FORM OF THE ENGLISH YEAR.

SOLAR CYCLE OF THE CHRISTIAN ERA.

These Twenty-eight Solar Years form an Almanack up to the end of the present century. The dates are Lord's Days. Those marked * are leap years.

1868 i.*	1869 ii.	1870 iii.	1871 iv.	1872 v.*	1873 vi.	1874 vii.
5 12 19 26	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28	5 12 19 26	4 11 18 25
2 9 16 23	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25	2 9 16 23	1 8 15 22
1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29
5 12 19 26	4 11 18 25	3 10 17 24	2 9 16 23 30	7 14 21 28	6 13 20 27	5 12 19 26
3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28	5 12 19 26	4 11 18 25	3 10 17 24 31
7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25	2 9 16 23 30	1 8 15 22 29	7 14 21 28
5 12 19 26	4 11 18 25	3 10 17 24 31	2 9 16 23 30	7 14 21 28	6 13 20 27	5 12 19 26
2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27	4 11 18 25	3 10 17 24 31	2 9 16 23 30
6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24	1 8 15 22 29	7 14 21 28	6 13 20 27
4 11 18 25	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	6 13 20 27	5 12 19 26	4 11 18 25
1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26	3 10 17 24	2 9 16 23 30	1 8 15 22 29
6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24 31	1 8 15 22 29	7 14 21 28	6 13 20 27

1875 viii.	1876 ix.*	1877 x.	1878 xi.	1879 xii.	1880 xiii.*	1881 xiv.
3 10 17 24 31	2 9 16 23 30	7 14 21 28	6 13 20 27	5 11 19 26	4 11 18 25	2 9 16 23 30
7 14 21 28	6 13 20 27	4 11 18 25	3 10 17 24	2 9 16 23	1 8 15 22 29	6 13 20 27
7 14 21 28	5 12 19 26	4 11 18 25	3 10 17 24 31	2 9 16 23 30	7 14 21 28	6 13 20 27
4 11 18 25	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27	4 11 18 25	3 10 17 24
2 9 16 23 30	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25	2 9 16 23 30	1 8 15 22 29
6 13 20 27	4 11 18 25	3 10 17 24	2 9 16 23 30	1 8 15 22 29	6 13 20 27	5 12 19 26
4 11 18 25	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27	4 11 18 25	3 10 17 24 31
1 8 15 22 29	6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24 31	1 8 15 22 29	7 14 21 28
5 12 19 26	3 10 17 24	2 9 16 23 30	1 8 15 22 29	7 14 21 28	5 12 19 26	4 11 18 25
3 10 17 24 31	1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26	3 10 17 24 31	2 9 16 23 30
7 14 21 28	5 12 19 26	4 11 18 25	3 10 17 24	2 9 16 23 30	7 14 21 28	6 13 20 27
5 12 19 26	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28	5 12 19 26	4 11 18 25

1882 xv.	1883 xvi.	1884 xvii.*	1885 xviii.	1886 xix.	1887 xx.	1888 xxi.*
1 8 15 22 29	7 14 21 28	6 13 20 27	4 11 18 25	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29
5 12 19 26	4 11 18 25	3 10 17 24	1 8 15 22	7 14 21 28	6 13 20 27	5 12 19 26
5 12 19 26	4 11 18 25	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27	4 11 18 25
2 9 16 23 30	1 8 15 22 29	6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24	1 8 15 22 29
7 14 21 28	6 13 20 27	4 11 18 25	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	6 13 20 27
4 11 18 25	3 10 17 24	1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26	3 10 17 24
2 9 16 23 30	1 8 15 22 29	6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24 31	1 8 15 22 29
6 13 20 27	5 12 19 26	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28	5 12 19 26
3 10 17 24	2 9 16 23 30	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25	2 9 16 23 30
1 8 15 22 29	7 14 21 28	5 12 19 26	4 11 18 25	3 10 17 24 31	2 9 16 23 30	7 14 21 28
5 12 19 26	4 11 18 25	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27	4 11 18 25
3 10 17 24 31	2 9 16 23 30	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25	2 9 16 23 30

1889 xxii.	1890 xxiii.	1891 xxiv.	1892 xxv.*	1893 xxvi.	1894 xxvii.	1895 xxviii.
6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24 31	1 8 15 22 29	7 14 21 28	6 13 20 27
3 10 17 24	2 9 16 23	1 8 15 22	7 14 21 28	5 12 19 26	4 11 18 25	3 10 17 24
3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24 31
7 14 21 28	6 13 20 27	5 12 19 26	3 10 17 24	2 9 16 23 30	1 8 15 22 29	7 14 21 28
5 12 19 26	4 11 18 25	3 10 17 24 31	1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26
2 9 16 23 30	1 8 15 22 29	7 14 21 29	5 12 19 26	4 11 18 25	3 10 17 24	2 9 16 23 30
7 14 21 28	6 13 20 27	5 12 19 26	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28
4 11 18 25	2 10 17 24 31	2 9 16 23 30	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25
1 8 15 22 29	7 14 21 28	6 13 20 27	4 11 18 25	3 10 17 24	2 9 16 23 30	1 8 15 22 29
6 13 20 27	5 12 19 26	4 11 18 25	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27
3 10 17 24	2 9 16 23 30	1 8 15 22 29	6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24
1 8 15 22 29	7 14 21 28	6 13 20 27	4 11 18 25	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29

The 12 lines in each year represent the 12 months respectively. This solar cycle would go on repeating the date of the Lord's day in 28 years for ever had our years not been on the solar principle. Our dates change in three centenary years in every four.

☞ Example of cycle: A person who is twenty-eight on Sunday, the 4th of Jan. 1880, was born on the selfsame day of the week and date of month—Sunday, 4th of Jan. 1852.

EXPLANATION OF THE ENGLISH SOLAR CYCLE.

A clock is a cycle of 12 hours, and a week is a cycle of seven days. By their natural continuance neither the hours or the days get out of place. A Solar Cycle is formed of the number of years which bring the days of the week round again so that they fall on the same dates of the month. Our English Solar Cycle does this in 28 years. It would do so after 7 years, but as we alter the form of every 4th year by making it a leap year, we require 4 times 7 years to complete the cycle.

Christians began about 523 to compute years from the birth of Christ, which was in 3996, A.M., from creation; but this era was not generally adopted till 1428, which was a first year of our Solar Cycle of 28 years.

The figures, or dates of the month, on our Solar Cycle are Sundays, not Saturdays, as is the case with the Antediluvian and the Ancient Hebrew cycles. No other cycles than these three have existed, because there can be no cycles without weeks of 7 days. I have already stated, in other sections, that as the Antediluvian years and dates work in Solar Cycles from the beginning, weeks of 7 days have never been broken.

By an Act of Parliament we bury our history and years by foolishly breaking up our Solar Cycle three times in the course of four centuries by omitting the observance of the leap year. A Solar Cycle should never be broken. The last alteration of the form of our English year was when "new style" was adopted in 1752. The 3rd of Sept. was ordered by Parliament to be the 14th, and it was also enacted that the following year should begin with January 1st instead of March 21st as formerly. By this 1752 had only nine months! But Parliament jumped in the wrong direction, for the breach between our years and scientific time was made three months wider.

ERRONEOUS FORM OF THE ENGLISH YEAR.

Solar 5894   5895   5896   5897 Reckons Creation year as 1.
A.M. 5893   5894   5895   5896 Reckons Creation yr. as 0, like a birth-day.

	1895	1896	1897	1898	
1					October, sometimes 10 days earlier.
2					November do. or few days later.
3					December do. do.
4					4 January do. do.
5					5 February do. do.
6					6 March do. do.
7					7 April do. do.
8					8 May do. do.
9					9 June do. do.
10					10 July do. do.
11					11 August do. do.
12					12 Sept. the solar year begins on 20th

The above shows the position of our English twelve months on the natural A.M. year. Our year covers nine months of one true year and three months of the next, and with such a system of time when eclipses, transits, or other phenomena are recorded by the Observatory in Oct. Nov. and Dec. they are out of gear with planetary motion because they belong to another year. It is therefore impossible to arrange them into tables for historical reference. The eclipses cannot be pulled from their natural years, but this is done when they are placed on unscientific English years. Hence all the darkness and disputes about time and events.

HOW TO FIND THE YEARS OF THE WORLD BY SOLAR CYCLES.

It is a simple process to find any year or the total number of the years of the world by solar cycles. First notice the "Table of Each First Year of the Antediluvian Solar Cycle, which it will be seen is proved by the Metonic method and marked off (*) into periods of 133 years which bring creation year round again. The Antediluvian method of keeping time ceased at the end of 1721, when a cycle of 15 years (Hebrew) succeeded one of 7 with 1722. This fact is proved by the dating and the position of eclipses on both of them. But really this is no point of importance inasmuch as years are carried on by transits and eclipses. Then the years on the Hebrew Solar Cycle also submit to the Metonic test as marked (See the page "How to Find the Years," following the Cycle). It may further be remarked that seventh years are another proof of correct succession. and also the dates of Scripture by falling on the right day of the week. There is thus no possibility of getting wrong, and no man ought to speak of years who is not able to identify them on solar cycles and prove them also by astronomical tests. There would be no disputes about years, or centuries, if men used proper methods.

H

WHY ASTRONOMY IS BELOW THE STANDARD OF REVELATION.
ERRORS OF TIME AT THE OBSERVATORY.

The Greenwich Observatory was established little less than 200 years ago for the purpose of assisting navigation ; but it is a great error to suppose that it has anything to do with the Science of Time. What it does is to give the positions of the heavenly bodies and astronomical phenomena, during the Gregorian, or English year, and the precision with which the work is done and its great utility to mariners, is deserving of our admiration and praise. But as the English year is not natural—that is to say, is not the year produced by planetary motion—it has no claim to rank as Scientific Time, and for this reason it fails to provide tables of eclipses or transits. This is a humiliati·g fact, and one much to be regretted, because it will be seen that the use of unnatural time plunges all history in darkness. Time is the amount of measured duration whilst some heavenly body proceeds from one place to another. There can be no other time than this. But there are 13 spurious systems of time in use in various parts of the world, and that observed at the Greenwich Observatory is the worst and most misleading of all of them, because it is based on an unnatural solar year which has been altered and pulled about by Acts of Parliament by which none of the planetary worlds are controlled. A cash-book cannot be kept unless it is reckoned up by tables formed of the standard value of the coins it represents, and which must never be altered. Nor can a Ready-Reckoner be published from one farthing to £1,000 if the standard of a shilling—48 farthings—be altered ; yet our Observatory uses a year the form of which has been thrice altered. But time, like arithmetic, is a fundamental science. Nothing can be added to it, or anything taken away. To alter time we must alter the laws of the universe. The following is a ludicrous example of legislative interference with the Science of Time, and I am indebted to the editor of the London "Daily Telegraph" for the long leader of approval of my remarks on the subject : " In what is called the year 1752, our legislature enacted what is termed 'new style,' and ordered that the next year should begin with the 1st of January instead of the 21st of March as formerly. Hence the year 1752 had only nine months ! Parliament jumped three months in advance of the moon, but did not take the earth or the moon with them. What was worse, our legislators took their jump in the wrong direction, because Parliament had already indulged in athletic performances to such an extent that they had leaped 18 months in advance of eclipse time. The distance therefore between the earth and Parliament is now 1¾ years." The Observatory was standing when this last error was made, but it shows that an establishment of this character can make no profession of dealing with Scientific Time. Another erroneous practice at the Observatory is, it makes all its celestial measurements from the point of Aries—the vernal equinox in March, which is the middle of the natural year—so the annual calculations are in two years. But let it be understood that no fault can be found with the accuracy of these calculations. It is the error on which they are based which defeats their utility to mankind. Men seem to think they can begin years where they please ; but an institution which would profess to deal with the motions of the planetary bodies cannot do so with a Japanese system of this kind. The great fact is, unless we start with the point of time given in Genesis i. no table of eclipses can be made. Begin there and the eclipses will always record the true year of the world. Is such useful knowledge to be hidden ? There is no great desire that our English year should be set right. It is too late to do this now. But what is insisted on is that all calculations pertaining to the sublime science of astronomy should have a correct basis. Men could then run a simple line—aye, and without mathematical science—from the eclipses we now see to those recorded by the ancients, and from the present time to the date of Creation, or any other subsequent event. We should prove all history, and our Observatory would be doubled in its service to mankind by dealing with time as well as navigation ; but until this is done, it cannot be regarded as an astronomical institution, and the post of "Astronomer Royal" has a meaning which is not enviable.

I hope that these remarks will be received in a proper spirit. For some reasons I regret to make them, but I have long ceased to wonder that great errors should exist in our literature and museums—men born 300 years before their fathers—and that our English Bible should be loaded with ludicrous translations whilst its historical events are doubted rather than admired, by putting science behind a cloud. I say I have long ceased to wonder at all this, when we have a misleading system of time at an institution like our observatory extravagantly supported by the public purse, whilst useful science is left without a shilling. Can it be surprising that agnosticism and theosophy should find ready soil wherein to flourish when, through the inability of old astronomy to supply tables of astronomical phenomena, certain "rain-makers" assign fabulous years to periods of history which our young men after leaving college—and taking degrees withal—are unable to disprove ? If men set up their Dianas of science above revelation, they must show that their images have a basis on which to stand.

"VOX DEI,"

OR

ECLIPSE LINE OF TIME.

THIRD LINE OF TIME.
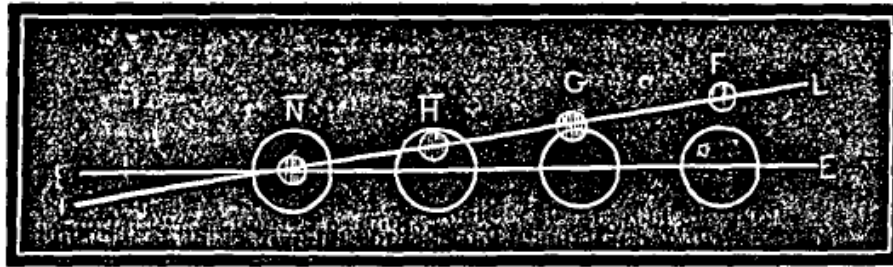
As a Solar Eclipse moves through the year in stages of 10 to 11 days, in English time, every 18 years; or of 1 month, in Ancient Hebrew time, every 54 years (3 times 18), whenever it occurs we have an unquestionable evidence of the number of the past years of the world. This rate of motion, like the hand of a clock, brings the eclipse back to the date from which it started in 649 years, which is its date-repeating cycle. We thus only deal with the first eclipse in following this motion from Creation year, viz., from Friday, the 1st day of the 4th month, 0 A.M.

ALL PAST YEARS BY ECLIPSES.

By the recent great advancement of the science of astronomy we now have obtained six lines of astronomical time, based upon natural and scientific years, by which all past years are known and consecutively identified. One of these lines is the Eclipse Cycle. The period between an eclipse and its re-occurrence is 6585½ days which with the use of English years, amount to 18 years and 10 to 11 days. These extra days produce three eclipses in a month in the course of 54 years (3 times 18). But by the use of natural years, beginning with the 20th of September, as did the Chaldean and Ancient Hebrew years, the 6585½ days through intercalary periods, are 54 years and one month, and as the years were Luni-Solar, arranged in triplets, the new moons were on or about the 1st day of every month, as shown by the Solar Cycle in this book. Now as there can be no solar eclipse unless the moon be new, we have, by the use of natural years, a perfect measure of 54 years for proving all past years, and by which each intervening year is identified by its own eclipses. Next comes a brilliant and marvellous success. This month of progression over 54 years carries an eclipse through the year after 12 periods of 54 years, so that an eclipse repeats its date after 649 years, viz. 648 years and 1 year for the 12 months of progression. Hence 649 years form the Eclipse Cycle.

Investigation shows, as will be hereafter seen, that the first solar eclipse took place on Friday, the 1st day of the 4th month, in Creation year, 0 A.M. This is the beginning of the Triple Eclipse Table of this book and the proof is that the eclipse No. 1., Line i., in its successive periods of 54 years picks up the ancient records and lands upon our English line of time, in the same 4th month and on the same day of the week.

Creation year is identified by unique physical standards, hereafter explained; but, simply, it was when all the cycles of time and planetary motion started together. They can never resume such positions, nor, owing to their variety and length, could they have had them previously by natural means. Deducting Usher's well-known error of eight years, Creation was 3996 years before the birth of Christ. Our 1894¼ was 5892¼, A.M. Solar Cycles, which are a record of every day that can occur, also determine this.

Hitherto it has not been possible to arrange eclipses into cycles, because the form of our English year is not scientific. Therefore under the present circumstances, astronomy is divided into two sections—Nautical Astronomy and Chronological Astronomy. The Greenwich Observatory was established by our Government for the purposes of Nautical Astronomy and as its years are not those of planetary motion, but legislative, any intelligent mind will at once see that they cannot be applicable for registering natural phenomena. The disastrous result is, all history is thrown into confusion.

It is however much to be hoped that Government will make the Observatory more useful by doubling its advantages, so that in addition to observations useful to masters of ships, it may be employed for historical and higher scientific purposes. We are not all sailors, and it is equally desirable that controversy should be settled about time as it was in respect to localities at sea when latitudes and longitudes were introduced.

CONTENTS.

Wanstead, London, E.
April, 1894, (5892½ A.M.)

J. B. DIMBLEBY,

The value of all astronomical science is the accuracy of its calculations, but it is impossible to ensure accuracy when we use periods of time which have no natural and scientific basis. The old school of astronomers to this day have not been able to make a practical use of astronomy for all mankind, because their solar year, although correct in length, is not the natural year produced by planetary motion. Hence no tables of eclipses or transits can be provided for purposes of time or history by years overlapping those produced by celestial phenomena. But when we use natural years a host of advantages come to our hands. For example, we find that eclipses move in cycles of 649 years, as shown in the margin of this page, when, by having travelled through the year, they repeat their dates. We also see that these cycles form another of seven, and that each of them begins with one of the days of the week, so that in this way the eclipses lay down all past years by a method that cannot be disturbed. It is proper, therefore, before showing the number of all past years, that the reader should first know what a solar year is. Its *length*, 365¼ days, is well known, but its *form* is not printed in books. According to the earliest history, Genesis i., and all scientific investigation, the solar year begins on Sept. 20th and thus the "fourth day" was, as now, the autumnal equinox on the 23rd, when we have equal day and night all over the world. This beginning of the year was observed by the ancients during 3,000 years. There must be two equinoxes in the year, six months apart. The vernal equinox, is March 22nd, the earth having then travelled to the opposite side of her orbit round the sun. So that unless we observe a year of this natural form, it cannot have two equinoxes six months apart, marking off a whole revolution. This is not all. We could not always have 12 new moons in the year, the lunar and solar year would not start together every 649 years, and we should be out of gear with all planetary motion, including the transits of Mercury and Venus. The medley would be and—with our unscientific form of English year—it really is, like a dozen musicians all playing different tunes. But when we make our calculations with the use of natural years, we preserve the uniformity of the clock-like motions of the heavens, and self-constructed tables are ready at our hands, providing, like immovable longitudes, a scientific basis for all history.

Up to the present period men write articles in magazines about past time, which only show how very ignorant and incapable they are of dealing with the subject, and what is worse, scientists often quarrel about centuries! The British Museum has become a Barnum Show of Curiosities. Men walk about the Assyrian and Egyptian galleries with gaping mouths wondering how some ancient monarchs were born more than a century before their fathers. The up and down process of B.C. and A.D. years (?), instead of the straight-forward A.M. year, makes "confusion worse confounded."

A.M.	
F	0
	649
Th	649
	649
W	1298
	649
Th	1947
	649
M	2596
	649
⇌	3245
	649
S	3894
	649
F	4543
	649
Th	5192
	649
W	5841

Advancing science has got rid of all these encumbrances by the use of Chronological Astronomy, which cannot accept any year without its known eclipses. The work is superior to Nautical Astronomy by which we sail all over the world using measurements.

The eclipse period is 6585⅓ days, which are 18 solar years and 10 or 11 days with English years, but the period is just 18 years with Chaldean and Biblical time. The latter is formed on a system of giving and taking by means of the 6 intercalary periods, one at the end of every 3rd year. The solar eclipses thereby take place at the beginning and lunar eclipses in the middle of the month. Instead therefore of eclipses moving through the year in stages of about 10 days—and thus occurring three times in the month—they took place three times at one date—say 1st of the 4th month—and then moved a whole month forward. They are so shown on the "Triple Eclipse Table," and are brought from Creation year down to those we now see without the loss of a day. Proof: the Solar Cycles show that the first eclipse took place on Friday, the 1st day of the 4th month in year 0, and coming forward to our time, it occurred again on Friday, 1st of 4th month, 5859, which was Friday, our Jan. 11th, 1861. The junction is complete and is also conclusively proved by the Metonic Cycle, transit tables, &c. &c.

FORM OF THE SOLAR YEAR.
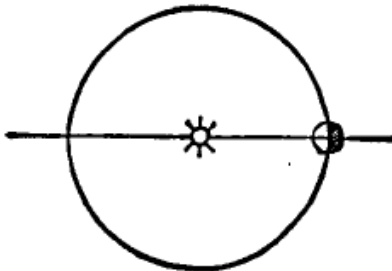
Let the annexed circle represent the orbit of the earth round the sun, completed in 365¼ days, a solar year. A straight line drawn through it must divide it into two halves and the intersecting points must form two equinoxes always separated by six months. As the autumnal equinox starts with the 1st month, (on the right) the vernal must end the sixth month, on March 21st. This is the natural year. It is also the Biblical and scientific year.

The following figures representing the Seasons, Equinoxes, and the positions of the Sun on the Zodiac in the four quarters of the year, are more descriptive than those published in other books, and will be easily understood.

At the autumnal equinox, Sept. 23, (the middle figure of the annexed triple diagram) the sun is direct on the equator, and the light is parallel with the axis of the earth, consequently there is equal day and night all over the world. It is the same at the vernal equinox about the 22nd of March, when the earth is on the other side of the sun. Then on the 21st of June, (the top figure) the sun is $23\frac{1}{2}$ degrees above the equator, and consequently the northern part of the earth has most light, and the south is dark and cold. But on the 21st of Dec. (represented by the lowest figure of this triple diagram) the sun has got to the same distance, $23\frac{1}{2}$ degrees, below the equator, and now the south has most light whilst the whole of the arctic regions are in darkness. It is easy to see that the year can only begin when the sun is on the equinoctial line, in his maximum position, and not when he is so far from it. The science of geometry also teaches this, whilst everything pertaining to the motions of the earth and the planets require it. It is so with the eclipses. Unless we start when the nodes of the moon are in the centre of the solar year, as in creation year, they cannot be tabulated. Perfect physical arrangements, in agreement with geometrical and astronomical, data must be regarded if our science is to be true. Advancing science cannot be bound to the errors of our predecessors.

It will be understood that the alternate light in the north and south is not produced by any alteration of the position of the sun, but entirely by the obliquity of the axis of the earth when on opposite sides of the sun.

THE SEASONS.

The following diagram of the ecliptic, (left side) shows the earth on opposite sides of the sun, which is always on a level with the earth's centre (the dotted line) called the ecliptic, but owing to the obliquity of her axis, when on the sun's left. the equator is below the sun, and when the earth is on the opposite side, the equator is above the sun.

THE ECLIPTIC.
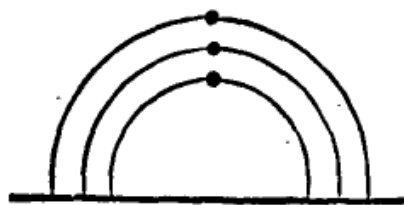
THE ZODIAC.

The result is what we all see. The sun has three places on the Zodiac as shown by the diagam (bottom figure on the right). About 12 o'clock at noon. Dec. 21st, he is on the lowest arc; at the two equinoxes in Sept. and March, he is on the middle arc, and on the 21st of June he is on the top, and makes a wider circuit of the heavens.

Creation year was phenomenal. It was distinctly marked by the existence of geometrical and astronomical standards by which it is well identified. Some of these have already been alluded to, such as the beginning of the solar cycle that year with Sunday as the first day of the week, the commencement of the Metonic cycle by the Moon, the starting together of the solar and lunar years, and the splendid positions of the nodes of the moon in the centre of the solar year. To these must now be added the simultaneous and sublime parallel positions of the earth and the moon in their orbits, as shown in the diagram on this page. Together they form the magnificent starting-post of time recorded in Genesis i., 3996, B.C. or 0, A.M., and more so if Mercury and Venus be added, as they also had their orbits and positions in line with the earth at creation.
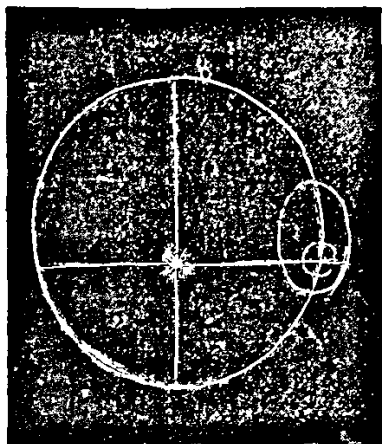
It will be seen by this diagram that neither the orbit of the earth or the moon is a circle, but an ellipse, but both are parallel in position. This was the case at the beginning of year 0 A.M., otherwise the eclipses could not take place, or be of the same character as those we now see. The sun is on the equinoctial line producing equal day and night, Sep. 23, the "fourth day" of every true year, and no matter when we now observe the longitude of the sun or moon, their positions can be traced back to those in the diagram. For example, after 669 lunar years, when the earth is at the autumnal equinox, as at creation, she catches the moon in her syzygies, the earth having completed 649 revolutions (solar years). In other words, the moon is there repeating with the earth the phenomena of creation, and three months afterwards the moon is in her node. Nine such periods were completed, as shown by the total solar eclipse, on Wednesday, 1st day of the 4th month, 5841, A.M., which was Wednesday night, invisible in London, Dec. 20-21, 1843, A.D. The proof: 5841 divided by 9 goes 649 times. The latter is the eclipse cycle.

The longest line in each orbit is the line of apsides of the earth and the moon, and the short one is the line of syzygies, when the sun, earth, and moon are in conjunction. The sun is never in the centre of the earth's orbit, but in the lower focus. This is also the true position of the earth in respect to the moon's more oval orbit. Here again, as in the diagram, the earth and moon had similar positions and were at the point where their motions began. This is particularly phenominal in the case of the orbit of the moon, because it twists round in the course of about nine years. Its position at creation was normal; but when the line of apsides takes the place of the syzygies, by lying, as it were across the orbit of the earth, the position is then said to be abnormal, or unnatural. The beautiful and normal position of the major axis of the moon's orbit may therefore be regarded as a third initial contrivance for geometrical and astronomical perfection.*

Another physical evidence is: The diameter of the earth is 26½ miles longer at the equator than that extending from the poles, so that by gravitation the sun has a greater pull on it. Hence we find the equator in its natural position "set" at the point of creation. like that of the planet Jupiter now; but with a continuance of this position there could be no seasons.† To obtain seasons the axis of the earth must be oblique in order that the sun may have angular distances from the equator in Dec. and June, accomplished by the annual revolution of the earth. But the greater attraction of the sun on the equator would overcome this oblique position, therefore to neutralize this "pull" the earth must have a rotatory motion, alternately producing day and night. The cause of this motion is inexplicable, particularly as Venus, which is nearly as large as our world, does not possess it. Should the rotatory motion cease, the axis of the earth would swing back to their natural perpendicular position and we should have no more "harvest festivals." We thus see that the rotatory motion began with the movement for producing seasons which, as the diagram shows, was at the point of creation. To these remarks we may add that geology, though yet an imperfect science, shows that at no remote period, the arctic regions were covered with tropical plants.

We therefore see that Creation, year 0 A.M., included an arrangement of planetary bodies to accomplish the necessary and definite purposes we now have, and that it has been our imperfect comprehensions of the sciences—and of time in particular—which have led to supposed disruptions between science and the sublime facts of revelation.

* * As the orbit of the moon (assumed to be closed for the purpose of easier comprehension) is tilted 5 degrees above the ecliptic, and her nodes shift one degree westward every lunation, there could be no central solar eclipse till the end of three months, Friday, 1st of 4th month, when the earth had reached the lower end of her orbit, and the next eclipse when at the top, in summer. The two nodes beautifully produced the eclipses in the centre of the true year—||| † ||| ||| † ||| —

† When the earth reaches the lower part of her orbit on Dec. 21st, the equator is 23½ degrees *below* the sun, and when at the top, the sun is the same distance *above* the equator. Hence the movement for obtaining these angular distances of the great luminary of day from the equator *must* begin at the Creation. They could begin no where else for the seasons.

THE COMMON TEAM OF ECLIPSES OCCURRING EVERY 18 YEARS.

For many years astronomers have known that all eclipses occur again after 18 years, but it was unknown as to which was the first year of a series of 18. We were in the position of an untutored African who had ascertained that there were seven days in a week, but did not know which was its first day. The valuable and useful discovery of the first year of the series of 18, was the work of Chronological Astronomy, as were also the discovery of the first month of the solar year, and numerous other things which have won great attention to this science. Having obtained a knowledge of the order of the 18 years, we can give an unchanging number to each eclipse and supply the consecutive years to the lines. We then follow No. 1. Line I, by its date through all past years. We can do the same with all the other 69, and identify any ancient eclipse.

LINE.	A.M.	Character and Number of the Eclipse.					A.M.	SOLAR.	A.D.
I	0 ...	⊙1	⊙2	...	...	...	...	5841	5812	1843-4
II	1 ...	●3	⊙4	●5	✳6	...	...	5842	5843	1844-5
III	2 ...	✳7	●8	✳9	✳10	●11	...	5843	5844	1845-6
IV	3 ...	⊙12	◗13	⊙14	...	...	...	5344	5845	1846-7
V	4 ...	⊙15	◗16	⊙17	...	...	...	5845	5846	1847-8
VI	5 ...	◗18	⊙—	✳19	◖20	✳21	✳—	●22	5816	5847	1848-9
VII	6 ...	✳23	⊙24	◗25	⊙26	◗27	...	5847	5848	1849-50
VIII	7 ...	⊙28	⊙29	...	...	...	...	5818	5349	1850-1
IX	8 ...	●30	⊙31	◗32	⊙33	...	...	5849	5850	1851-2
X	9 ...	●34	✳35	✳36	●37	✳38	...	5850	5851	1852-3
XI	10 ...	⊙39	◗40	⊙41	◗42	...	...	5851	5852	1853-4
XII	11 ...	⊙43	◗44	⊙45	...	...	...	5352	5853	1854-5
XIII	12 ...	◗46	⊙47	●48	✳49	...	...	5353	5854	1855-6
XIV	13 ...	●50	✳51	⊙52	◗53	...	...	5854	5855	1856-7
XV	14 ...	✳54	●55	⊙56	⊙57	...	...	5855	5856	1857-8
XVI	15 ...	◗58	⊙59	◗60	...	...	...	5 56	5857	1858-9
XVII	16 ...	⊙61	●62	✳63	✳64	●65	...	5857	5858	1859-60
XVIII	17 ...	✳66	⊙67	◗68	⊙69	◗70	...	5858	5859	1860-1

Eclipses: ⊙ Total Sun. ✳ Partial Sun. ● Total Moon. ◗ Partial Moon.

The XVIII lines represent 18 years, which numerically change as time rolls on. They are however enumerated in this table by way of illustration, showing, on the left, the first 18. The 70 eclipses which occur in 18 years move bodily through the year from left to right as if they were painted on canvass, so that after 36 of these 18 years they are all back again having the same positions and repeating their dates as in the first 18 years. The period of their progression is by stages of one month in 54 years (3 times 18) when natural and scientific years are in use (that is Biblical); but with English years, the eclipses are carried through the year in stages of 10 to 11 days more than 18 years so that an eclipse will occur, as a rule, three times in one month, but each 18 years apart. The 36 times 18 years are 648 years, but with one year for progression, the period is 649 years, which is the cycle. They then start afresh. This should be understood, because the date of any eclipse gives us all past time and the true year of the world.

The eclipses do not leave their lines, nor do they get out of one team into another, when natural years (commencing Sept. 20th) are used; but I regret to say that our English form of year drags the eclipses far into other lines and partly ruptures the team, by sometimes having the first eclipse in Line xviii. and vice versa. See diagrams.

In the Triple Eclipse Table it will be seen that No. 1 eclipse occurred in 1262, then in 2524 (twice 1262), then thrice the period, 3786, and lastly four times, 5048. The result of which is, this 1262 proves the first year and first eclipse! For confirmation of this period of 1262, and accuracy of my table of eclipses, see the German work " Kannon der Finsternissen," (Canon of Eclipses) and " The Life-History of a Solar Eclipse," by Mr. Maunder, of the Greenwich Observatory, printed in " Knowledge," Oct., 1893.

This 1262 is made up of the three great periods of 70, 360, and 1260, by which the " times " of the world's history is predicted in Scripture, and carried out by the events of history we see accomplished and accomplishing. Thus, 70 times 18 are 1260. With English years the eclipses occur after 18 years and 10 or 11 days, and it is these which form the 2 years making 1260 into 1262, namely 720 days of twice 360.

By the use of these 18 years, which I have named the Historical Cycle, all history is displayed as pictures before our eyes, and astronomy is made practically as useful to us as it is to navigation. We double the utility of a sublime science and place all history on a scientific basis. Following the first eclipse from Creation (whatever that epoch means), we pick up accurately its ancient records, finally landing it in our own times. In fact every eclipse preserves its number, line, and day of the week when it occurs.

TWO CONSECUTIVE TEAMS OF 70 ECLIPSES WITH ENGLISH YEARS COMPARED SHOWING IDENTITY AND REPETITION.

The following two teams, each in a period of 18 years, occurred as dated, and are the 1st and 2nd teams of the 10th Cycle consisting of 36 teams in 649 years. By this arrangement it will be seen how the same eclipse repeats itself after 18 years and 10 or 11 days with the English form of the solar year. There are xviii Lines for the 18 years. The 1st eclipse, dated Jan. 1st, took place on the previous day, Dec. 31st, 1842, but it is brought forward a few hours, to show its proper line. All the others are correctly dated.

1st TEAM.   **2nd TEAM.**

Line I.
	No.		No.
1843, Jan. 1, ⊙...	1	1861, Jan. 11, ⊙...	1
Jun. 27, ⊙...	2	July 8, ⊙...	2
Dec. 6, ●...	3	Dec. 17, ●...	3
Dec. 21, ⊙...	4	Dec. 31, ⊙...	4

Line II.
1844, May 31, ●..	5	1862, Jun. 12, ●...	5
Jun. 15, ✳...	6	Jun. 27, ✳...	6
Nov. 10, ✳...	7	Nov. 21, ✳...	7
Nov. 24, ●...	8	Dec. 6, ●...	8
Dec. 9, ✳...	9	Dec. 21, ✳..	9

Line III.
1845, May 6, ⊙...10	1863, May 17, ✳...10
May 21, ●...11	June 1, ●...11
Oct. 30, ⊙...12	Nov. 11, ⊙...12
Nov. 13, ●...13	Nov. 25, ●...13

Line IV.
1846, Apl. 25, ⊙...14	1864, May 6, ⊙...14
Oct. 20, ⊙...15	Oct. 30, ⊙...15

Line V.
1847, Mar. 31, ●...16	1865, Apl. 11, ●...16
Apl. 15, ⊙...17	Apl. 25, ⊙...17
Sep. 24, ●...18	Oct. 4, ●...18
Oct. 9, ⊙...19	Oct. 17, ⊙...19

Line VI.
1848, Mar. 5, ✳...20	1866, Mar. 16, ✳...20
Mar. 19, ●...21	Mar. 31, ●...21
Apl. 3, ✳...22	Apl. 15, ✳...22
Aug. 28, ✳...—	
Sep. 13, ●...23	Sep. 24, ●...23
Sep. 27, ✳...24	Oct. 8, ✳...24

Line VII.
1849, Feb. 22, ⊙...25	1867, Mar. 6, ⊙...25
Mar. 8, ●...26	Mar. 20, ●...26
Aug. 18, ⊙...27	Aug. 22, ⊙...27
Sep. 2, ●...28	Sep. 13, ●...28

Line VIII.
1850, Feb. 12, ⊙...29	1868, Feb. 23, ⊙...29
Aug. 7, ⊙...30	Aug. 18, ⊙...30

Line IX.
1851, Jan. 17, ●...31	1869, Jan. 27, ●...31
Feb. 1, ⊙...32	Feb. 11, ⊙...32
July 13, ●...33	July 23, ●...33
July 28, ⊙...34	Aug. 7, ⊙...34

1st TEAM continued.   **2nd TEAM.**

Line X.
	No.		No.
1852, Jan. 7, ●...35	1870, Jan. 17, ●...35
Jan. 21, ✳...36	Jan. 31, ✳...36
Jun. 17, ✳...37	June 28, ✳...37
July 1, ●...38	July 12, ●...38
Dec. 11, ⊙...39	July 28, ✳...—
Dec. 26, ●...40	Dec. 22, ⊙...39

Line XI.
See prior eclipse	1871, Jan. 6, ●...40
1853, June 6, ⊙...41	Jun. 17, ⊙...41
Jun. 21, ●...42	July 2, ●...42
Nov. 30, ⊙...43	Dec. 12, ⊙...43

Line XII.
1854, May 12, ●...44	1872, May 22, ●...44
May 26, ⊙...45	June 6, ⊙...45
Nov. 4, ●...46	Nov. 15, ●...46
Nov. 20, ⊙...47	Nov. 30, ⊙...47

Line XIII.
1855, May 2, ●...48	1873, May 12, ●...48
May 16, ✳...49	May 26, ✳...49
Oct. 25, ●...50	Nov. 4, ●...50
Nov. 9, ✳...51	Nov. 20, ✳...51

Line XIV.
1856, Apl. 5, ⊙...52	1874, Apl. 16, ⊙...52
Apl. 20, ●...53	May 1, ●...53
Sep. 29, ⊙...54	Oct. 10, ✳...54
Oct. 13, ●...55	Oct. 25, ⊙...55

Line XV.
1857, Mar. 25, ⊙...56	1875, Apl. 6, ⊙...56
Sep. 18, ⊙...57	Sep. 29, ⊙...57

Line XVI.
1858, Feb. 27, ●...58	1876, Mar. 10, ●...58
Mar. 15, ⊙...59	Mar. 25, ⊙...59
Aug. 24, ●...60	Sep. 3, ●...60
Sep. 7, ⊙...61	Sep. 17, ⊙...61

Line XVII.
1859, Feb. 17, ●...62	1877, Feb. 27, ●...62
Mar. 4, ✳...63	Mar. 15, ✳...63
July 29, ✳...64	Aug. 9, ✳...64
Aug. 12, ●...65	Aug. 23, ●...65
Aug. 28, ✳...66	Sep. 7, ✳...66

Line XVIII.
1860, Jan. 22, ⊙...67	1878, Feb. 2, ⊙...67
Feb. 7, ●...68	Feb. 17, ●...68
July 18, ⊙...69	July 29, ⊙...69
Aug. 1, ●...70	Aug. 12, ●...70

As the English form of the solar year overlaps the natural and scientific year three months, the eclipses, to suit our fictitious dating, are dragged from the ends of the lines and placed three months in another. This does not occur with Biblical and Chaldean years. To see this, compare the Bird's Eye Views of Eclipses. Transits and Eclipses published in tables are the triumphs of Chronological Astronomy.

ANCIENT HEBREW ERA "BIRD'S EYE VIEW" OF THE TEAM OF 70 ECLIPSES IN 18 NATURAL YEARS.

A.M.	A.D.	Line	1st month	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Intercalary
5841	1843-4	I	⋮	⋮	⋮	⊙	⋮	⋮	⋮	⋮	●	⊙	⋮	⋮	⋮	—
5842	1844-5	II	⋮	⋮	●	⊙	⋮	⋮	⋮	⊙	●	*	⋮	⋮	⋮	—
5843	1845-6	III	⋮	⊙	●	*	⋮	⋮	⋮	⊙	*	⋮	⋮	⋮	⋮	—
5844	1846-7	IV	⋮	◐	⋮	⋮	⋮	⋮	⋮	⊙	⋮	⋮	⋮	⋮	⋮	—
5845	1847-8	V	⋮	⊙	⋮	⋮	⋮	⋮	⋮	⊙	⋮	⋮	⋮	⋮	⋮	—
5846	1848-9	VI	◐	⊙	⋮	⋮	⋮	◐	◐	*	⋮	⋮	⋮	⋮	◐	●
5847	1849-50	VII	*	⋮	⋮	⋮	⋮	⊙	●	⋮	⋮	⋮	⋮	⋮	⊙	—
5848	1850-1	VIII	⋮	⋮	⋮	⋮	⋮	⊙	*	⋮	⋮	⋮	⋮	⋮	⊙	—
5849	1851-2	IX	⋮	⋮	⋮	⋮	⋮	⊙	⋮	⋮	⋮	⋮	⋮	⋮	⋮	—
5850	1852-3	X	⋮	⋮	⋮	●	◐	⋮	⋮	⋮	⋮	●	⋮	⋮	⋮	—
5851	1853-4	XI	⋮	⋮	⋮	◐	*	⋮	⋮	⋮	◐	●	◐	⋮	⋮	—
5852	1854-5	XII	⋮	⋮	⊙	⊙	⋮	⋮	⋮	⋮	⋮	⊙	*	⋮	⋮	—
5853	1855-6	XIII	⋮	◐	⊙	⊙	⋮	⋮	⋮	●	⋮	⊙	⋮	⋮	⋮	—
5854	1856-7	XIV	⋮	●	⋮	⋮	⋮	⋮	⋮	◐	⋮	⋮	⋮	⋮	⋮	—
5855	1857-8	XV	⊙	●	⋮	⋮	⋮	●	⊙	⋮	*	⋮	⋮	⋮	●	—
5856	1858-9	XVI	⊙	*	⋮	⋮	⋮	●	*	⊙	⋮	⋮	⋮	⋮	●	—
5857	1859-60	XVII	*	⋮	⋮	⋮	⋮	●	⋮	⊙	⋮	⋮	⋮	⋮	*	—
5858	1860-1	XVIII	⋮	⋮	⋮	⋮	⋮	⊙	⋮	⋮	⋮	⋮	⋮	⋮	⊙	—

⊙ Total Sun. * Partial Sun. ● Total Moon. ◐ Partial Moon. ◗ Team.

These are the 70 eclipses which constitute the Team. They all occur in 18 solar years. As the years are lunar, but made solar by the Intercalary month at the end of every 3rd year, the eclipses of the sun take place at the beginning of a month, and those of the moon in the middle of the month. After occurring three times on the same data during 54 years, which are 3 times 18, the eclipses move into the next month and occur three times again in the same period, and so pass through the year in 648 years. It is the intercalary month which is the cause of this progression, and they accumulate into 1 year after

36 teams. The cycle is thus 649 years, when the eclipses are all back again as above represented. They show us all past years, and as there are seven cycles, each having one of the days of the week, we cannot mistake the numerical order of years from creation, because the above team began the first 18 years. The solar eclipse ⊙ at the top is No. 1, Line I, on the 1st day of 4th month. With natural, or Biblical years, eclipses never leave their lines. The years on the left are the first of the present triple team, beginning 5841. Proof: Multiply the cycle of 649 years by 9 (the number of past cycles) and the result is 5841. This was our 1843, Dec. 21st, the beginning of the 4th month, true solar time-

"BIRD'S EYE VIEW" OF THE TEAM OF 70 ECLIPSES IN 18 ENGLISH YEARS.

With a view to bring our pagan English years into better use with the Science of Time, the cycle was formerly worked in 651 years by using two blank years, but it was a disadvantage.

A.D.	Line.
1843-4 1861 1879	I
1844-5 1862 1880	II
1845-6 1863 1881	III
1846-7 1864 1882	IV
1847-8 1865 1883	V
1848-9 1866 1884	VI
1849-50 1867 1885	VII
1850-1 1868 1886	VIII
1851-2 1869 1887	IX
1852-3 1870 1888	X
1853-4 1871 1889	XI
1854-5 1872 1890	XII
1855-6 1873 1891	XIII
1856-7 1874 1892	XIV
1857-8 1875 1893	XV
1858-9 1876 1894	XVI
1859-60 1877 1895	XVII
1860-1 1878 1896	XVIII

Months (diagram columns, right to left): December, November, October, September, August, July, June, May, April, March, February, January.

649 the cycle
9 multiply
———
5841 our 1843
18
———
Jan. 11, 1861
18
———
Jan. 22, 1879

This page ends all argument about years from creation. The 70 eclipses work in teams of 18 years (or as lines) and complete a cycle, by repeating their date, after 649 years. Hence, start this diagram with year 1, which was 0, A.M. or creation year. The eclipse, No. 1. line i. must have taken place on 1st day of 4th month (our January). Multiply the cycle by 9, as in the margin, because, apart from historical records, the consecutive day of the week when the cycles begin shows that the 9th cycle ended the moment before 5841, our 1843, Dec.

The diagram begins the second team (1861) of the 10th cycle. By looking at almanacks for 18 years, from 1861, all the eclipses of the diagram will be found properly placed, but those of the present team. Example: ⊙ No. 1, line i. recorded on 11th Jan. 1861, occurred again in the present team on Jan. 22nd, 1879. It thus requires 649 years, which is the cycle, to travel through the year and repeat its date. Our pagan English year, and the order of months, having no agreement with the Science of Time, the eclipses in the last 3 or 4 months of the diagram leave their lines for a similar period. ⊙ Total sun, * partial. ● Total moon, ◐ partial.

EXAMPLE OF ECLIPSES MOVING THROUGH THE SOLAR YEAR.

The following table gives an example of the Central Solar Eclipse No. 1, Line I., moving through the solar year, owing to the 10 or 11 days beyond 18 years when the eclipse occurs. It will be seen that the progression of 10 days allows the eclipse, as a rule, to occur three times in one month, and that as 12 times 0 are 360, it moves through the year of 365 days in 651 years when it must repeat its date or nearly so. Eclipses do not leave their lines.

The A.D. dates are extracts from "L'Art de Verifier les Dates." which gives the eclipses as endorsed by the Observatory at Paris, and as France adopted the New Style of dating in 1582, the dates previous to that year are corrected 11 days to show the working of the cycle.

All the eclipses for the A.D. years are not given in the book from which the dates in the column to the right are extracted.

The great value of this table of 651 years is its practical importance. It gives us a measuring line, astronomically determined, which will carry us back through all past time more correctly than the mariner's compass will lead us over the world. By its use we find what were the eclipses of the first year, 0 A.M. (See "Guage Proving All Past Time"). It also shows us the day of the week with which each year began, and thus ratifies the date of the first seventh day as Saturday, the seventh day of the first year and month.

Astr	Jan	Feb	Mar	April	May	Jun	July	Aug	Sept	Oct	Nov	Dec	A.D. Eclipse Date
5209	o												1210, Dec. 27.
5227	o												1228, Jan. 8.
5245	o												1246, „ 30.
5263		o											1264, Feb. 10.
5281		o											1282, ...
5299		o											1300, March 3.
5317			o										1318, „ 14.
5335			o										1336, ...
5353			o										1354, April 5.
5371				o									1372, „ 16.
5389				o									1390, ...
5407				o									1408, May 7.
5425					o								1426, „ 18.
5443					o								1444, ...
5461					o								1462, ...
5479						o							1480, ...
5497						o							1498, ...
5515						o							1516, ...
5534							o						1535, July 11.
5552							o						1553, ...
5579							o						1571, July 22.
5588								o					1589, Aug. 11.
5606								o					1607, ...
5624								o					1625, ...
5642									o				1643, ...
5660									o				1661, ...
5678									o				1679. ......
5697										o			1698, Oct. 4.
5715										o			1716, „ 15.
5733										o			1734, ...
5751											o		1752, Nov. 6.
5769											o		1770, „ 17.
5787											o		1788, ...
5805												o	1806, Dec. 10.
5823												o	1824, „ 20.
5841												o	1842, Dec. 31.

The next eclipse of No. 1. 19 years after 1842, was on the 11th Jan. 1861, and as the top date was, when corrected for New Style, skipping 11 days, Dec. 27th the date was repeated with the exception of an overplus of about four day.

Thus No. 1 occurred again on Jan 11, 1861, beginning another Cycle, and also in 1879.

The first column is the same as given in the List of "Astronomical Years." The reason why the years are not always 18 years is because the solar year overlaps the lunar, and therefore sometimes computes one more (19).

All the eclipses, as set out in the Bird's Eye View of Eclipses, could be tabulated in the above form by beginning them in the month which that Diagram places them, but more particularly eclipses of the moon, because they do not vary like those of the sun, as seen by looking at Two Consecutive Teams Compared.

The astronomical years on the left are true time, and the right what we have erroneously made.

JOINS PRESENT ECLIPSES.   The next Section (10) is in its infancy.   It will be the same as Section 3, because the table repeats after Section 7, which exhausts the week. Continuation is: iv 1st of 4th month, Wed.,   5841, which was Dec. 21st, 1843, Wed.

i   Do.   do.   Friday, 5859, which was Jan. 11th, 1861, Friday.

This table is therefore the—Pillars of Time—the Conquerors—proving all past time, first by years, 2nd, by successive months, and 3rd, by the unbroken week in Gen. i.

THE TRIPLE ECLIPSE TABLE.   With Date and Day of Week.

The First Solar Eclipse followed by series of 3 times 18, or 54 years, from Creation to 5823, A.M. (1825, A.D.)

Cycle year.	Month A.M.	Section 1.		Section 2.		Section 3.		Section 4.		Section 5.		Section 6.		Section 7.		Section 8.		Section 9.	
i ☉ 1st of 4th	0	F	vi	649	vi Th	1298	ii Tu	1947	vii M	2596	v ♋	3245	iii S	3594	i F	4543	vi Th	5192
v	do.	18	♋ iii	667	i S	1316	vi Th	1965	iv W	2614	ii Tu	3263	vii M	3912	v ♋	4561	iii S	5210
ii	do.	36	Tu vii	685	v M	1334	iii S	1983	i F	2632	vi Th	3281	iv W	3930	ii Th	4579	vii M	5228
vi 1st of 5th	54	F	iv	703	iv W	1352	vii Tu	2001	v M	2650	iii ♋	3299	i S	3948	vi F	4597	vi Tu	5246
iii	do.	72	♋ i	721	vi F	1370	iv Th	2019	ii W	2668	vii Tu	3317	v M	3966	iii ♋	4615	i S	5264
vii	do.	90	Tu v	739	iii ♋	1388	i S	2037	vi F	2686	iv Th	3335	ii W	3984	vii Th	4633	v M	5282
iv 1st of 6th	108	S	ii	757	vii Th	1406	v W	2055	iii Tu	2704	i M	3353	vi ♋	4002	iv S	4651	ii F	5300
i	do.	126	M vi	775	iv S	1424	ii F	2073	vii Th	2722	v W	3371	iii Tu	4020	i M	4669	vi ♋	5318
v	do.	144	W iii	793	i M	1442	vi ♋	2091	iv F	2740	ii F	3389	vii Th	4038	v W	4687	iii Tu	5336
ii 1st of 7th	162	♋ vii	811	vii F	1460	iii Th	2109	i ♋	2758	vi Tu	3407	iv ♋	4056	vii S	4705	v F	5354
vi	do.	180	Tu iv	829	iv ♋	1478	vii F	2127	v Th	2776	iii W	3425	i Tu	4074	iv M	4723	ii ♋	5372
iii	do.	198	Th i	847	i Tu	1496	iv ♋	2145	ii S	2794	vii F	3443	v Th	4092	i W	4741	vi Tu	5390
vii 1st of 8th	216	♋ v	865	vii F	1514	i F	2163	vi W	2812	iv Tu	3461	ii M	4110	vii S	4759	v S	5408
iv	do.	234	Th ii	883	iv ♋	1532	v ♋	2181	iii F	2830	i Th	3479	vi W	4128	iv Tu	4777	ii M	5426
i	do.	252	S vi	901	i M	1550	ii S	2199	vii ♋	2848	v S	3497	iii F	4146	i Th	4795	vi W	5444
v 1st of 9th	270	♋ iii	919	vii F	1568	vi ♋	2217	iv W	2866	ii Tu	3515	vii M	4164	iii S	4813	iii S	5462
ii	do.	288	Th vii	937	iv ♋	1586	iii Th	2235	i F	2884	vi Th	3533	iv W	4182	vii M	4831	vii M	5480
vi	do.	306	S iv	955	i ♋	1604	vii M	2253	v ♋	2902	iii S	3551	i F	4200	iv W	4849	iv W	5498
iii 1st of 10th	324	M i	973	i S	1622	iv F	2271	ii Th	2920	vii W	3569	v Tu	4218	iii M	4867	i ♋	5516
vii	do.	342	W v	991	v M	1640	i ♋	2289	vi ♋	2938	iv F	3587	iii M	4236	vii W	4885	v Tu	5534
iv	do.	360	F ii	1009	vii W	1658	v Tu	2307	iii M	2956	i ♋	3605	iv S	4254	iv F	4903	ii Th	5552
i 1st of 11th	378	M iii	1027	iv S	1676	ii F	2325	vii Th	2974	v W	3623	iii Th	4272	iii M	4921	vi ♋	5570
v	do.	396	W i	1045	i M	1694	vi ♋	2343	iv S	2992	ii F	3641	vii Th	4290	vii W	4939	iii Tu	5588
vi	do.	414	F v	1063	v ♋	1712	iii Th	2361	i M	3010	vi ♋	3659	iv S	4308	iv F	4957	vii Th	5606
vi 1st of 12th	432	Tu iv	1081	iii M	1730	vii ♋	2379	v F	3028	iii F	3677	i W	4326	vi Tu	4975	iv M	5624
iii	do.	450	S i	1099	vii ♋	1748	iv ♋	2397	ii ♋	3046	vii S	3695	v F	4314	iii Th	4993	i W	5642
vii	do.	468	♋ v	1117	iv Th	1766	i ♋	2415	vi Th	3064	iv M	3713	ii ♋	4362	vii S	5011	v F	5660
v 1st of 1st m.	487	Th iii	1136	iii M	1785	vi S	2434	iv S	3083	ii Th	3732	vii W	4381	v W	5030	i M	5679
ii	do.	505	♋ vii	1154	vii W	1803	iii M	2452	i ♋	3101	vi S	3750	iv F	4399	ii Th	5048	vii W	5697
vi	do.	523	S iv	1172	iv F	1821	vii W	2470	v ♋	3119	iii M	3768	i ♋	4417	vi S	5066	iv F	5715
iii 1st of 2nd	541	W vi	1190	i ♋	1839	iv ♋	2488	ii ♋	3137	vii F	3786	v ♋	4435	iii W	5084	i Tu	5733
vii	do.	559	F iii	1208	v W	1857	i ♋	2506	vi M	3155	iv S	3804	ii S	4453	vii F	5102	v Th	5751
iv	do.	577	♋ vii	1286	ii S	1875	v Th	2524	iii W	3173	i ♋	3822	vi M	4471	iv ♋	5120	ii S	5769
i 1st of 3rd	595	W vi	1244	vi Tu	1893	ii ♋	2542	vii S	3191	v F	3840	iii Th	4489	i W	5138	vi Tu	5787
v	do.	613	F iii	1262	iii Th	1911	vi ♋	2560	iv M	3209	ii ♋	3858	vii S	4507	v ♋	5156	iii Th	5805
ii	do.	631	♋ vii	1280	vii S	1929	iii Th	2578	i W	3227	vi Tu	3876	iv M	4525	ii ♋	5174	vii S	5823

ALL PAST YEARS OBTAINED BY ECLIPSES.

The following is the 9th, or last cycle, of the "Triple Eclipse Table," which is here printed with additional explanations, since the other stereotyped pages were published.

The eclipse dealt with is No. 1. in Line I. of the "Ancient Hebrew Birds's Eye View of a Team of 70 Eclipses," so that as they each occur again after 18 years, this total solar eclipse ☉ which occurred on Friday, the 1st day of the 4th month in Creation year, 0 A.M., has re-occurred in every subsequent 18th year. It has, however, a progressive movement of one month after 54 years (3 times 18 are 54). This movement carries it through the year in monthly stages in the course of 648 years. Twelve movements of 54 years each are 648 years. But the 12 months progression cover another year and thus makes the 648 into 649 years. This is the date-repeating cycle because it brings this No. 1. eclipse back again to Friday, the 1st day of the 4th month where it started in Creation year. If the reader comprehends these explanations, all will be clear.

Section 9.			Section 10.			English Time.
vi	Thursday	5192	iv	Wednesday	5841	Wednesday, Dec. 31st, 1843.
iii	Saturday	5210	i	Friday	5859	Friday, January 11th, 1861.
vii	Monday	5228	v	Sundy. nght	5877	Monday, January 20-21st, 1879
iv	Thursday	5246	ii	Wednesday	5895	Wednesday, Feb. 4, 1897, invisible.
i	Saturday	5264				
v	Monday	5282				
ii	Friday	5300				
vi	Sunday	5318				
iii	Tuesday	5336				
vii	Friday	5354				
iv	Sunday	5372				
i	Tuesday	5390				
v	Saturday	5408				
ii	Monday	5426				
vi	Wednesday	5444				
iii	Saturday	5462				
vii	Monday ☽	5480				
iv	Wednesday	5498				
i	Sunday	5516				
v	Tuesday	5534				
ii	Thursday	5552				
vi	Sunday	5570				
iii	Tuesday	5588				
vii	Thursday	5606				
iv	Monday	5624				
i	Wednesday	5642				
v	Friday	5660				
iii	Monday	5679				
vii	Wednesday	5697				
iv	Friday	5715				
i	Tuesday	5733				
v	Thursday	5751				
ii	Saturday	5769				
vi	Tuesday	5787				
iii	Thursday	5805				
vii	Saturday	5823				
	18					

The cols. start with the 4th month for the first three examples, and proceed by ending with the last three recorded eclipses in the 3rd month. See 1st col. Triple Eclipse Table. The month is the same for all the cols. across the table.

The numerals refer to the year of the Luni-Solar Cycle of the Antediluvians, which by being the motions of the moon, is best adapted for eclipse work. Thus, vi. in the top line means the 6th year of the cycle. On referring to this cycle it will be seen that the 1st day of the 4th month in the 6th year was Thursday, as stated in the adjoining column.

We get the day of the week when the eclipse occurred by this method. This is of service, because when an eclipse is brought down to our time by the Triple Eclipse Table, and we find that it occurs in the same period of the year, and on the same day of the week, we have a good proof that the line of years is correct from creation. For instance, the eclipse in 5859, A.M. was on Friday, the 1st day of the 4th month. This would be Friday, 11th of Jan. 1861. See the almanack for that year recording the eclipse.

It will be seen, however, that 5877 has not the same day of the week in our 1879; but it has when the Antediluvian Solar Cycle is corrected. The moon gets two days advance towards the end of the Solar Cycle. This is explained in "Important Additions," and the following paragraphs, but it is set right by the intercalary days.

The present cycle is given as far as it is going, and it is a splendid proof of the accuracy of the working of the table and the number of all past years. Of course the reader will understand that there can be no eclipse of the sun without the moon being new, and as she is new on or about the first day of every month on the Biblical, or Ancient Hebrew Solar Cycle, it is a manifest conclusion that the eclipse No. 1., Line I. comes down from Creation year in regular stages of 18 years,—which are one cycle (15) and 3 years—moving a month in 54 years, i. e. after three eclipses of 18 yrs. each.

As stated elsewhere in this book, no table of eclipses can be formed unless we start at the point of time given us in Genesis i., nor can the years of the world be tabulated without beginning at the same place. This explains why every seventh year of all the astronomical lines of time are also the Sabbatic years of Biblical history.

If our astronomy had not been below revelation, all this would have been known years ago. Revelation has not required to be raised up to science, but our science has had to be improved so as to be elevated to the standard of revelation.

The 18 at the foot of the adjoining col. is to show that there are 18 years more in the cycle than represented by the year 5823, which in fact is the beginning of the last 18.

IMPORTANT ADDITIONS.

The day of the week for an eclipse, No. 1, is right for all years of the Antediluvian Solar Cycle i. ii. and iii., but when the year is iv, one day more must be given; when v. one and a half; when vi. two days must be added, and when vii, three. In other words, v. when printed Sunday, becomes Tuesday; vi. when Friday, becomes Monday.

These irregularities are known to mathematical astronomers as periodical disturbances, called "the evection," "variation," and "annual equation," by which the velocity and longitude of the moon are affected. They have been a source of great trouble to all mathematical calculations, when extended over several centuries, but as their amount or value is known, allowance is made for them, but in bridging over difficulties of this kind, experience shows that it is best to use the Metonic Cycle, because by it we can bring any remote new moon, or eclipse, down to the same day of the week of our own times. Reference is made to this in another part of "All Past Time," and I wish it was better known to astronomers who seek accuracy.

The result of this is the eclipse of the third example, for 5877 our 1879, took place on Tuesday. The Metonic Table places it there and it is so recorded in all almanacks. The irregularity is really a confirmation of the Triple Table, but can form no part of it.

EXPLANATION OF THE TRIPLE ECLIPSE TABLE.

The Cycle Year is the year on the Antediluvian Luni-Solar Cycle of seven years, thus i. is the first year and v. is the fifth, and so on. It is necessary to use this cycle because it is purely a table of the motions of the moon for seven years not disturbed by intercalary days, and as such it is the best and most useful astronomical table in existence. It was made solar by the clever Antediluvian patriarchs at the end of seven years, but with such precision as not to disturb its form. It is also necessary to use it in order to work the Metonic Cycle and the Cycles of Eclipses, Transits, &c., which move on the basis of the line of seven days in Gen. i., producing time and planetary motion for ever.

The months in Section 1 are the same across the page. The 12 months are consecutively stated, and the day mentioned is always the first day of the month. These days have not the same dates on the Solar Cycles of the Ancient Hebrews or ours.

All the years stated are by the addition of 18—which is the precise period of the re-occurrence of the same eclipse with ancient Hebrew time—and therefore there are three times 18, or 54 years in every three examples. The reason of this is, there can be no eclipse unless the moon is new and thus the first day of every 18th year. Another reason is, on the Ancient Hebrew Solar Cycle an eclipse occurred thrice on one date, because it could not move into the middle of a lunar year. We have three eclipses in same month.

Left		Right
⊙ 595		⊙ 1262
595		1262
——		——
⊙1190		⊙ 2524
595		1262
——		——
⊙1785		⊙ 3786
*594		1262
——		——
⊙2379		⊙ 5048
595		1262
——		——
⊙2974		6310
595		——
——		⊙
⊙3569		
595		or
——		⊙ 1244
⊙4164		1262
595		1262
——		1262
⊙4759		——
595		⊙ 5030
——		1262
5354		——
595		⊙ 6292
		18
		⊙ 6310

There are 36 eclipses of No. 1 in each section, which at 18 years each, are 648 years, but when the 1st month is reached, another year has to be computed by the 18 becoming 19. It is marked thus —. The total number of each section is therefore 649. The consecutive order of these months and years shows that no year can be omitted. The ruling periods of the eclipse are 595 and 1262 years. For the first I am to some extent indebted to Sir George Airy, who, when he was the Astronomer Royal, called my attention to some features in a French work, "L'Art de Verifier les Dates par Eclipses." For the 1262 period I acknowledge the observations of Mr. Maunders, the first assistant at the Greenwich Observatory, with whom I met on three occasions at supper in the West of London. He referred to a German work "Kannon der Finsternissen," (Canon of the Eclipses) in which 1262 is the leading principle. The 18 years are formed of 223 lunations, known as the "Saros" amongst the Babylonians and Egyptians. But it will not work with years enacted by our Parliament for 1000 years without re-adjustment after that period. There is, however, no trouble with it in respect to natural or Biblical years. There are 70 Sarii in 1260 years, which is a prophetical period. The 2 additional years, making 1260 into 1262 are obtained by ennumeration, or twice using 19 years at the beginning of the 1st month. Otherwise it is 594 and 666, the latter being another period of Scripture. I have published another Eclipse Cycle—one of 651 years—but it is to work both the solar eclipses Nos. 1 and 2, in Creation year and has been misunderstood. It was produced to work our spurious and broken English years, by carrying new moons through the month. There does not seem to be any other way. Eclipses must go through our years so long as the year begins with January. When will men be wise?

* 1 year less because 2379 occurs before the new year.

DISTINCTION BETWEEN ECLIPSE PERIODS AND DATES.

No. 1. occurs 36 times in 648 years, to which 1 year is added for historical enumeration.
No. 1. occurs 34 times in 612 years, to which 1 year is added for   do.

Total 70 times   1260 solar years and 2 added. 70 eclipses tabulate 1262 years.

Explanation—When an eclipse has run through the year in periods of just 18 years of Biblical time (which is 18 years and 10 or 11 days of English time), its next occurrence is 19 years after its first appearance in the cycle. That is to say, the 10 to 11 days over the solar year, or month in the case of Biblical time, have accumulated into one year during 12 months. There are nearly two of these accumulation periods in 70 occurrences of the same eclipse, so that the general period is just 18 solar years—1260.

The true practical period is 360 days, called a "prophetic year." This will be further seen by the fact that this is the standard for measuring a circle, either in astronomy by dividing the heavens, or in navigation by dividing the surface of the globe. It is thus the period of the eclipses. See the table of the Eclipse Chronometer, based on 360, or the Triple Eclipse Table, based on 720, (twice 360) which produces all the table when the 1 year of progress is added.

The accuracy of the Triple Eclipse Table is seen by the fact that the length of the cycle, 649 years, produces any eclipse on the same line in the next cycle. The table, like those of the transits, is self-constructive, because transits also keep 7 days.

THE ORIGIN OF SCIENTIFIC TIME.

As a book of scientific precision, the Biblical standards of time are 7 days, 18, 70, 360, 1260 and 2520 years. These, with 354 days of the lunar year, are astronomical and geometrical; and the ancient solar cycle and the Metonic cycle, together with all planetary motion show that they were in the Bible before they were known by mankind. The 360 years are a "time," and "time (1), times (2), and half a time" are 1260, the period during which the four universal empires of Babylonia, Medo-Persia, Greece. and Rome continued. The "seven times" mentioned in Leviticus xxvi. 24 and 28. are therefore 2520, (twice 1260, or seven times 360. What could Euclid, the father of mathematics, who was not born till three centuries before Christ, have done without this Biblical standard of 360 which begins in the first chapter of Genesis? How is it that the Metonic cycle, discovered in the 4th century before Christ and cut in letters of solid gold by the ancient Grecians, starts with the "first day" in Genesis, bringing the new moons at the beginning of the months of the first seven years down to the same days of the week in our own times? We can do any thing of an astronomical or scientific character with Biblical periods. It was within the covers of the Bible that I found all the eclipses and transits and their cycles, but they have not been produced to this day by any other means, and cannot be formed by any one of the dozen pagan forms of years which have darkened the minds of men.

The Eclipse Cycles start afresh after seven cycles because the seven days are completed. Daniel's 70 weeks and his 1260 years are eclipse periods.

HOW TO GET RID OF DARKNESS AND ERROR.

The following will show the progress of No. 1 eclipse, Line i. from the epoch of Creation through all past years to its appearance before our own eyes. It will also illustrate the working of the Triple Eclipse Table and Team of 70 in Lines.

lli lli lli lli lli lli   lli lli lli lli lli lli...lli ili lli lli lli lli   lli lli lli lli lli l   70 eclipses.
      18   18   18   16

36 teams, 18 years each, 648 years	34 teams of 18 years are 612 years.
Progression through year 1	Progression through year 1
649	613
	Brought forward 649
	1262

There are 18 years in each l or i, which represent a team having 70 eclipses. The 36 teams are two series of 18-year teams. These 36 form the cycle of 649 years. The i represents the end of 3 teams, 54 years, when the extra 30 days are picked up which moves the solar eclipse to the 1st day of the next month. The motion is simple like a clock and has this advantage—the position of the eclipse in the year gives the number of years from the epoch of Creation. Away goes the darkness of men's minds!

THE NUMBER OF DAYS IN THE ECLIPSE PERIOD.

As stated in all books of astronomy, the period between an eclipse and its re-occurrence is 6585 days and 8 hours (one-third), which works as 18 solar years and 10 to 11 days. The period manipulates with different years as follows :

English Time.	Days.	Lunar Time.	Days.
18 solar years 365¼ days	6575	18 lunar years of 354 days	6372
10 days and one-third progression		7 months of 30 or 29 days	207
through the month and year...	10⅓	6 days and one-third, or a week ...	6⅓
	6585⅓		6585⅓

By the Ancient HEBREW Solar Cycle, or Biblical Time :

18 lunar years of 354 days, (without the intercalary periods) ...	6372	days.
6 Intercalary periods of 6 lunar months	177	do.
6 days extra in the Intercalary period, each having 34 days ...	6	do.
30 days, or one month of progression through the year	29½	do.
⅓ or practically one-third of a day once in 15 years by giving 30 instead of the usual 29 days to the 12th month of the 9th year of the Cycle	⅓	do.

Producing the same total 6585⅓

In reference to the Ancient Hebrew Solar Cycle, I have previously explained that all solar cycles must form in seven years, i.e. 7, 14, 21, or 28, and for some time I was troubled to find that all the dates and periods of Scripture worked on one of 15. I then saw that I had accidentally made an error at the bottom of the 9th year, which does not continue to the 10th year. But by working it out, I found that the Cycle was one of 21 years (3 times 7) and that 6 years had been amputated between the 9th and the 16th. The error, though accidental, was very fortunate. Had I not made it, I could not have gone on. The amputation cleverly secures some important astronomical advantages.

A MARVELLOUS AND BRILLIANT RESULT.
ANOTHER GREAT PROOF OF THE DATE OF CREATION.

By the use of the Metonic Cycle of 19 years, and the Antediluvian Solar Cycle of 7, the two meet after 133 years and produce Creation year beginning with Sunday. We can thereby bring the form of Creation year and the days of the week when the moon was new throughout seven years, down to our own times. The point of creation was Sunday, 20th Sept. and the sun was on the equinoctial colure on the "fourth day." We had both these facts in Sept. 1846, which was the first day of 5845, A.M. as worked down in periods of 133 years. We thus find that the first seven Antediluvian lunar years synchronize with our time from Sunday, Sept., 20th 1846, to Saturday, July 17th, 1852, both days inclusive, and the moon, we find by our almanacks, was new on the same days of the week. The method of proving all this is as follows. Write on paper each month of the seven Antediluvian years from the Solar Cycle, day and date, and also the day and date from our Almanacks, which must be placed opposite. Thus—

●	S 1 ...	Sept. 20	The Antediluvian months have alternately 30 and 29 days, and
	M 2 ...	21	in our leap years, 1848 and 1852 give 29 days in February. The
	Tu 3 ...	22	table will prove each month by noticing the day of the week with
	W 4 ...	23	the date in the almanack corresponding with that of the Antedi-
	Th 5 ...	24	luvian Cycle. At the beginning of each Antediluvian year add
	F 6 ...	25	from the Almanack the new moon, on the first day also, although
	S 7 ...	26	not in its place then, or as a luminary.

The result is as follows :—

Year	Solar.	A.M.		New Moon.	A.D.	
1 also	5846 or	5845...1st of 1st month	●	Sunday, 20th Sept.,	1846	
2 „	5847 ...	5846...1st of 1st month	●	Thursday, 9th Sept.,	1847	
3 „	5848 ...	5847...1st of 1st month	●	Monday, 28th Aug.,	1848	
4 „	5849 ...	5848...2nd of 1st month	●	Saturday, 18th Aug.,	1849	
5 „	5850 ...	5849...2nd of 1st month	●	Wednesday. 7th Aug.,	1850	☉ Eclipse
6 „	5851 ...	5850...3rd of 1st month	●	Monday, 28th July,	1851	☉ Eclipse
7 „	5852 ...	5851...4th of 1st month	●	Saturday, 17th July.	1852	

Using 1 day extra in the intercalary month (34) twice in 6 years, the Ancient Hebrew Solar Cycle kept the moon at the beginning of all the months. In the last year the moon was new early in the morning. The above is the illustration of the acceleration of the moon's motion referred to respecting the Triple Eclipse Table, but arising partly from the secular diminution of the eccentricity of the earth's orbit. We see how the lunar year was floated on to keep up with the moon. The above proves all past years, and the date of Creation, with which the Metonic Cycle, and indeed all cycles, begin.

I

SUMMARY AND PROOFS OF ACCURACY.

It will be seen that there are nine sections in the Triple Eclipse Table. There are 36 eclipse periods of 18 years in each section, which with 1 year for progress of the eclipse through the year, make a total for the section or cycle of 649 years.

The last eclipse in the table is 5823, so that when its period of 18 years are fulfilled, the year 5841 is reached, which is the length of the whole table—9 times 649 are 5841.
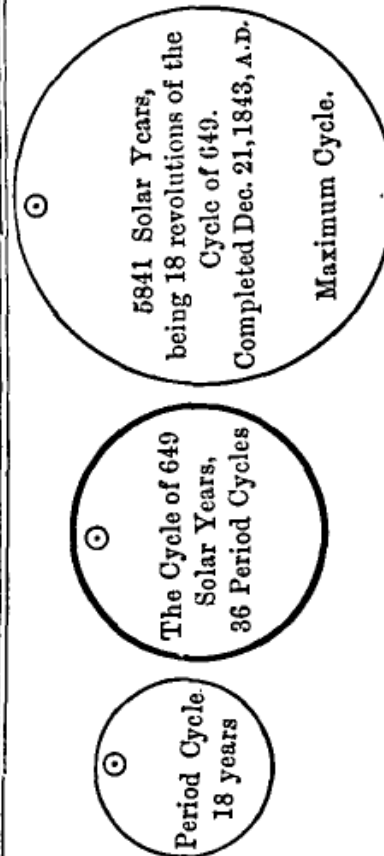
Now 5841 divided by 18 goes 324 times and 9 over. This is a grand proof, because the length of each half section (shown in the subjoined table) is 324½ years. Thus 18 times 6 months are 9 years, which are produced by the month of progression in Ancient Hebrew time, or the 10 days of English time. 36 times 10 days are 360, in either case.

The subjoined table is a proof of the working of the dates according to our English time. The years and months would be the same if the table was constructed for Ancient Hebrew time, but the day would always be 1st of the month. It will be seen that there would be 9 tables similar to this given, and that each would contain 649 years, and begin with the 1st day of the 4th month, which all investigation shows was the date of the first eclipse, year 0, on Friday. The 2 eclipses had 3 months each end of the year.

As all correct tables form themselves, it will be seen that the subjoined is but simple addition by continually adding 18 years and 10 days, and also that the second column is obtained by adding, in every case, 324½ years to the date of each eclipse in the first col. It is thus time carried on by eclipses totalled in two ways. Again, the total of the periods in the centre is also that of all the nine tables. 5841 years.

⊙0	4	1	and 324 6 is	324	10	1		ECLIPSE CHRONOMETER.
18	0	10		18	0	10		
18	4	11	and 324 6 is	342	10	11		
18	0	10		18	0	10		
36	4	21	and 324 6 is	360	10	21		
18	0	10		18	0	10		
54	5	1	and 324 6 is	378	11	1		
18	0	10		18	0	10		
72	5	11	and 324 6 is	396	11	11		
18	0	10		18	0	10		
90	5	21	and 324 6 is	414	11	21		
18	0	10		18	0	10		
108	6	1	and 324 6 is	432	12	1		
18	0	10		18	0	10		
126	6	11	and 324 6 is	450	12	11		
18	0	10		18	0	10		
144	6	21	and 324 6 is	468	12	21		
18	0	10		18	0	10		
162	7	1	and 324 6 is	487	1	1		
18	0	10		18	0	10		
180	7	11	and 324 6 is	505	1	11		
18	0	10		18	0	10		
198	7	21	and 324 6 is	523	1	21		
18	0	10		18	0	10		
216	8	1	and 324 6 is	541	2	1		
18	0	10		18	0	10		
234	8	11	and 324 6 is	559	2	11		
18	0	10		18	0	10		
252	8	21	and 324 6 is	577	2	21		
18	0	10		18	0	10		
270	9	1	and 324 6 is	595	3	1		
18	0	10		18	0	10		
288	9	11	and 324 6 is	613	3	11		
18	0	10		18	0	10		
306	9	21	and 324 6 is	631	3	21		
18	0	10	5841 total	18	0	10		
Forwd.			Proof.	Cycle 649	4	1		

5841 Solar Years, being 18 revolutions of the Cycle of 649. Completed Dec. 21, 1843, A.D. Maximum Cycle.

The Cycle of 649 Solar Years, 36 Period Cycles

Period Cycle. 18 years

Astronomical and geometrical positions of the two eclipses in the centre of the first year.

The smallest circle represents the Period Cycle of 18 years and 10 days, when any eclipse, say No. 1, again occurs. The middle circle is the Section or Cycle of 649 years, when the eclipse repeats its date. Its revolution is 36 times the small circle, or twice 18 as in the annexed table. The largest circle represents the Maximum Cycle. Its revolution is the 9 Sections or Cycles of 649 years—5841, A.M., or Dec. 21, 1843, A.D.

The above years are the same as in the Triple Eclipse Table, and the next section will begin 649 4 1. ⊙ is the solar eclipse starting the cycles.

It will be seen by these pages how the first eclipse, No. 1, Line i., can be traced from creation year to the present period in cycles of 649 years, and that its date on Friday, the 1st day of the 4th month, shows that the year was one when the solar and lunar years began together, as history states. Nothing, indeed is capable of greater proof because we have other evidences of indisputable character, such as the natural succession of the solar cycles, the Metonic cycle, the life-history of eclipses and two transit tables. It is also clear that we can identify each eclipse cycle by its day of the week, whilst we must all admit that the date or monthly position of an eclipse indicates the year of the cycle when it occurs. We can now proceed,

HOW TO FIND ANCIENT ECLIPSES BY THE CYCLES.

History states that the troops of Alexander the Great were alarmed by a total eclipse of the moon ● the night before the final battle when he defeated Darius Condimanus, the last of the Persian monarchs, in 332, B.C. which deducted from 4004 is 3672.

> 3659 is the nearest preceding year in the Triple Eclipse Cycle.
> 13 as the remainder, is Line xiii.
> ———
> 3672 See Line xiii. on the Ancient Hebrew Bird's Eye View of Eclipses, where we have a total lunar eclipse ● in the middle of the 8th month, our May. See also English years Bird's Eye View, Line xiii. May.

By history we learn that Shalmanezer II., (whose deeds recorded on a black obelisk in the British Museum state that Jehu, king of Israel, paid him tribute) came to the throne owing to a total eclipse of the sun ☉ in 3144, which was 860 B.C.

> 3137 is the nearest preceding year in the Triple Eclipse Cycle.
> 7 is the remainder will be Line vii.
> ———
> 3144 See Line vii ☉ on the Bird's Eye Views, the date would be Sunday, March 16. our English time. The eclipse again occurred in 1884, A.D. so called.

By Roman history we learn that Augustus, the first emperor of Rome, died on the 16th or 19th of August, 4010, which would then be 12 A.D., and that there was a total eclipse of the sun ☉ a few days afterwards. We prove the date unquestionably .—

> 4002 is the nearest preceding year on the Triple Eclipse Cycle.
> 8 the ramainder will be Line viii.
> ———
> 4010 See Bird's Eye View of a team of eclipses English years, ☉ end of August. On the Ancient Hebrew Bird's Eye Team the eclipse is the 1st of the 12th month, which would be the same, inasmuch as 4002 is the first of its class.

Ptolemy, the astronomer who lived in Alexandria about 130, A.D., says that three total eclipses of the moon, ● ● ● which he witnessed there were the same which were seen in Babylon 720 and 721 B.C. which would be 3282-3 from creation.

> 3281 is the nearest preceding year on the Triple Eclipse Table.
> 2 the remainder will be Line ii.
> ———
> 3283 See Lines ii. and iii. ● ● ● both teams Ancient Hebrew and English. The period was whilst Shalmanezer iv. and Saragon were besieging Samaria. In 2 Kings xviii. 10. we read "at the end of three years they took it." (the city). A reference to the Ancient Hebrew solar cycle will show that 3284 was the 3rd year of the cycle, and this is the meaning of the verse.

I have a score or more of ancient eclipse records, but there is no trouble with any of them, and I trust the reader will see that this system of dealing with eclipses is the best. It is simplest and has the useful advantage of preserving the identity of all the eclipses. Mathematical calculations are admirable for continued uniform motion, but the movements of the moon are subject to increased velocities and disturbances, too technical to be explained here, so that when we cannot work with a motion "straight off the reel," but are hampered with what are known as "the eyection," "variation," and the "annual equation," outside computations have to be adopted to rectify the longitude of the moon, and numerous minor inequalities allowed for, all of which tend to make mathematical calculations unreliable. Of course we are in all such cases dependent upon the position of the line of apsides, the action of the tangential force, and eccentricity of the orbit of the earth. But the Biblical form of the solar year majestically carries us over all these complications and brings eclipses more as events of known conclusion and observation rather than of abstruse algebraic determinations in the hands of a few. I might also add that the system here given can supply not only the date of the month but also the day of the week for all eclipses past or to come.

The Ancient Hebrew and Chaldean Solar Cycle of 15 years—evidently amputated from 21 for astronomical purposes—is annexed. It shows how the eclipses could occur on the 1st day of every 18th year. The years are lunar (354 days) but made solar by extra 34 days at the end of the 3rd year, of which there are 6 in 18 years.

TRACKING AFTER THE FIRST ECLIPSE.

THUS FAR AND NO FARTHER.

The Date of Creation proved by the first Solar Eclipse, on Friday, the 1st day
of the 4th month, year 0 A.M.
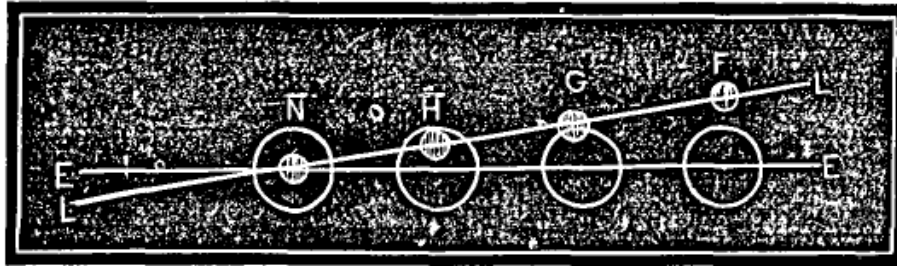
In the latter part of 1883, A.D., two gentlemen, residing far from each other, wrote asking for the precise date of the first solar eclipse. The question was regarded as a difficult one, though it was not considered as one which could never be answered. Accordingly after the subject had been entertained for about two months by occasional investigation, it fell to my lot to find out how the work was to be done. I felt sure that the precise date could be obtained if we could find out how to do it. Ultimately, after looking at the subject, and trying over several methods, a way was discovered for solving the question. But much figuring was required to work out the details on the basis of four methods, one of which was bound to be correct. The requisite calculations for determing this point, and thereby fixing the actual day of the week and date of the month when the first solar eclipse occurred, were undertaken by four gentlemen connected with the Chronological and Astronomical Association. The year had already been determined and published in All Past Time. It was known that it was one of the three solar eclipses of Line I. of the diagram of eclipses given as those of the Christian era, and occurring in the year 1861, A.D., that year being the commencement of a series of 651 years, when by the natural working of the cycle of the eclipses for 18 years and 11 days, they all begin again by repeating their dates. If the reader looks at the diagram of eclipses in the Christian era, he will see Line I. as follows :

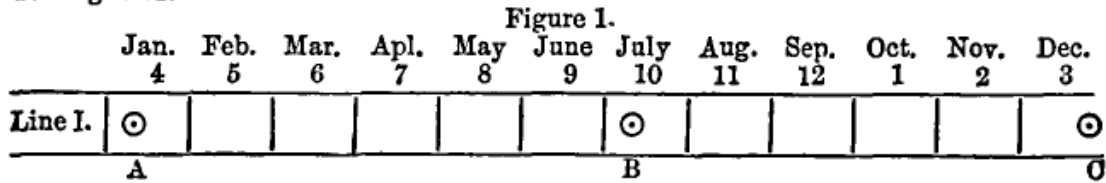|	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Line I.	☉						☉					● ☉

The dates of the eclipses in this Line I. taken from the almanacks of 1861, are, ☉ Total eclipse of the sun, January 11th—12th: ☉ July 8th, and ☉ Dec. 31st. The partial lunar eclipse ● is Dec. 17th, but it forms no part of the present enquiry.

The result of all the calculations made by these four gentlemen was that the first solar eclipse occurred on Friday, the 1st day of the 4th month. The successful calculator was Mr. Henry Sweeney, who worked out the figures according to the instructions he received. When he handed these calculations to me I was really overjoyed with the result, because they not only proved the date, and day of the week, as I expected, but also provided a most important and arbitrary factor for determining several interesting things, viz :

1. It shows that the first year began with Sunday.
2. It proves that the first Sabbath was the 7th of the month, Saturday.
3. As the eclipse always occurred on Friday, as the ancients tell us, it shows the week has never been broken, because it takes place now on Friday.
4. It supplies the number of Sabbaths since Creation to the present time.
5. It determines the number of all past years and the day of the week when each began.

DATE OF CREATION PROVED BY THE FIRST ECLIPSE.

The following is the manner in which the date of the first solar eclipse is determined to have been on Friday the 1st day of the 4th month, in year 0, which was astronomical year 1, because it is not past time, but present motion, which forms time, that we are dealing with.

Figure 1.

	Jan. 4	Feb. 5	Mar. 6	Apl. 7	May 8	June 9	July 10	Aug. 11	Sep. 12	Oct. 1	Nov. 2	Dec. 3
Line I.	⊙						⊙					⊙
	A						B					C

Here we have three total eclipses of the sun, on January 11th, July 8th, and Dec. 31st. There can be no solar eclipse unless the moon is new. Hence the almanacks for 1861, A.D., from which this example is given state that the moon was new on three dates of the above eclipses.

As the lunar year begins with a new moon as shown in another part of this book, a new moon must begin each lunar month, or the day before when the month is but 29 days, so that there are 12 new moons in the course of a lunar year, viz. on or just before the 1st day of each lunar month.

This is shown also by the dates of the above eclipse. For instance Figure 1. is a solar year of 365 days, and as eclipse C occurred on the last day of 1861, A.D., (31st Dec.) the eclipse A could only take place on the 11th January, because when 11 days are deducted from 365 of the solar year, there are 354 left, which is the length of the lunar year.

Therefore the eclipses A and C are the beginning and ending of a lunar or Biblical year, and prove the length of it. It is a valuable astronomical measurement, because no man can alter it, and when used is applicable for many purposes. Our solar year of 365¼ days is a correct period, but it is of no practical value, because, unlike the lunar year, it has nothing to mark its beginning or end, and can therefore be started on any day of the 365. We have begun it on three different dates, and for a long time we began the solar year on March 21st.

Hence as the eclipses A and C are astronomical indications of the beginning and end of the lunar year, it is not possible for men to alter the time when the lunar year begins, nor lengthen or shorten it. The moon is 29½ days going round the earth. The ancients therefore constructed the length of the twelve months of the lunar year (which was the only year they divided into months and dates) by giving them alternately 30 and 29 days. They borrowed the half day from every other 2nd month. Thus the twelve months systematically and astronomically contained the following days:

30, 29, 30, 29, 30, 29, 30, 29, 30, 29, 30, 29.—Total 354.

The ancients never thought of altering the length of a lunar year. They could not do so, any more than we can alter the length of an hour. So that when we also find how to determine the number of years between the eclipses, we can prove all past time.

The eclipse B is in the middle of the lunar year. Thus in Figure 1. A to B is 177 days, or from B to C is 177 days. Twice 177 are 354. Thus 30, 29, 30, 29, 30, 29.— Total 177. We therefore see that eclipse B is between 29th of 6th month and 1st of 7th month of the lunar year. They divide the lunar year, like a two-foot rule, as follows:

Figure 2.

A ⊙————————————————177 days.
B ⊙————————————————177 days.
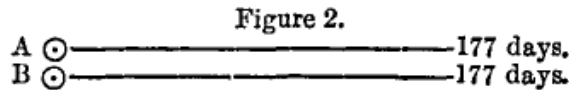
The lunar year of 354 days.

In point of fact although the two lines form the lunar year, one of them is the measure with which we have to deal, because it is the period which exists between two eclipses. The line A cannot be shortened without B commencing earlier, which it cannot do.

Now the question arises, as we see that there are 177 days between these two eclipses, and 354 inclusive in three eclipses, or the lunar year, have there always been 354 days in the lunar year? In other words has the moon always had the same orbit? This had been doubted by some astronomers, because by their system of measurement the eclipses were thought to be earlier than in ancient times. This doubt has however been abandoned. Indeed it must, because it is evident by the ten dates of the flood given us by Noah for the year 1656, A.M., that there were 354 days in the lunar year when he lived. See the Flood year 1656 which makes his dates fall on seventh days

CONFIGURATIONS OF FOUR OF JUPITER'S SATELLITES

Seen by an Inverting Telescope, at 23h.—June, 1887 (5885, A.M.).

The figures in this diagram represent the four satellites seen. That nearest Jupiter is so small that it is only visible by the best three large telescopes. 1. is the first we see nearest to Jupiter, and 4. is that which is most distant from him. Where the black disc ● occurs, it shows that the satellite whose numeral is next to Jupiter is eclipsed by his extended shadow, or is occulted by being behind him. The sign ⊙ represents that the satellite is in transit, or crossing the disc of the planet, and re-appears at that side where its figure is placed. A dot. indicates the place of a satellite and the figure the direction of the motion. How interesting to nightly watch these changes.

Day.	West.		East.
1	4· 33.·	o .1	
2	·4 3. .·21	o	
3	·4 .3	o 1. 2,	
4	·4 .1 .o32.		
5	·2.4	o1. .3	
6	●21.4 3.		
7	1·	o 32.· .4	
8	32.·	o .1	.4
9	3. .2·1	o	,4
10	.3	o .1 .2	4.
11	.1.3	o 2.	4.
12	2.	o 1. .3 4.	
13	●21 4. 3.		
14	1. o4. 31·.		
15	4· 32·. o .1		
16	4· 3· .2 1. o		
17	4· ·3	o 2.1.	
18	·4 .·31	o 2.	
19	·4 2.	o 1. .3	
20	·4 .·21	o	3.
21	.4 1⊙	2. 3.	
22	.4 2 3⊙ .1		
23	3· 2· 1.	o .4	
24	·3	o ·.21 .4	
25	·.31	o 2.	.4
26	2.	o 1..3	.4
27	.·21	o .3 4.	
28	1o 2. 3. 4.		
29	.2⊙13. .4		
30	3.·2 .1 o 4.		

This diagram of four of the five satellites of Jupiter is printed to show the spiral motion of the moon round the earth. For example, when we look at Jupiter through a telescope we see four of his satellites day after day in positions as printed. They are always in about the same straight line upon which they seem to move to and fro: but this is because we see their orbits edge way on, as they are all nearly on the same level. If we hold up a saucer nearly level with our eyes, having a fly walking on the edge of it, the fly would seem to walk backwards and forwards on a straight line. Now by observing the distance of—say No. 4 satellite—from Jupiter in the centre of each line, and following its position through all the month, we trace its spiral motion. This is because the satellite, whilst revolving round Jupiter is drawn after him as he moves in his own orbit. It is the same with the moon, which is the satellite of the earth. A Lunar Cycle must therefore be a record of this motion.

The object glass of a telescope clearly revealing the satellites of Jupiter, should not be less in size than a penny. The larger the better. Such telescopes can be bought second-hand for 7s, in London. Any person may thus nightly witness the sublime phenomena of these motions, watching them for seven days, as something akin to the power manifested during the seven days of creation. Jupiter is almost 1400 times larger than the earth, and thunders along in his journey round the sun at the rate of 28,000 miles an hour, carrying with him a family of satellites, one of which is about the size of the earth. Large as is Jupiter, the giant-planet, his nearest moon sweeps round him in 11 hours presenting all its phases.

TRANSITS.

FOURTH AND FIFTH LINES OF TIME.

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8 Transits of Venus in 486 years.

15 Transits of Mercury in 92 years.

Unlike Eclipses, Transits are immovable phenomena, always occurring at the same period of the year. They thus in a simple but powerful way control all past time.

Owing to the regularity of the changing nodes of the planets, Venus and Mercury, when in transit, neither of the lines of time which they produce can be disturbed. They therefore show what amount of time is possible for the events of history and what is impossible when more years are assigned to history than these lines will allow. In a word, transits are the pillars of scientific time.

EXPLANATION OF TRANSITS.

A transit means a planet moving across the face of the sun, as shown by two examples in figure 1., and as our earth is the third planet from the sun, round which all planets move in circles, called their orbits, transits can only occur by Mercury and Venus, the first and second planets, when they come in a line with us, that is between the earth and the sun. On such occasions, if they were near enough to us, or were as large as the sun, they would totally eclipse that great luminary, instead of appearing like small black balls on the sun's face or disk. The earth moves in nearly a circle having the sun about 93,000,000 of miles from it in the centre. Venus, which is nearly as large as the earth, revolves in a smaller circle, about 68,000,000 of miles from the sun, and Mercury which is not half the size of our globe, moves round the great central luminary at a distance from him of about 33,000,000 miles.

The stars, which are distant suns, and like him, shining by their own light, cannot make transits. Their distance is so great that they appear to us about the size of planets, but they twinkle, whilst the planets shine with a steady light, because it is reflected and derived from the sun. Planets, also, when seen through a telescope, are round like the moon, but stars have the same appearance when seen by the best glasses. Hence, in respect to planets, when they are seen sailing across the face of the sun, they are black, because their dark, or night side is towards the earth. Transits will last six hours. When in the descending node, the direction of the dotted path-line, Fig. 1., is downwards from left to right.

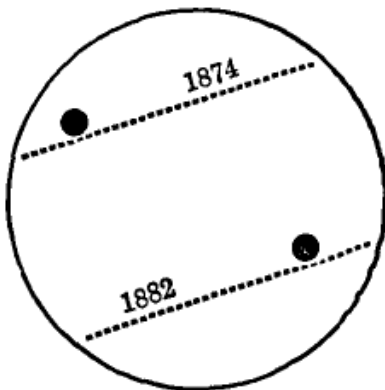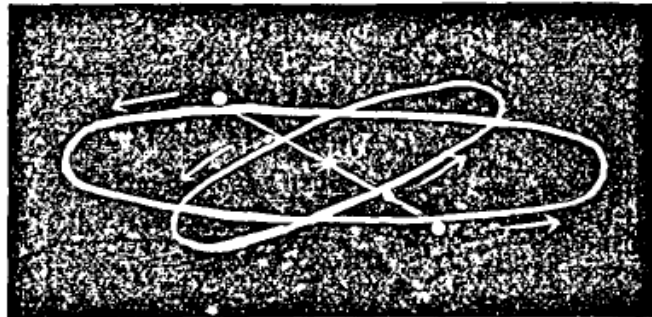Figure 1.
Two Transits of Venus,
in ascending nodes.

Figure 2.
Showing the Earth opposite the ascending node
of Venus in Transit.

The two points of the orbit of Venus, when she is opposite the earth, are called her nodes, in one of which she must be in order to be seen in transit. Figure 2 represents the orbits of the Earth and Venus seen side way on. ✳ is the Sun, o is Venus in her orbit (the small circle), and ◯ is the Earth in her orbit (the larger circle). The orbit of Venus does not cross or extend beyond that of the Earth, but is necessarily drawn so to show that it it is not on the same level as that of the Earth. The upper end of the orbit of Venus is higher, and the bottom end lower than the ecliptic, or level of the earth. Hence Venus can only be seen to make a transit when the Earth is opposite to her nodes where she rises to the level of the earth where she is placed in the figure, or descends below it. marked thus *'.* The former is called her ascending, and the latter her descending node. The Earth is opposite the ascending node about the 6th of Dec., and opposite the descending node · about the 6th of June every year. But as Venus goes round the sun 13 times to the Earth 8, she cannot always be in one of her nodes when the earth passes them. This is the case once after the eight years, but the variation is sufficient to place the two planets out of a direct line in the 16th year, and thus we have to wait 122 years to witness the third transit of a team, which we catch at the descending node. Having reached that position, the general regularity of the 13 revolutions of Venus to eight of the Earth, gives us the opportunity of seeing another after eight years in the same node, the fourth transit of the team. After this the same slight irregularity requires us to wait 105 years, when we catch the fifth transit of the team, and are back again opposite the ascending node. Thus the transits go on until the team of eight transits is completed in 486 years, there being also always 486 years between one transit and another of the same class.

Such is the beautiful science of Chronology, which is astronomy practically applied in the accurate determination of all past time.

ALL THE TRANSITS OF VENUS.

THE FOURTH LINE OF TIME.

There are eight Transits of Venus in a Team. They occur in a period of 486 years. Hence it follows that there are 486 years between a transit of the same character and number in each team produced by the following intervals namely:

In Astronomical Years : 8, 121, 8, 106, 8, 121, 8, 106—486.
In Anno Domini Years : 8, 122, 8, 105, 8, 122, 8, 105—486.

Transits work on the same principle as eclipses. There are 18 years during which a team of eclipses occur, and therefore there are 18 years between an eclipse of the same character and number.

To reverse transits to the first after the Mosaic Creation, it is necessary to do so upon astronomical years, first because there were no A.D. years before 4,000, and secondly owing to the erroneous computation of the A.D. year which is one year and nine months in advance of the A.M. or historical year, and nine months in advance of the astronomical year.

The last three months of our year are the first three of the astronomical, because the Christian year begins with January instead of in Sept., and this makes the Transits of the ascending node of Venus to occur in the same astronomical year. The first astronomical year, since time was instituted, was 0, A.M., because the latter is reckoned as time past. The A.M. year of a transit is therefore always one year less than the astronomical. Without this arrangement transits could not be correctly tabulated, because our Christian year is one year and nine months in advance of true time, or A.M. year. Astronomical phenomena are present occurrences of motion, but the age of the world and a man's history, or past time. The Biblical year, which is the A.M. year, and the astronomical, or scientific year, both commence in September and on the same day. This is an important explanation, the failure to comprehend which was the means of the edition of "All Past Time for 1880" being unfavourably reviewed by a publication of some astronomical character, but the title of which it would now be cruel to mention.

This transit line of astronomical time is the same as that obtained from the eclipses, the periodical difference of "one year after," or "one year before," is owing to lunar years and the central solar eclipse No. 2. taking the place of No. 1., as soon as it reaches January, through the operation of the 10 or 11 days beyond 18 years. Or it may be explained by stating that eclipses are lunar years and transits essentially solar years. This will be seen by noticing in the "Bird's Eye View of the Eclipses in the Christian Era," that the first eclipse, in 1861, was No. 1. and occurred on the 11th of January, and the last one, No. 4, took place on the 31st of Dec., embracing a period of 354 days, or lunar year. In the next place it will be evident to the reader that in respect to transits, we cannot see them unless the earth is in that particular part of her orbit opposite to the node of a planet in transit, and that this part of the earth's orbit can only be reached in a solar year, which means a complete revolution of the earth in its orbit round the sun.

The practical value of the list of transit years is immense in proving the veracity of historical statements. Observe: the transit of Venus on Dec. 6th, 1882, A.D., or 5882 astronomical year, requires that one should have occurred 5840 years previously, to which if we add the 42 years, we have a year beginning with Sunday, the first day of the week and the first year of the solar cycle of seven years. Six times seven are 42. Here, then we have scientific evidence of the date of the Mosaic Creation, and the first seventh day at the end of that week, written on the face of the sun. If this were not so, the transit of 1882 is not a fact, but an optical delusion, and all our astronomical data speculations of the mind.

The transit of Venus in the astronomical year 42 must have occurred, otherwise those seen during the last 300 years could not have taken place when they did. It absolutely proves the date of the Mosaic Creation in the following way · When we look at the Antediluvian Solar Cycle of seven years, we see that the astronomical year 42 was the 7th or last year of the cycle—six times seven are 42—therefore the first year began with Sunday, the 1st day of the week, and had Saturday on the 7th day of the first month, as the Biblical history informs us. There are no means of resisting this conclusion because we cannot alter the natural succession of seventh days without which a solar cycle does not exist.

To this 41st year add 64, that is 8 times 8, because Venus accomplishes 13 revolutions to our 8. We then have "105," to which the first transit belongs.

The transit on Dec. 5th, 1639. was the first one seen of Venus and was witnessed by a young clergyman named Horrocks.

ALL THE TRANSITS OF VENUS.

Classified and arranged in their Teams from the beginning of Time, Year 0, A.M.

No.	1st Team Astr.	*	2nd Team Astr.	*	3rd Team Astr.	*	4th Team Astr.	*	5th Team Astr.	*
I	42	Dec. 42	528	Dec. 528	1014	Dec. 1014	1500	Dec. 1500	1986	Dec. 1986
	8	8	8	8	8	8	8	8	8	8
II	50	Dec. 50	536	Dec. 536	1022	Dec. 1022	1508	Dec. 1508	1994	Dec. 1994
	121	122	121	122	121	122	121	122	121	122
III	171	Jun. 172	657	Jun. 658	1143	Jun. 1144	1629	Jun. 1630	2115	Jun. 2116
	8	8	8	8	8	8	8	8	8	8
IV	179	Jun. 180	665	Jun. 666	1151	Jun. 1152	1637	Jun. 1638	2123	Jun. 2124
	106	105	106	105	106	105	106	105	106	105
V	285	Dec. 285	771	Dec. 771	1257	Dec. 1257	1743	Dec. 1743	2229	Dec. 2229
	8	8	8	8	8	8	8	8	8	8
VI	293	Dec 293	779	Dec. 779	1265	Dec. 1265	1751	Dec. 1751	2237	Dec. 2237
	121	122	121	122	121	122	121	122	121	122
VII	414	Jun. 415	900	Jun. 901	1386	Jun. 1387	1872	Jun. 1873	2358	Jun. 2359
	8	8	8	8	8	8	8	8	8	8
VIII	422	Jun. 423	908	Jun. 909	1394	Jun. 1395	1880	Jun. 1881	2366	Jun. 2367
	106	105	106	105	106	105	106	105	106	105

No.	6th Team		7th Team		8th Team		9th Team		10th Team	
I	2472	Dec. 2472	2958	Dec. 2958	3444	Dec. 3444	3930	Dec. 3930	4416	Dec. 416
	8	8	8	8	8	8	8	8	8	8
II	2480	Dec. 2480	2966	Dec. 2966	3452	Dec. 3452	3938	Dec. 3938	4424	Dec. 424
	121	122	121	122	121	122	121	122	121	122
III	2601	Jun. 2602	3087	Jun. 3088	3573	Jun. 3574	4059	A.D.,Jun. 60	4545	Jun. 546
	8	8	8	8	8	8	8	8	8	8
IV	2609	Jun. 2610	3095	Jun. 3096	3581	Jun. 3582	4067	Jun. 68	4553	Jun. 554
	106	105	106	105	106	105	106	105	106	105
V	2715	Dec. 2715	3201	Dec. 3201	3687	Dec. 3687	4173	Dec. 173	4659	Dec. 659
	8	8	8	8	8	8	8	8	8	8
VI	2723	Dec. 2723	3209	Dec. 3209	3695	Dec. 3695	4181	Dec. 181	4667	Dec. 667
	121	122	121	122	121	122	121	122	121	122
VII	2844	Jun. 2845	3330	Jun. 3331	3816	Jun. 3817	4302	Jun. 303	4788	Jun. 789
	8	8	8	8	8	8	8	8	8	8
VIII	2852	Jun. 2853	3338	Jun. 3339	3824	Jun. 3825	4310	Jun. 311	4796	Jun. 797
	106	105	106	105	106	105	106	105	106	105

No.	11th Team		12th Team		13th Team	
I	4902	Dec. 902	5388	Dec. 1388	5874	Dec.8,1874
	8	8	8	8	8	8
II	4910	Dec. 910	5396	Dec. 1396	5882	Dec.6,1882
	121	122	121	122	121	122
III	5031	Jun. 1032	5517	Jun. 1518	6003	Jun.7,2004
	8	8	8	8	8	8
IV	5039	Jun. 1040	5525	Jun. 1526	6011	Jun.5,2012
	106	105	106	105	106	105
V	5145	Dec. 1145	5631	Dec.7,1631	6117	Dec. 2117
	8	8	8	8	8	8
VI	5153	Dec. 1153	5639	Dec.5 1639	6125	Dec. 2125
	121	122	121	122	121	122
VII	5274	Jun. 1275	5760	Jun.5,1761	6246	Jun. 2247
	8	8	8	8	8	8
VIII	5282	Jun. 1283	5768	Jun.3,1769	6254	Jun. 2255
	106	105	106	105	106	105

The nodes of the eight transits forming a team occur in alternate pairs. Nos. I, II, and V, VI are in the ascending node; taking place in Dec., and III, IV, and VII, VIII in the descending node, occurring in June.

The transits occur regularly in the following

Astronomical Years:
8, 121, 8, 106, 8, 121, 8, 106 - 486.

Anno Domini Years;
8, 122, 8, 105, 8, 122, 8, 105—486.

There are always 486 years, the length of a team, between any transit and another. Beautiful motion ! A splendid line for the measurment of years.

Astr. represents the Astronomical Year, and * the Anno Domini Year. The latter must be understood as reversed from 4000, and the former starts year 0 as 1.

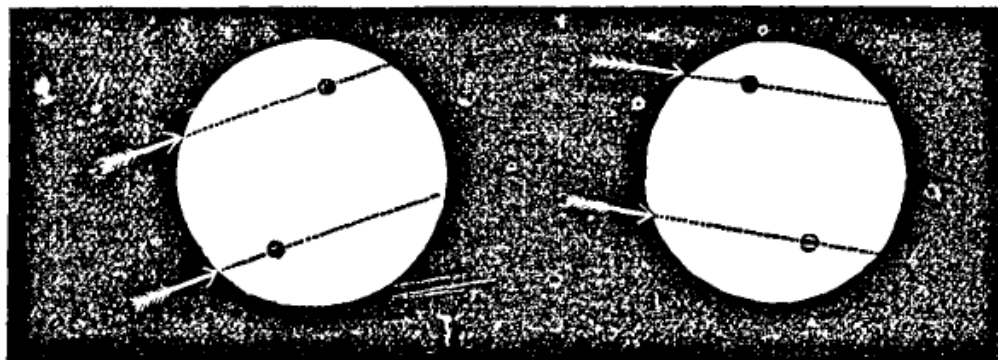## HOW TO PROVE THAT THE EARTH IN JUNE IS ON THE OPPOSITE SIDE OF HER ORBIT WHEN IN DECEMBER.

Figure 3.   Transits of Venus, Ascending and Descending Nodes.

I have already shown by the two diagrams in this book (See **Explanation of Transits**) how transits occur, but there are several facts derived from phenomena of this character. The illustration here given proves that the earth in June is on the opposite side of her orbit she occupied six months previously, that is, in December.   The representation of two transits on the left are when Venus is in her ascending node.   Node means the place in her orbit when Venus rises or drops to our level with the Sun, called the ecliptic.   This can only occur twice in her revolution round the sun, because the orbit of Venus, compared with our level, is tilted up at one end and consequently depressed at the other end. (See figure 2).   These two transits occurred on Dec. 8th, 1874, and Dec. 6th, 1882, being Nos. 1 and 2 of the 18th team of transits (8 in each) from Adam.   The two transits on the right side of the figure being in the descending node, their direction is downwards. They represent the two which took place on June 5th, 1761, and June 3rd. 1769, being respectively Nos. 7 and 8 of the 12th team.   All the transits seen in the ascending node occur in one or the other of the two positions shown in the figure, and the same remark applies to those in the descending node.   They are also consecutive, that is to say when two take place in the ascending node, one on the top half of the sun's disc and the other on the lower half, they will be followed by two in the descending node.   Venus is always in conjunction, i.e. in a line between the earth and the sun every 19 months, but being mostly above or below our level, we do not see her in front of the sun.

If the earth did not move to the other side of her orbit in June, we could not see Venus cross the face of the sun when in her descending node, she being then on the other side of the sun, nor would the direction of her motion be the same as when in her ascending node—from left to right.   The reader should notice this by looking at the figure.

If the earth were immoveable, and the sun travelled round it, the same results might occur in respect to the direction of the motion of transits, but the movement of the sun would be an annual one. We should also see 26 transits in eight years, that is 18 in each node.   Whereas we see only eight transits of Venus in the course of 486 years, because she goes round the sun about 13 times whilst the earth is going eight times round.   This is why, when we see a transit after a long period—105 or 122 years—we are sure to see another eight years afterwards.   We do not quite catch Venus in her node in our 16th year.   It requires 416 years to catch the same transit; but in half that period, viz. 243 years, we catch another in the ascending node after having seen two in the descending node, the first of which takes place in 121½ years, or half the 243 years.   This is why Chronologists, who go deeper into the study of transits and eclipses than astronomers, found that 486 years, or 8 transits, complete a team. and produce the same transit.

Mr. Proctor, the editor of "Knowledge," has asked me how any one can show time measurements by transits, i. e. before they were seen.   This is a singular question from an evolutionist; but if he were a Chronologist he would never have asked it.   Only a man from the country, when in Cheapside, would ask the way to the Bank. There were 60 minutes in a period of time we call an hour, before clocks were invented, and we can multiply that period for proving any other.   Therefore as we find that there are now 486 years in a team of transits, we can use it for proving other measures of time, before transits were seen, and if the product is the same, we have only done what is common in every twopenny Board School in the kingdom.   But eclipses and solar cycles prove that the transits of Venus took place from the beginning of time.

HOW TIME IS PROVED BY TRANSITS.

Transits cannot be correctly enumerated by any other than natural years, and for this reason they have never been tabulated except in this work. This is a great pity, because, as also in respect to eclipses, the sublime science of astronomy has been confined to star-gazing instead of being made practically useful to mankind. There are eight transits of Venus in a team lasting 486 years. This is a useful line of measurement and extinguishes men who talk about "gaps" in the line of time, or those miracle workers who create years which they are unable to produce by any astronomical motion. When the transits of Venus are tabulated, there will not only be 486 years in the length of a team, there will also be the same number of years between any transit and one opposite it in the adjoining column to the right or left. Any person can see that a team cannot be broken, because the regularity of the nodes would be disturbed, and as to the succession of the teams, it would not be possible to miss one or more, because it would have to be done designedly, and then such omissions would be detected, in the very place where they occurred, because the line of years would not accord in such places with that of the eclipses, or any other cycle of time. The Metonic cycle would soon show up an error of any kind, even if it was but a day.

Team. Year.   Days.

I.	42	Wednesday		
		Th	F	S	S
II.	528	Monday		
		Tu	W	Th	F
III.	1014	Saturday		
		S	M	Tu	W
IV.	1500	Thursday		
		F	S	S	M
V.	1986	Tuesday		
		W	Th	F	S
VI.	2472	Sunday		
		M	Tu	W	Th
VII.	2958	Friday		
		S	S	M	Tu
VIII.	3444	Wednesday		
		Th	F	S	S
IX.	3930	Monday		
		Tu	W	Th	F
X.	4416	Saturday		
		S	M	Tu	W
XI.	4902	Thursday		
		F	S	S	M
XII.	5388	Tuesday		
		W	Th	F	S
XIII.	5874	Sunday		

The table in the margin shows with what day of the week the lunar year began when a team of the transits of Venus commenced. There are always four days passed over (as shown to the right) between the teams. It will be seen that seven teams have the seven days of the week and that there is also a continuation of the week by reading all the days straight forward. There could therefore be no omission of a team. They are all consecutive from year 42 astronomical, which was 41 A.M., to 5874 when the present (13th) team began. The days of the week are taken from the Antediluvian cycle of seven lunar years, than which no better table of days by planetary motion is known.

The 7th team concludes the week of seven days.

It may be further observed that the corresponding transit is always of the same node. No. V. in all teams is one in the ascending node, and as Venus crosses the sun when in a direct line with the earth at the same period of the year—the ascending node about the 7th Dec. and the descending node about the 5th June—the transits are very simple in their occurrence and in this way surpass eclipses which by their dates travel through the year. There are six months between the two nodes, because after seeing a transit in the ascending node in Dec., we cannot see the same planet in its descending node till the earth is on the opposite side of the sun half a year afterwards.
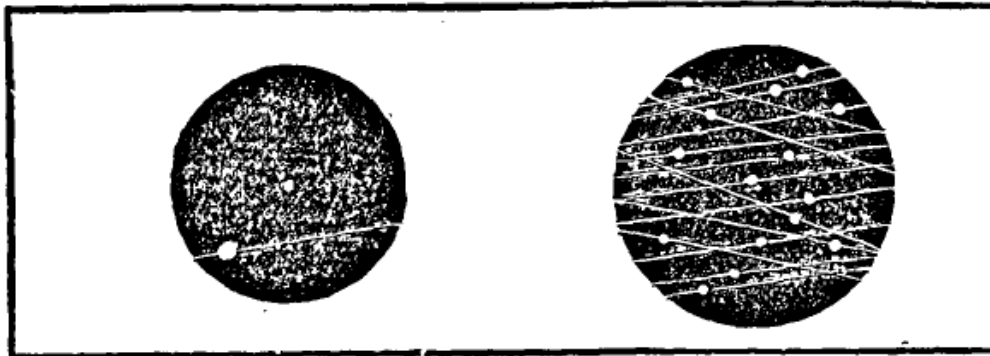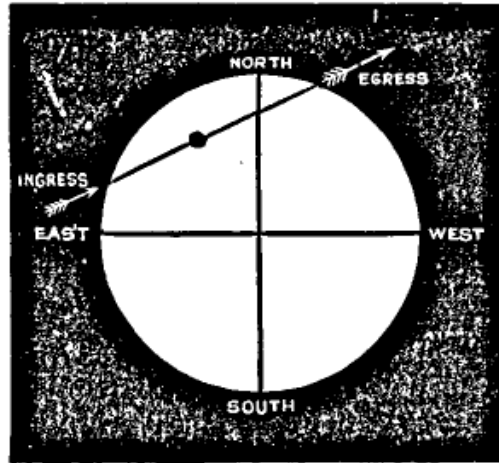

Figure 5.   Figure 6.

Figure 5 is a transit of Venus, ascending node, observed at Charminster, England, Dec. 6th, 1882. Figure 6 is a diagram of the British Chronological and Astronomical Association, by a French astronomer, showing 15 transits of Mercury of the present century, 1802 to 1891. The transit of Nov. 10, 1894, had not taken place.

FIFTH LINE OF TIME.

TRANSITS OF MERCURY.

Mercury the nearest planet to the sun, is termed an inferior planet (as is also Venus), because its orbit, or path made in moving round the sun, is within that of the earth. This will be understood by stating that Mercury is about 37,000,000 miles from the Sun, Venus about 68,000,000 miles, whilst the distance of the earth (which is the third planet) is about 94,420,000 miles from that luminary. As these planets move round the sun in these distances, the circle-like orbit of Mercury is the smallest. The orbit of Venus is larger, and that of the earth the largest of the three, and thus Mercury and Venus are called inferior planets because they make their revolutions round the sun in orbits, or path-ways, within the orbit of the earth. The earth completes its revolution in 365¼ days, which form our solar year, but Mercury is only 88 days in going round his orbit. Mercury is a small planet. It would take 17 globes like his to make the size of our world, and he has a swifter motion—100,000 miles an hour.

Therefore as there are only two planets (Mercury and Venus) situated within the orbit of the earth, they are the only two which can be seen in transitu. Transits of Venus are the most serviceable to astronomers, because they determine distances; but, owing to the shorter intervals between the transits of Mercury and consequently their greater frequency, they are most serviceable to chronologists in determining true time. For instance the first transit of Mercury since creation period, occurred in the second year (astronomical or 1st A.M. of the Antediluvian Solar Cycle) hence it gives us the first occurrence of that cycle and a scientific determination of the point when time began, because when we reverse the transits of Mercury from those we now see, we arrive upon the first seven years of the Solar Cycle. This is a very beautiful fact, and a very simple one. To put it in other words, if we start with a transit of Mercury in its ascending node, in the 8th month of the 2nd year (our May) of the Antediluvian Solar Cycle, we can follow all the rest in regular succession to those we now see. Hence every transit of Mercury writes the date of Creation, or the Re-fabrication of the world, on the face of the sun.

As history followed on the solar cycles shows with what day of the week each year has begun, and as the simple counting of the succession of the solar cycles proves the number of the years of the world, it is, after all, very simple work to prove anything by transits, because if we were promised all the world we could not add a day to any period of time determined by planetary motion, or take one from it. The results obtained by transits are also derived by other means, such as eclipses, but transits being events occurring on a scale of solar years, they are the most simple and ready means for dealing with time. Let the following illustration be taken. The reader has probably noticed that when he has presented a cheque to a banker, the gold is not counted, but simply weighed, yet the banking clerk knows that he has paid every farthing represented by the cheque. This is because the weight of a single sovereign is known, and by a system understood at the bank, the aggregate weight of any number of sovereigns is equally known. Chronologists who have an astronomical system—and they are not worthy of the name if they have not—can deal with transits in the same way. We know, for instance, that there are

DATE OF CREATION PROVED BY TRANSITS OF MERCURY.

92 solar years in a team or series of transits of Mercury, and that each team consists of 15 transits. It is easy to observe from the solar cycle with what day of the week each of these 92 years began, and hence with what each team began; and then by a quick process, we can see if the day of the week given in history fell on the date of the month recorded. In this way it is found that the year 0 A.M. did begin with Sunday and had its first 7th of the month on Saturday. The human mind can do anything if it knows how to do it. Thus in a school there is a system of arithmetic by a multiplication table, by which it is known that as there are 20 shillings in a sovereign, there are 100 shillings in five sovereigns, and 1,000 shillings in fifty sovereigns. Hence if you are selling a man a thousand yards of cloth at a shilling a yard and he gives you £50, you are satisfied that he has paid you for every yard.

The following tables prove that year 0 A.M. began with Sunday and that Saturday the first Sabbath Day fell on the 7th of the first month. The year 1 A.M. was the 2nd year of actual time, because there could be no counting of a year past until one year was complete. Hence the commencing year of the solar cycle is called 0, and the next year 1. The first transit when reversed from those we now see falls upon this year 1, beginning with Thursday, and as 92 years afterwards—the period of a team of 15 transits—is added to 1, the second team began in year 93, commencing with Monday, and so on.

From the Antediluvian Solar Cycle :—

1 Thursday ...	645 Thursday ...	1289 Thursday	As year 1 (the 2nd
93 Monday ...	737 Monday ...	1381 Monday	on the cycle) began
185 Friday ...	829 Friday ...	1473 Friday	with Thursday, year
277 Tuesday ...	921 Tuesday ...	1565 Tuesday	0, the 1st on the cy-
369 Saturday ...	1013 Saturday ...	1657 Saturday	cle began with Sun-
461 Wednesday ...	1105 Wednesday ...		day, as we learn by
553 Sunday ...	1197 Sunday ...		Genesis ii. 2.

From the Ancient Hebrew Solar Cycle :—

1749 Wednesday ...	3129 Wednesday...	4509 Wednesday...	5889 Wednesday...
1841 Thursday ...	3221 Thursday ...	4601 Thursday ...	
1933 Thursday ...	3313 Thursday ...	4693 Thursday ...	
2025 Thursday ...	3405 Thursday ...	4785 Thursday ...	[Wednesday, the
2117 Friday ...	3497 Friday ...	4877 Friday ...	first day of 5889, is
2209 Friday ...	3589 Friday ...	4969 Friday ...	Wednesday, Oct. 1,
2301 Saturday ...	3681 Saturday ...	5061 Saturday ...	1890, A.D.]
2393 Sunday ...	3773 Sunday ...	5153 Sunday ...	
2485 Sunday ...	3865 Sunday ...	5245 Sunday ...	
2577 Sunday ...	3957 Sunday ...	5337 Sunday ...	The scientific and
2669 Monday ...	4049 Monday ...	5429 Monday ...	Biblical year both
2761 Monday ...	4141 Monday ...	5521 Monday ...	end with Sept. and
2853 Monday ...	4233 Monday ...	5613 Monday ...	no man can alter
2945 Tuesday ...	4325 Tuesday ...	5705 Tuesday ...	or separate them.
3037 Wednesday ...	4417 Wednesday...	5797 Wednesday...	

The day of the week across the column are always the same, and are obtained from the solar cycles in their natural consecutive succession, that is the Antediluvian and the Ancient Hebrew, both being unalterable, and the latter brought forward to present time. Our solar cycle, not being astronomical as to the proper beginning of the year, and being also variable, is inapplicable for tabular measurements of this character.

Hence the transits of Mercury prove the date of Creation to be scientifically correct, because the history of the events of the world, when placed together and added up, will come to 5889 years, when the transit above referred to takes place. But the years of the world are best determined by counting the solar cycles, which are the natural production of weeks of seven days combined with dates of the month. Therefore, when we come to investigate history, whether by the records of events—such as the births of the great patriarchs, reigns of kings, or dates mentioned in history—we find that as a chain of time it is capable of confirmation by the transits of Mercury. The same results are also obtained by eclipses, the lunar cycle, and the transits of Venus. The more this is thought of, the more splendid and interesting it will become.

The reader will understand that it is not essential to know that all the transits of Mercury occurred in the years mentioned—though there is plenty of evidence that they did—all we require are well-known standards of measurement. Our present method of dividing days into 24 hours of 60 minutes each is applicable to all past time according to eclipses.

TRANSITS OF MERCURY.

TRANSITS are valuable in determining time and distance. Those of Mercury are more serviceable for time than are those of Venus, the latter, however, recover some importance by being more applicable in determining distance, principally that of the sun. The great value of the transits of Mercury arise from the fact that that planet being much less than half the distance of the earth from the sun, accomplishes four revolutions round the central luminary before the earth quite completes one, thereby producing a frequency of transits which by reversing from the present time carry us back to the first twelve months of history when time was first instituted, viz. :—year 1 A.M., or astronomical 2.

There are 15 transits of Mercury in a team. They occur in a period of 92 years. Hence it follows that there must be 92 years between a transit of the same number and character in each team produced by the following intervals :—

In Astronomical years: 4, 9, 4, 9, 4, 7, 9, 4, 3, 6, 4, 7, 9, 4, 9. Total 92.
In Anno Domini years: 3, 10, 3, 10, 3, 7, 10, 3, 3, 7, 3, 7, 10, 3, 10. Total 92.

It will thus be seen that they work on the same principle as eclipses. There are 18 years during which a team of eclipses occur, and therefore there are 18 years between an eclipse of the same character and number. The same simple but beautiful arrangement also occurs in respect to the transits of Venus.

It is necessary here to observe that neither transits or eclipses can be enumerated and classified on our solar Anno Domini years, because the latter have no existence prior to the year 4000 A.M., and are also imperfect in correct numeration. Neither can transits be compared with eclipses when classified upon Anno Domini years, or serve as a starting point for continued observation down to our own time. Endless perplexity arises when we deal with astronomical phenomena upon Anno Domini years which begin with the fourth month of the true scientific year, and consequently overlap each successive year more than three months. The A.M. or Biblical year, would be more correct, as it starts with the same month as the astronomical, but by being the enumeration of past time, it necessarily begins year 1 on the astronomical year 2, and is always one short. The reader will thus see the indispensable importance of the astronomical year, which simply means counting time by present planatary motion, that is calling the first 12 months one year of motion, or beginning year 1 with the first day of time.
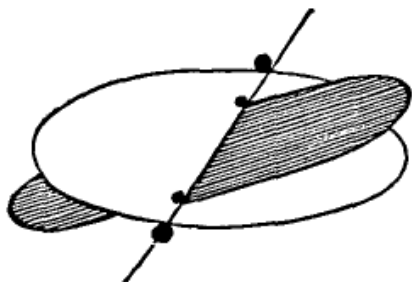

Figure 7.

Figure 8.

The beautiful and always precise motions of the earth and Mercury are shown in the above figure, No. 7. The large orbit represents the path of the earth round the sun, the place of which is in the centre of the transverse line. The shaded orbit is that of Mercury. It is smaller than that of the earth and not on the same level, as it is tilted up seven degrees at the upper end. Both the earth and Mercury travel in the same direction, but Mercury completes his revolution in less than three months. The two small dark spheres are Mercury in his ascending and descending nodes, both of which are on the level of the earth's orbit, so that when he cuts through it, and the earth is in conjunction, as represented by the two larger dark spheres, we see Mercury as a small black ball sailing across the sun. With motion as this, who can deny Biblical history? Only the man who knows nothing about either.

As Mercury is a small planet, it cannot be seen in transit when looking through a piece of smoked glass. A small telescope with an astronomical eye-piece of coloured glass is necessary. Venus, a larger and nearer body, can be seen by the unassisted eye.

Figure 8 shows the pair of transits of Venus which we see eight years apart, occurring after rather more than a century. Should Venus and the sun be simultaneously on the line of nodes, Venus would travel across the sun's centre, on the horizontal line, and take eight hours to perform the passage, but the next transit, eight years afterwards, might scarcely be on the sun.

It should be stated that figure 7 on this page, and also 2, representing Venus in transit, are not correctly drawn. The upper end of the tilted orbit should have been on the left side, because the direction of the motions of the planets is from right to left, so that the ascending node is at the bottom of the figure. This error of the engraver, however, does not interfere with the explanation of the cause of transits, nor will it prevent any person using the tables for obtaining the years of the world.

THE FIFTH LINE OF ASTRONOMICAL TIME.

MERCURY'S TRANSITS.

The following are the *first transits in each team of* 15. A team comprises 92 years. The years in the list are astronomical. As our time is 1 year and 9 months in advance of historical or A.M. time, a transit in May is 1 year earlier, and a transit in November is the same year as almanack time.

ASTR.	ASTR.	ASTR.	ASTR.	ASTR.	ASTR.	ASTR.	A.D.	ASTR.	A.D.	ASTR.	A.D.	ASTR.	A.D.
2	646	1290	1934	2578	3222	3866		4510	511	5154	1155	5798	1799
92	92	92	92	92	92	92		92		92		92	
94	738	1382	2026	2670	3314	3958		4602	603	5246	1247	5890	1891
92	92	92	92	92	92	92		92		92		92	
186	830	1474	2118	2762	3406	4050	51	4694	695	5338	1339	5982	1983
92	92	92	92	92	92	92		92		92		92	
278	922	1566	2210	2854	3498	4142	143	4786	787	5430	1431	6074	2075
92	92	92	92	92	92	92		92		92		92	
370	1014	1658	2302	2946	3590	4234	235	4878	879	5522	1523	6166	2167
92	92	92	92	92	92	92		92		92		92	
462	1106	1750	2394	3038	3682	4326	327	4970	971	5614	1615	6258	2259
92	92	92	92	92	92	92		92		92		92	
554	1198	1842	2486	3130	3774	4418	419	5062	1063	5706	1707	6350	2351
92	92	92	92	92	74	92		92		92		92	

FOUR LAST TEAMS OF MERCURY'S TRANSITS.

No.	62nd Team Astr.	A.D.	63rd Team Astr.	A.D.	64th Team Astr.	A.D.	65th Team Astr.	A.D.
I	5614 May 4	1615 3	5706 May 4	1707 3	5798 May 7 / 4	1799 3	5890 May 9 / 4	1891 3
II	5618 Nov. 9	1618 10	5710 Nov. 9	1710 10	5802 Nov. 8 / 9	1802 10	5894 Nov. 10 / 9	1894 10
III	5627 May 4	1628 3	5719 May 4	1720 3	5811 May 4	1812 3	5903 May 4	1904 3
IV	5631 Nov. 7 / 9	1631 10	5723 Nov. 9	1723 10	5815 Nov. 9	1815 10	5907 Nov. 9	1907 10
V	5640 May 4	1641 3	5732 May 4	1733 3	5824 May 4	1825 3	5916 May 4	1917 3
VI	5644 Nov. 7	1644 7	5736 Nov. 7	1736 7	5828 Nov. 7	1828 7	5920 Nov. 7	1920 7
VII	5651 Nov. 3 / 9	1651 10	5743 Nov. 9	1743 10	5835 Nov. 9	1835 10	5927 Nov. 9	1927 10
VIII	5660 May 3 / 4	1661 3	5752 May 4	1753 3	5844 May 8 / 4	1845 3	5936 May 4	1937 3
IX	5664 Nov. 3	1664 3	5756 Nov. 3	1756 3	5848 Nov. 9 / 3	1848 3	5940 Nov. 3	1940 3
X	5667 Nov. 6	1667 7	5759 Nov. 6	1759 7	5851 Nov. 6	1851 7	5943 Nov. 6	1943 7
XI	5673 May 4	1674 3	5765 May 4	1766 3	5857 May 4	1858 3	5949 May 4	1950 3
XII	5677 Nov. 7	1677 7	5769 Nov. 7	1769 7	5861 Nov. 11 / 7	1861 7	5953 Nov. 7	1953 7
XIII	5684 Nov. 9	1684 10	5776 Nov. 9	1776 10	5868 Nov. 4 / 9	1868 10	5960 Nov. 9	1960 10
XIV	5693 May 4	1694 3	5785 May 4	1786 3	5877 May 6 / 4	1878 3	5969 May 4	1970 3
XV	5697 Nov. 9	1697 10	5789 Nov. 9	1789 10	5881 Nov. 7 / 9	1881 10	5973 Nov. 9	1973 10

Respecting the two tables of the transits of the planet Mercury, the top one contains all the transits following each other in their teams, having 15 transits in each team, the whole extending over 92 years. Thus the first team began in year 2 (reckoning Creation year as 1). The second team therefore began in year 94, the 3rd in 186, and so on. The transits in this way lay down the line of years for us. They are obtained by reversing their present periods, for it would be impossible to alter their length five seconds.

The larger table consists of the four last teams fully tabulated in order to illustrate the way in which they occur. The years with which they began are in the top table.

The transit in 1894, is Nov. 10th, at 3.55 40 seconds. The time from Creation is 5894, 2nd month, astronomical solar year (the true year always begins on 20th Sept.) or 5893, A.M. 2nd month, by counting Creation year as 0.

The Bible is by all these methods proved to be a magnificent book. It is the only book in the world whose years and months are strictly those of astronomical motion. There are ten cycles of time and they all began together at Creation, 0 A.M., but they have never been together since, and it would be impossible for them to get together at the starting of Creation year by the present known motions of the earth and the moon, because they all differ in length and character. We should have known this before, but as astronomy was based on years made by Acts of Parliament, it was not able to make the necessary investigation. Creation has been lost by the confusion of years which are not natural or in accord with planetary motion. For the same reason the beginning and end of the prophecies, and all events of Scripture have been hidden. They are based on time produced by the motions of the heavenly bodies—not on fictitious, but scientific time ordained by the laws of God. It is shown in "All Past Time," that no tables of eclipses can be formed without starting from the point of Creation. Men who speak lightly of the first chapter of Genesis do not know what they are talking about. The man who hangs out his tongue in derision of the movements of the orbs of heaven recorded in this chapter, is now a great simpleton, for we see that as science advances it comes nearer to revelation. All the motions known to us by the sublime science of astronomy have had a beginning, and it would be destruction to allow such prodigious motions to begin without control. Measurements show that they began at the epoch of Creation, and there also we find all the features of a beginning. King David lived in a period when men better understood the motions of the heavenly bodies than the men of this generation, for ancient years were produced by solar and lunar motions, in direct consecutive "line" from Creation, hence in Psalm xix. David speaks of "their line." Their motions and positions were instituted as signs of "seasons, and days, and years," and the man who does not know "their line," is deficient in his education. In the Bible we have a true line of natural years—a line of scientific time—the want of which has prevented the construction of tables of transits and eclipses. But as Bible time is found to be the time produced by astronomical motion, all such tables are formed. The Scriptures have thus enlarged our knowledge of astronomy.

What is the result of this rich harvest of new scientific facts? We can obtain the precise point of Creation, the Flood or any event of Biblical history. We can fix the date and the end of prophecies and periods of time. Revelation is thus proved to be superior to the formula of human science. Revelation has not to be lifted up to a level with science, but science is being raised to the higher platform of inspiration. The ambassadors of religious truth can no longer be told that their teaching is "tolerated for the sake of children." No; the first, the highest, and the chief seats belong to the priesthood of God. To the church of God must now be said, in the language of Isaiah, "Arise, shine! for thy light is come, and the glory of the Lord is risen upon thee. Put on thy beautiful garments." The church of Christ is clothed with strength. She is "terrible as an army with banners" to all sceptics. They are "ashes under her feet." She is breaking, as with a rod of iron, all the gilded lamps which have no oil—theories are fallen, and the Dianas of science which have no basis fall before the ark of God and his written word. This is true. It has been expected by those who have faithfully held to the Divine records in a period of darkness and trial. Men now see that they cannot get away from the first chapter of Genesis. It begins all time and supplies the periods of all planetary motion. Without the Bible not one of them can be tabulated, as is shown by the fact that notwithstanding great efforts, the work could never be done. But it is effected with Biblical time, which is thus proved to be scientific time—a continued chain from the "first day" of Creation.

The transit of the planet Mercury, on the 10th of Nov., 1894, will be a proof of the accuracy of the first chapter of Genesis, because the team would be broken if the first team was not complete. Transits in the ascending node must always occur about 50 days after the equinox. This transit may be regarded as a signal gun fired in the heavens indicating the accomplishment of the period when, as a small black ball, Mercury will be seen by the telescope, should the weather be clear, sailing across the face of the orb of day. It will be the finger of God writing the date of Creation on the face of the sun and precisely at 3h. 55m. 40s.

1. We stole a year by beginning the Christian era on the year 4000, and therefore 4001 was our year 2, instead of 1 A.D. We are also 89 days in advance of another year, owing to the changes we have introduced in altering the form and beginning of our years. The year 1880 is therefore properly 1878 until Sept. This is proved both by the eclipses and solar cycles.

2. The lunar cycle proves that the modern Jews err in the computation of years. They lost their old documents soon after the destruction of Jerusalem, and adopted the Selucidæn era. This they again abandoned 400 years ago for that they now use.

3. It is certain, by the eclipses, that the Ancient Hebrew Solar Cycle began with 1722, A.M. It must commence with a 15th year when a 7th of the antediluvian, or original cycle ended its intercalary days. We have three other 15th years of this class, but I can obtain no testimony in their favour. It is satisfactory, however, that the result would be the same, whichever of the four years be taken. Both the lunar cycle and the record of the lives of the patriarchs in Gen. xi. again travelling side by side as they do in relation to the flood year and the golden record in Gen. v. Nothing in all the world can excel the beautiful affinity and perfect unity of testimony between high stern science and sacred history in these two chapters.

4. There can be no solar cycle unless weeks of seven days are observed. The fact that the years of the antediluvians, the postdiluvian patriarchs, and the ancient Hebrews all work in solar cycles, is itself absolute proof that weeks of seven days have been observed from creation, whilst the lunar cycle in connection with the dates show that they have never been broken.

5. The two Biblical solar cycles being composed of seventh days, and each beginning with the sabbath on the 7th day, is the simple, yet arbitrary succession of an astronomical line of seventh days of the lunar years. The intercalary days of the antediluvians being just 11 weeks did not disturb this rotation, whilst those of the Hebrews, by being incorporated, could not do so.

6. The scriptural record of the flood, giving us the beginning and end of a full lunar and solar year—one revolving in the other—might be hung up in our museums as an ancient almanack and a curiosity of antiquity,

7. We can now assign a date to every day that has occurred since creation, and give it the proper position in the week.

8. As we are now acquainted with the precise length of the solar year, we can find the number of the 7th days from creation. It is the same as the number of sabbath days obtained from the solar cycles.

9. Our solar year was used in Rome before Christ with an observance of a "leap year," but the months were not divided in weeks.

10. As the dates in the Old and New Testaments fall when the years possessed such dates (for the dates of one year are not the same as another), each book of the scriptures must belong to the years which they claim to come from, whilst the narratives are often of a character that they could not be recorded if untruthful.

11. Assyrian and ancient Egyptian dates have no concurrence with Biblical and astronomical time, and have no solar cycles.

12. Intercalary days are alluded to in the Bible as "at the end of days," in which case the words ought to be in the text instead of the margin, They are also sometimes expressed by "after two full years," that is a full lunar and solar year, when both ended by the use of intercalary days.

13. The application of the lunar cycle of nineteen years to all time (See first years of antediluvian solar cycle), is a sort of net or guage. It is a most convincing fact to find that this famous cycle when squared to the Biblical solar years always falls upon a year that has the dates of a nineteenth.

14 The proper year of the lunar cycle cannot be that given in some almanacks. It must be taken from the exact starting post of time at creation,

15. There is a very important place in the Hebrew solar cycle, at table i. It is the middle intercalary period, and may be termed the accommodation point. All the dates of scripture history prove that the following year began with Sabbath day on the 1st of the month, but unless an extra day be given to the 12th month, it would not do so. The moon requires it once in 15 years. Thus,

12th month   2 9 16 23 30
Intercalary   7 14 21 28   So by

this arrangement the cycle could always be adjusted to 15 solar years, accomplishing what we fail to achieve—always having the cycle new on the first day of the week.

16. The actual link of our time with the Hebrew cycle requires several tables and much explanation. It may here be observed that history proves that Jews have not excelled Christians in reverencing a 7th day. It has been safe in the hands of these two communities since the apostles.

17. Geology requires an antiquity prior to the institution of time and the creation of man; but I cannot allow this pre-historic period to trench a single "day" upon our chronological history. It is a great fallacy to talk about pre-historic man! How could men have public records—which are certainly history—stating that Adam was the first man, if every generation knew they were lies? Could we say that Wesley, or even St. Paul, was the first man?

18. That the figures on the Ancient Hebrew Solar Cycle were Sabbath days is seen by hosts of dates. The first 3 years have same figures as first 3 of Antediluvian cycle.

19. No eclipse is mentioned in Scripture, but they are all obtained by starting from the first day in Gen. i., and by no other way.

20. Julius Cæsar abolished the lunar year and its intercalary month and thus broke the line—an eclipse on 1st day every 18 yrs. except 3rd 18th, when it was 1 month more.

21. The correct year of the world can be always obtained from Triple Eclipse Table.

22. There are imperfect comprehensions of science as well as of religion. Joshua commanding the sun to stand still is likely to be soon one of the brightest evidences of Scripture history. It could be effected by two or three methods. One by moderating the rotatory motion of the earth. An astronomer tells us that when a gentleman raises his hat on meeting a lady in the street he travels 30 miles bareheaded. This is owing to the great speed with which the earth moves in space. Now reduce the diurnal motion one half, and the effect would be that the length of day would be doubled, 48 instead of 24 hours. But the period of Joshua only requires a reduction of 1-3rd. It would in effect be like an express train slackening its speed whilst passing through a station. As to the cause of the reduced motion, wise men will not say a word until they know how the motion is effected. Venus and Mercury do not rotate. To them the sun stands still half their year.

23. A watch is an indicator of the motions started in year 0 A.M., so that he who carries a watch wears a memento of Creation.

24. No year is used in this book without its eclipses. When men talk of years for which no eclipses can be produced, the years have not existed. Years must be delivered as a banker does gold. He weighs it. We supply eclipses producing the years.

25. The English Government offered a reward of £20,000 in 1784 to any person who discovered how to obtain the longitude of places at sea within 30 miles. Mr. Harrison won the money, and the result was Capt. Cook was able to sail round the world. But when astronomical measurements were made applicable for determining time and periods of history, with greater, and indeed absolute precision, Mr. Gladstone refused a grant of £150 for the expenses, and to this day not a shilling has been contributed from any public source. The Royal Society receives yearly from Parliament £6000 for scientific research, but thrice refused a small grant for construction of instruments. Why are they afraid of useful work? It will live when they and their ideas are buried.

26. The B.C. and A.D. years are dropping out of use. They should never be employed for history because their length is irregular. Besides they are not capable of addition, subtraction and division. Writers should be ashamed of them if they want accuracy.

27. On the 180th degree of longitude, half of the circumference of the globe—starting from Greenwich east or west—there is an arbitrary change or dropping of a day. In crossing the Pacific ocean, you go to bed on Saturday night and awake on Monday morning. Sunday has dropped from the calendar, for that week. This is because on voyaging round the world a day is lost on going west, and one added on passing east.

28. One of the five methods for proving that the sun is 92,520,000 miles distant is that the earth moves 68,000 miles an hour. For instance, the diameter of the earth is about 8,000 miles, so that she has only to move about eight times her diameter to accomplish 68,000 miles in one hour. Just imagine a horse only moving eight times its length in an hour. It would not win the " Derby." A race-horse will move four times its length, in two seconds, but this would be impossible to an insect the 16th of an inch in length. Again, 68,000 miles an hour would be an awful speed for a bullet fired from a rifle; but let the big earth be the bullet and the motion is slow.

29. For the purpose of celebrating the crucifixion when the moon is about full, and also observing it on Friday, the following method was ordered by Constantine, the emperor, at the Council of more than 300 bishops, at Nice, in the year 325: the first Sunday after the pascal full moon, or in other words, after the full moon which happens on or after the 21st of March (the vernal equinox), should be Easter Sunday, so that the Friday previous be Good Friday. Therefore to ascertain on what day Easter will fall in any year, nothing more is requisite than to find the moon's age on the 21st of March, which will show when the next full moon will occur, and the Sunday following will be Easter Sunday. This therefore cannot happen earlier than the 22nd of March, nor later than the 25th of April. Easter Sunday regulates all other moveable festivals. The solar date of Good Friday is the 2nd of April, but its observance neither secures Friday nor full moon.

30. The 7 days in Gen. i. cannot be moved from the first year, and hence they cannot be regarded as great periods. Astronomical phenomena will not allow them to be placed in any other year. We should not stumble at the rapidity of creative work. All great work is rapid, and so is all great motion. Watch the heavens to see this.

K 2
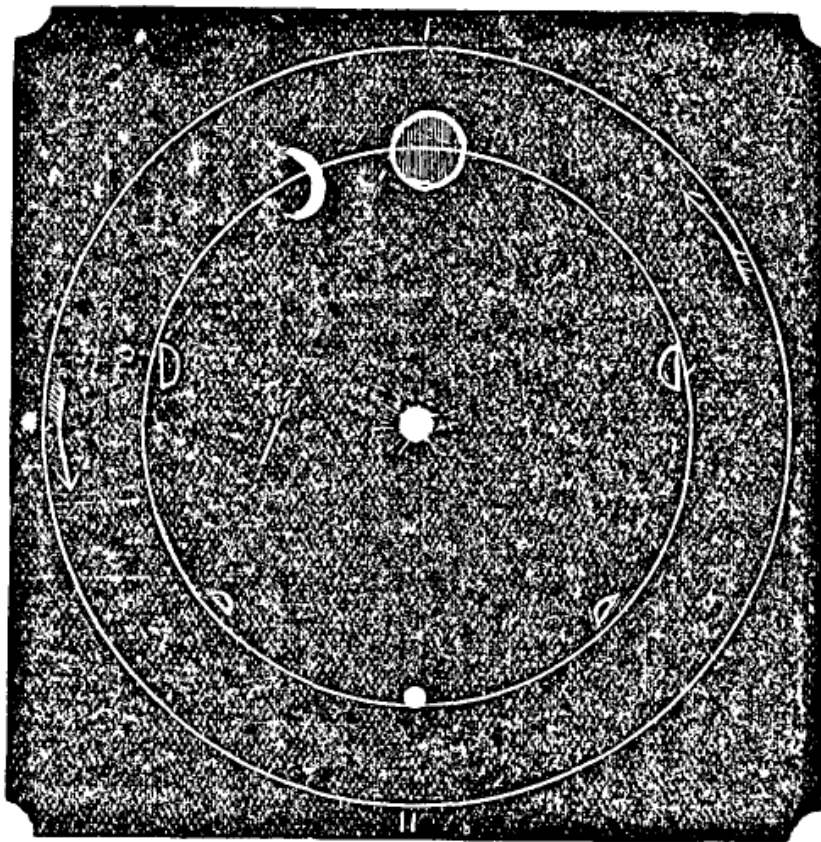
CONFIGURATIONS AND DISTANCE OF VENUS SHOWING HER
REVOLUTION ROUND THE SUN.

The annexed sketch will show why Venus is sometimes so bright in the east, and how we see her at certain times in transit by passing between the earth and the sun. The inner circle is the orbit of Venus, and the outer one that of the earth with the sun in the centre of both. The earth is supposed to be at the point I. at the bottom of the figure, in December, from which the dotted lines indicate the direction of sight. When Venus is near the earth, in her inferior conjunction, she has her dark side towards us and is invisible, except when in transit, moving like a small black ball across the sun. She is then but twenty-six millions of miles distant from us. When she has moved round to the top or opposite side of her orbit, at a time when the earth is again at I., she is in her superior conjunction and has her full face towards us, but looks much smaller, as she is then 158,000,000 miles distant. Her appearance, as seen through the telescope, when near the earth, is that of a large crescent, shown on the lower right side of the above sketch. When about half way round her orbit, providing the earth is again at I. in December, Venus shines like a half moon, the configuration of which is the reverse of that when she is on the opposite side of her orbit. Then, when in the upper, or, shoulder-like positions, she is seen still smaller, her gibbous appearance, when measured is about two-thirds of her illuminated face, but very brilliant. I have been often much interested in watching Venus when in the left shoulder, and have met with difficulty at such times in securing an outline of her luminous contour, owing to her burnished and glittering aspect when so near the sun. She is on these occasions invisible to the naked eye, owing to the golden lustre of the great orb of day, just as he is dropping below the horizon. Of course the phases of Venus, and apparent size, are reversed when the earth is at II. in June, and this fact shows that the earth travels round the sun.

As Venus moves in a smaller orbit, she travels 13 times round the sun whilst the earth can only complete eight revolutions. This explains why, after seeing Venus in transit, we catch her again in the same position eight years afterwards, but then, owing to the slight difference of time, have to wait more than a century before the magnificent spectacle is repeated. See Transits of Venus. Men who work with genealogical chronology can speak of "gaps" of time, or put any number of years into their periods, but astronomical chronologists cannot work such miracles.

As the greatest brilliancy of Venus is every eight years, her light is so great that it casts a shadow. This is best observed when a piece of white paper is held just behind a lead pencil, holding both in an upright position, and in a room on the opposite side to the window. The proof is that when Venus has moved away, or the paper is not held opposite the planet, there is no shadow. Time by a watch can also be seen.

CREATION AND GEOLOGY.

We have been in an unfortunate position in respect to Creation. We know nothing about it. It was therefore a subject confined to the records of revelation. But by the extension of astronomical research, made practical by the application of the known periods of planetary motion on the basis of *natural* years, and by which several tables of scientific time are produced, we are now able to reach and explore the epoch of Creation mentioned in revelation and on the Cuneiform records of early Babylonian history. The result is an array of new scientific facts. How far the Cæsar of Science, equipped with new weapons, now smites certain hypothetical conclusions of pre-historic authors for whose years—like those of some writers of modern periods—no eclipses can be found, let the reader judge.

CREATION AND GEOLOGY.

THE ARGUMENT.

I. Geologists have taken up a position, stating, in effect, that there was no Creation at the time mentioned in revelation (year 0 A.M.), but that the world, and the whole of the solar system with its motions, were in existence many thousands of years before that time, and that (as some men say) whatever exists is due to productive stages of evolution.

II. The reply is, we have now arrived at a period in which the advancement of science and our ability to place all history on a scientific basis, compels us to admit that the date of Creation given us in Genesis i. (year 0, A.M., 3996, the true B.C.) is an astronomical fact of the highest scientific character. What prevented astronomy from making this discovery before was, its calculations have been based on Parliamentary instead of natural years, and thereby prevented the necessary investigation. But now that planetary motion is used as the basis of time, and the motions of the earth and moon are preserved in their lines of natural years, all astronomical phenomena are traced back to year 0, A.M. where they stop, all the eight or ten cycles of time and motion being together in a line—a position which they have not since resumed, and which their character also renders it impossible to have previously obtained.

It has been the imperfection of our knowledge which seemed to give rise to a conflict between revelation and science. Ten years ago, neither the opening chapter of Genesis nor the science of astronomy were understood. We were not aware, for instance, that the "fourth day," when the sun was "set in the firmament." was the autumnal equinox, and that the sun is in that position on the fourth day of every solar year now, for nothing in the whole domain of astronomical science is so precise as the period of the revolution of the earth round the sun, marked by the return of the great orb of day to the equinoctial colure in September. In the next place astronomy has not been purged entirely from astrology. We yet begin years by legislative enactments from the foundation of cities, the achievement of a victory, or the celebration of an anniversary, none of which are we able to prove by our 13 barbarous systems of time, any better than they can lead us up to Creation. When will our public schools be swept of such encumbrances which hide the great facts of history? When we begin to use natural years, produced by the laws of motion, we can follow all celestial phenomena and know where we are, or how far we are precisely from one point of time to any other. We can then put our finger on the "first day" in the same way as with our pencil we can point to the first unit in the multiplication table. We obtain by a natural and scientific process the epoch of Creation—the true era before which all others are falling—because time, like arithmetic, is a science to which nothing can be added or taken away. By these means we found the starting-post of time when all the cycles stood abreast like horses at the commencement of a race—a position which the eight or ten cycles have not since resumed, and which, as already intimated, they could not previously have held, because they could not exist. This, then, was the discovery of "the beginning" of planetary law and motion, and the creation of the constitution of the world on which we live. We were able to lay hold of it, because every 7th year is also the 7th year of the Bible.

We find by investigation that the first chapter of Genesis gives us a point of time which is unique for being scientific time, that is to say, produced by the sun, the moon, and the earth. Such an incident has not occurred since, neither is it recorded in any other book. It was an epoch—the marvellous epoch—when (1.) the solar and lunar years began together. (2.) When the solar and lunar cycles, now existing, commenced. (3.) When the Metonic cycle started. (4.) When the sun was on the equinoctial colure in Sepetmber, thus starting the year with the autumnal equinox, and accordingly, six months later, the earth having got half way round her orbit, she reached the vernal equinox in March, and then was back again in Sept. at the point from which she started, the natural year being formed by the equinoxes. (5) When the solar cycle started with the first day of the week. (6.) When the eclipse date-repeating cycle of 649 years began. (7,) When the common team of 70 eclipses began its recurring period of 18 years. (8.) When the "life-history" of solar eclipses began to register periods of 1260-2 years. (9.) When the line of apsides of the moon were normal in position and parallel to that of the earth. (10.) When the nodes of the moon had the beautiful geometrical position of being in the centre of that year, as shown by the two solar eclipses on the 1st days of the 4th and the 10th months—a position indicating a beginning.

These are hard facts. They are facts of the highest scientific character against which no geologist can lift a finger, and they show us that before men attack Creation they ought first to know what it was.

CREATION AND GEOLOGY.

We should have known all this before had our astronomy been correctly constructed, but as it was based on the form of years enacted by legislature, it could not furnish tables of eclipses, or transits, or indeed of months and natural years. Our dilemma was so great that we could not even carry our A.D. further back than 1752, when Parliament made the last alteration in the form of the year by the adoption of the "new style" of dating. When therefore geologists made claims for many thousands of "years," before the beginning, we could obtain no assistance from astronomy for making investigation.

It is true that in the midst of the conflict there was no harmony of views amongst geologists. Indeed there was great contradiction. Claims were made for a "glacial period" in one volume, and answered by another on "The Nightmare of the Ice Age." This is to be regretted, for both writers are men of eminence. A good book seems yet to be wanted on geology, showing what has been the condition of things before years and days, and seasons began, and when the earth, like Jupiter, had an upper sea.

But the conflict raised by geologists against revelation is not confined to the condition of the mass of the shapeless earth in remote ages. It has trenched on the work of Creation by importing the present motions of the earth and its physical constitution into periods which geological research shows that they did not exist. It is this which causes confusion. Of late years we have been told that there is no land which has not at some time been the bottom of the sea, and that at no remote period "the climate of the north was equal to that of tropical regions." These are statements showing that the present oblique position of the axis of the earth has not existed even in the latest geological periods, for it is clear that seasons—alternate cold and heat—are produced by the tilt of the earth's equator caused by the upper end of her axis always pointing to the north. The claims of geologists for years, and days. and seasons—which produce the present higher constitution and superior plants and animals of the world, are inconsistent. They are opposed to our knowledge of physical science.

Where do geologists get their "years"? How do they obtain a rotating earth and revolving seasons, without cycles of time? It is like talking about a clock which has no wheels. There could be duration before Creation, but we have clear and abounding evidence that the present laws of motion had no existence. Geology will be better understood when such nebulæ as that of Andromeda and others are more known—the "heaps of shingle," as one of our scientists calls the rude and shapeless masses of matter enwrapped in luminous gases.

Creation does not belong to remote origin. It was an arrangement—perhaps limited to the solar system—when a new and superior order of things were made from those which, in a rude form, had some pre-existence. We are told this in Genesis i., so that whatever may have been the condition of things prior to the epoch of creation, they were demolished by mighty forces and convulsions which displaced much of the strata and rolled up others like a carpet. We have evidence of all this around us. It seems to have been the preliminary stage of Creation.

The work of Creation would follow the upheaval of the strata, so that everything was re-constructed during the six natural days of Creation. This period of re-fabrication was particularly begun by the institution of the present laws of motion, by which the round world, for the first time, began to rotate on its axis. We must believe this, because the cycles of time were not together on the second day. They had accomplished one day of the periods which we find that they possess, and we must bear in mind that they were all abreast on the first day, and must have been so arranged, for there are no natural means by which 10 cycles of varied character and length could get into a line. The earth also began to travel round the sun, having received an impulse of motion for accomplishing an orbit in a period adapted to the new order of seed-bearing plants, and of such dimensions as would preserve it from the attractive "pull" of other celestial bodies and yet so nicely adjusted as the velocity should not overcome the centripetal force by which the sun has such a hold on the earth as to prevent it from flying off in a straight line into boundless space. This impulse of motion, and its adapted force is regarded as inexplicable. It could not be evolved. A diminution of the velocity would be destruction. It could not begin when the earth was a shapeless mass, or smaller, or of less density. But no matter what the condition of the earth was, we have to admit a beginning of this inexplicable impulse of motion. Some men leave it as a mystery. I do not, because I see when it began. The present laws of planetary motion—for the planets all differ—could not exist before the necessary adjustments; or when the planets were shapeless masses entombed or conglobated in a nebula at rest, without magnetic or gravitating disturbance. We can imagine no period for the beginning of motion but that where we can trace it—Creation.

CREATION AND GEOLOGY.

What has greatly helped us in realising this fact is the discovery by our improved telescopes that all the bodies of the solar system have not a rotating motion, and that some of them have no seasons. Like our moon, the planets Mercury and Venus, and perhaps others, do not turn on their axis, except once in the full period of their revolution round the sun—their year. The axis of the planet Jupiter is almost perpendicular, so that his huge rotundity can have no seasons. One of the leading theories of evolutionists used to be that the planets were the conglobated matter belonging to the sun, and that they became spherical by the rotatory motion they received in common with all bodies connected with the central mass, like eddies in water. But this theory has now to be given up. The motions of the planets indicate a diversified origin. We know not where some of them have come from. The moon is evidently an older world than the earth and is not of the same physical or stratified constitution. There seems also to have been modifications or degrees of force employed for establishing their velocities in proportion to their distance from their primary, but not according to their density or size. For example, Mercury is much more dense than the earth, and not half so far from the sun, yet travels with nearly double the velocity; but Uranus is double the density of Saturn, and nearly twice his distance from the sun, yet moves more slowly. There can be no evolution in a reversed order like this. One more law of opposite character must be mentioned. The satellites of Uranus move in an opposite direction to those of other planets. We can therefore contend that motion is a selection of force suitable to the position of each orb in order to preserve the whole of them from collision; for it must be manifest that to have a number of large bodies in motion, without determining their respective orbits by the adjustment of their velosity, would smash up the whole system in less than twelve months. To avoid such an appaling catastrophe it is quiet as important to regulate them as we do our railway trains, particularly the smaller planets which interlace each other's orbits in probably a hundred places.

M. Piquot says we have no means for explaining the origin of motion and that Newton refused to regard it in any other sense than the act of the Creator. This is a true remark, but even if all planetary motion was of one character, just as we might suppose all flowers to be white, there would still be difficulty in referring motion to evolution.

We can give to geology—undetermined and confused as yet its standards are—all that it claims for duration; but it has had no days, seasons, or years of time, nor any plants or animals belonging to the epoch of Creation. It is somewhat remarkable that the early cuneiform records from Babylonia should state that prior to Creation there were monsters in the chaotic age. This is not found in the writings of Moses, and whilst it shows that the Chaldean records were written from traditions independent of the sources from which the Biblical records were obtained, it amounts to a confirmation of Creation as a subsequent event to a remote and rude condition of the world.

There is, however, a difficulty in accepting geology as a science, because science is a knowledge of the laws and constitution of things which now exist, and geology concerns what preceded them during immeasurable ages. Therefore everything belonging to prehistoric periods is irrelevant, and as the world is destined to receive, with us, a still higher application of creative power, present sciences must in their turn pass into oblivion.

We have no conception of voluntary and immediate creation; but we formerly had no compehension of the transmission of words in a few moments to our antipodes by electric currents, or transforming air into a liquid. We find that the Son of God performed creative work. He made the maimed whole. All the four evangelists tell us that he fed 5,000 persons with five barley loaves and two small fishes. We can only disbelieve this by supposing that these four evangelists were untruthful men, and that our present knowledge or science will never be surpassed by our successors.

EXAMPLE OF DATE BY METONIC CYCLE.

The astronomical character of the date of Creation is proved by the Metonic cycle, amongst others, as follows: The Luni-solar cycle is 7 years. The Metonic cycle is 19. As 7 times 19 are 133, every 133rd year has the same form as Creation year. Then by bringing down years in series of 133, we have a repetition of the first seven lunar years in our own time, namely, from Sunday, Sept. 20th, 1846, (which was 1st day of the 1st month, 5846th solar year) to Saturday, July 17th, 1852, both days inclusive. The result is, the moon in this period was new on the same days of the week that she was new in the first seven lunar years beginning with Creation. Any person can do this by following the directions given in the Eclipse Section of All Past Time under the heading "A Marvellous and Brilliant Result." By this we must admit that only men whose education stands on pagan astrology can doubt the sublime records of Creation, which are incessantly proclaimed before our eyes by all the phenomena of the skies. Let us hope that those who are responsible for the education of the young will see the mischief of putting exploded systems of error in the place of revelation and science.

CREATION AND EVOLUTION.—NEW SCIENCE.

Evolution is a theory and cannot survive the hard facts discovered by the Science of Time. It is a fad destroyed by the physical facts we now find at the epoch of Creation belonging to the constructive arrangements and laws which then formed and now govern the constitution of the world. I have already stated that no cycle of eclipses can be formed without beginning at the first day in Genesis i., and that at the epoch of Creation ten cycles of time started together. Owing to their various lengths, and their physical character, they have not resumed this unique position, nor could they get together prior to Creation without prescribed arrangement. Indeed as cycles of time are the result of planetary motion, it is a manifest conclusion that they could not begin before these motions began, and that they did begin with year 0 A.M. we see by finding them there beginning all abreast from that point. With this new science, old astronomy without measurements must be abandoned by men who wish to preserve their reputation.

It will readily be seen how we find these new scientific facts, because when we know the periods of astronomical phenomena, we can follow them back to Creation; but astronomy has been unable to do this owing to ignorance of Scientific time.

The reply to evolutionists is: How did the Antediluvian Solar-Lunar Cycle, which starts when Sunday was the 1st day of the month, begin when the solar and lunar years were abreast on that day? How also did this motion of the earth and the moon begin with the autumnal equinox and the Metonic cycle? Why did the "life-history" of a solar eclipse, which is 1262 solar years, begin when the nodes of the moon were in the centre of the year—the starting point of eclipses? How comes it that the moon was placed in the maximum position of her orbit when the sun was set in his on the equinoctial colure? Moreover, how did this occur when the line of the moon's apsides was in its normal position, parallel with the same line of the orbit of the earth?

These questions are capable of being multiplied: but there are two others which ought to be mentioned. The revolution of the perigee of the moon, like that of the node, is not uniform. It is subject to increased, and at other times to a diminished velocity, and as the earth is situated in the lower focus of the moon's orbit, her accelerated motion, when nearest to us, would in time cause her to be drawn towards the earth, so that there would be an end to all sublunary things, evolution included; but after this acceleration has completed its cycle, it becomes regressive.

If the orbits of the earth and planets were perfect circles, the perturbations arising from the "pull" of other orbs, would cause a revolving body to be drawn towards the sun, or travel further off, so that a collision would occur, or the regularity of the seasons, in the case of the earth, would be affected. To avoid such catastrophies, the planets describe elipses, or ovals, and the sun is placed in the lower focus, as will be seen by the annexed illustration which represents the orbit of the earth. The 12 spaces are the 12 months of the year, which are equal in volume, though not in length. They are indeed so equal that if the diagram were drawn on metal, and each section cut out, they would be found all of one weight. The earth travels over the widest sections in winter (I.) and is then nearest to the sun, moving with increased velocity. In June the earth (II.) travels slowest, and it is this varied motion which aids in preserving the earth in her proper path. Evolution could not provide an arrangement of this kind. The three foci are shown in the diagram, that in the middle being the orbit's centre.

These remarks will show that men who hastily run off with the theory of evolution have done so without scientific inquiry, and whilst challenging revelation have not been aware of the guns which, by Creation, are arrayed against them.
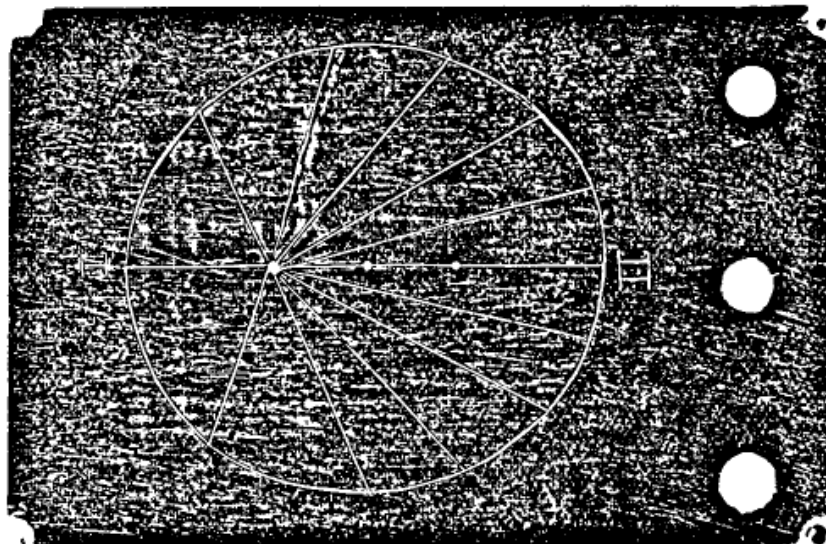
DO YOU UNDERSTAND THE FIRST CHAPTER OF GENESIS?

There are thousands of persons whose abilities do not enable them to understand the first chapter of Genesis. Yet there is no book which contains so much deep science in the same number of words. Of all the chapters in the Books of Scripture there is not one to equal it for its evidence of inspiration and Divine authorship. It is because this chapter is so high above the ordinary standard of human intelligence, and contains great scientific facts, that it is derided by the unlearned. If, a century ago, a man wrote in a book that a message could be sent seven times round the world in a second of time, or even that it was possible to sit in a carriage and travel 75 miles an hour, such a book would not have been understood. It would have been derided because the scientific character of the statements were at that time neither known or understood. Only recently all London was taken by surprise when a scientific lecturer, in a few moments liquified some of the air we breathe, and then freezed it so that it was weighed in scales. We had not previously known or understood anything like this. Men went home from these demonstrations musing on the possibility of the existence of many great mysterious things of which the human mind was yet ignorant. The first chapter of Genesis is full of them. The four right angles of 90° (360) by which the circle of the heavens is divided are first found there, also in Dan. vii. 25, as an eclipse "time."—3½ times are 1260.

It was recently stated by the writer of a letter in one of the London papers that the first chapter of Genesis was legendary. In reply to inquiries no proof could be obtained in support of the statement and it became a question whether this writer or the sacred text was to be believed. He then fell back on the supposed impossibility of the patriarchs living so long as Scripture recorded. He was now caught in the grip of the science he professed to support. He was first reminded that man was not created to die, and this was shown before the eyes of the world by the long lives of the line of patriarchs. The proofs were given. The years of the patriarchs, it was shown, both in respect to nativity and death, are marvellous records, inasmuch as they produce a line of time always in accord with astronomical periods. They are an incomparable record, for, notwithstanding their diversified character, if unitedly they had contained 48 days more, the line of time would not have worked on any scientific basis.

Now for the proof. We will take the birth of Arphaxed in 1658, because it is well proved by the Solar Cycle and is on the Eclipse Cycle. By referring to the Antediluvian Patriarchs in the First Line of Time, it will be seen that the Flood year, both by computation of the births of the patriarchs and the motions of the earth and moon, was the year 1656. We read that Arphaxed was born "two years after the Flood," which would be 1658. Now look at the Triple Eclipse Table, and in the 3rd col. it will be found that this 1658 was a year when the first eclipse in Creation year re-occurred. The columns are the date-repeating cycle of 649 years. In the 1st cycle, or col., the eclipse was in the year 360, in the 2nd col. (that is to say 649 years afterwards) it was in 1009, and in the 3rd the eclipse took place in 1658, the year when Arphaxed was born. Proceeding onwards to the right, on the same line, we have 2307, 2956, 3605, 4254, 4903,- and 5552. Now if the eclipse did not occur on the 1st day of the 10th month in the last mentioned year, the eclipses of the year 1894, A.D., could not take place in the months and dates mentioned in our Almanacks.

Now when we register the birth of a child, the year is given, not to prove that such a year had arrived, but that some particular child was born that year. Here, then we see that from the epoch of Creation to the birth of Arphaxed, there were not more nor less than 1658 years. It would be a fortunate affair if the birth of children, born in England, could be proved in the same way, that is by Solar Cycles and Eclipses.

In what way, then, does the "legendary tale" come in? On the line of presumptive ignorance. It is the tail of a head which has other prominent appendages, and it is unfortunate for these writers, that they often put their names to their letters.

The Creation in the first chapter of Genesis, as shown in other pages, is not only an historical fact which all human records confirm; it is also a sublime scientific statement demonstrated by every period of planetary motion that is known. Had Drummond known this he would have hesitated to challenge the initial chapter of revelation, for he would have found that the works and the word of God are inseparable. It has been the crude and baseless system of our astronomy which has left a field for weeds of error. We now plough them up. Not one of them will have room to grow. What has been wanted was better science and more of it. Science has been brought into disrepute by theories of contradiction. Sir Wm. Thompson has shown that the theories of geology are unscientific and impossible, and that the claims of geologists to knowledge of the physical grounds of their theories are presumptuous and inadmissible..

THE APPROACHING CLOSE OF THE PROPHETIC PERIODS.

Four Beasts and Mahommedans.	Gentile Times 2520	Jewish Times
Babylon 90		
Medo-Persian 200		
Grecians...... 304		
Pagan Rome 666		
The first 1260		
The Antichrist of Mahommedan power treading down Jerusalem 1260 years.		
The second 1260		
2520		

The Gentile and the Jewish Times are both of the same length, 2520 years, but the former began 30 years before the latter and therefore ends earlier.

It is remarkable that the four great empires lasted 1260 years and that the Saracens, with the flag of Mahomet, immediately succeeded the Romans.

Biblical Standards of Time:

360, a time, or 360 years
360, } times, or two times
360, }
180, half a time.
____
1260 years, enumerated as "days,"
1260 also enumerated as 42 months,
    being months of 30 days.
____
2520 years, or "seven times."

Mahommedans take Jerusalem. Same year 1st col.

The period "that day" occurs about 150 times in the Scriptures, and always in an emphatic sense, indicating the regeneration, restoration, day of the Lord Jesus, his time, my day which Abraham saw and was glad, the period when the Stone will break into pieces the kingdoms of the world, the harvest, the reward to his servants, the grand levee, the rapture of his appearing and kingdom—all of which point out that it is the 30 years from the end of the Gentile times in 5896¼ which will be 1898¼ to 1928¼.

3376¼ Babylonia as 1st Beast became universal Empire.
3406¼ Captivity of 70 years began.

3451¼ Daniel's vision of four beasts

3666¼ Alexander the "he goat," began. Dan. viii.

4029¼ Crucifixion.

Inner diagram (numbers and notes):

1290 years, Dan. xii. 11.
1260 solar years.
1290 solar years
4636¼
1185 solar years.
4636¼
1260 solar years
4636¼
2445 solar are 2520 lunar
2300 lunar years are 2230 solar. The sanctuary (Jerusalem) to be cleansed. Dan. viii. 14.
1222 solar years are 1260 lunar
645 do. do. are 666 do.
1926 Rev. xiii. 5, 18 do. do.
4029¼ crucifixion
See diagram 2nd, method iv.
1260 solar years Jerusalem trodden down, 638 to 1898

5926¼ — 30
5896¼ — 30
5896¼ — 30
5896¼ — 30 "My day."
5896¼ — 30 "that day," or period.
5926¼
5926¼
5926¼
5926¼

58964 is 1898¼ A.D. when Gentile times end, Turkey falls.

Period of 30 years, or "that day." Jews restored.

5926¼ is 1928¼ End of Jewish times, and date of Millennium.

FOUR METHODS INDICATING THE BEGINNING OF A NEW ERA IN 1898¼, A.D.
Drawn up by the Premier Chronologist (J. B. Dimbleby).

I.

Creation, year 0

Investigation shows that the year of Creation is an astronomical fact, 5888 years completed on Sept. 20, 1890, A.D. It brings all eclipses and transits down to those we see now and picks up old records.

For this date see 2 Sam. vii. 16. It 2963¼ is the everlasting kingdom which was promised to David, and was half way to the Restoration, 5926¼.

Years A.M.   A.D.
4029¼ is   31 Easter
4636¼ "   638 do.
5896¼ "   1898¼ do.
5928¼ "   1928¼ do.

Dan. xii. 11. Restoration, A.M. 5926¼

0
2963¼
2963¼
——
5926¼

II.

This central space gives the full "Times of the Gentiles," which end with 5896¼ which is 1898¼, A.D. and is formed of 2520 years (twice 1260) thus:

Babylon flourished 90
Medo-Persians do. 200
Grecians do. 304 } years
Romans do. 666

Total, the 4 beasts 1260 a.
Also Mahommedan 1260 b.
2520

Babylon universal empire by subduing Assyria. 3376¼

Saracens enter Jerusalem and stop true worship. See Dan. xii. 11. 4636¼

1898¼ A.D. Gentile era ends 5896¼ 30 years' judgments follow.

Eclipse line of time

2963¼ Years.   2963¼ Years.

3376¼
1260
4636¼
1260
5896¼

1898¼ A.D. 5896¼

III.

a. 1260
b. 1260
30
······1290······

3376¼
1230
4636¼
1290
5896¼

Dan. xii. 11.

3406¼ Captivity.

5926¼ "All dominions shall obey Him" 5926¼

IV.

The subjoined is another half-way event from its type to the work completed by the Restoration of the everlasting kingdom.

Abraham is to offer up his son Isaac. 2132¼ "Where is the lamb?" Gen. xxii. 7.

Crucifixion, the Lamb—4029¼ provided.

1897 years.
1897 years.

2132¼
1857
4029¼
1897
5926¼

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"Sir.—I am directed by the Royal Society to express their thanks for your 'All Past Time and Classification of the Eclipses,' and to assure you that the Society deeply appreciates this mark of consideration.   I have the honour to be,

Sir, your obedient servant,

To Mr. J. B. Dimbleby.   T. H. HUXLEY, (LL.D, &c., Secretary."

From the Royal Historical Society.

"The subject to which you have devoted your attention is a most important one, and the Council of this Society much commend your indefatigable labours.

London, July 31st, 1880.   CHARLES ROGERS, LL.D."
Secretary [at that date.]

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Memorial Hall, London Street, E.   EDWARD REGINALD WRAITH.
Dec. 16th, 1880.   Secretary [at that date.]

Encouraging letters have also been received from eminent scientific men, bishops, and public men, rejoicing in the achievement of this work.

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"This is a utilitarian age. Speciality is the order of the day. All work is done in departments, and all science is conducted in the same method. If we want the best information about the constitution of the strata of the earth, we should not go to the Royal Geographical Society, but to the Geological Society. In like manner, if we wanted to obtain the best means for improving our understanding of Chronology, we should not go to the Royal Astronomical Society, whose members are busy in ascertaining the parallaxes of stars and investigating the recesses of the universe, but to the British Chronological Association, where we should find men with all kinds of Cycles, not one of which is probably to be found in an observatory, and where men are to be met with who were born Chronologists and have a speciality for this particular department of science. With great respect to our professors of Astronomy, and the brilliancy of their achievements, to go to them on questions of years and time would be like taking a lady's gold watch to an engineer for repairs. Gifted as that engineer might be in his own great and useful department of knowledge, he would be unable to accomplish the work we want or have the requisite tools. This is a proper illustration, and the imperfect knowledge of Chronology in the minds of mankind is a proof of the correctness of the statement. Happily for us, men who are gifted in Chronology have in recent years been stimulated to bend their minds to a more detailed study of this science, and have worked and thought out various cycles of time on the stern principle of astronomical measurement. With these Chronologists can face a world of theorists. Such controlling cycles are like so many tools in the hands of a skilled artizan, and by them Chronologists have obtained results which Astronomers could not supply. At all events they have not done so. Chronology is the science which has pointed out the clock-like mechanism of the skies, detected the order of the eclipses, enumerated all the transits, and supplied mankind with practical and unerring means for testing the periods of the history of the world. The result is Chronology, as an 'exact science,' comes before mankind with a teeming harvest of new facts."