

# ECLIPSES.

By LADY BLOUNT.

"What causes the moon's eclipse?" is an oft repeated question; but even if eclipses could not be explained from a plane-earth standpoint, still it would *not* detract from the possibility of proving that the earth is not a revolving globe rushing away through space with an awful velocity. Furthermore, our inability to explain all heavenly phenomena would not prove the globular theory true. Readers should remember this; and after they have seen the proof of a plane and stable earth, nothing whatever should shake them from it.

But if the above question be asked from a desire for further light on the subject of God's Creative Works, then it is quite in place, and even laudable.

In the first place I would state that it does not necessarily follow that, because we have proved (both from a Scriptural standpoint and from practical proofs) that the hypothetical shadow of the earth upon the moon is a false and baseless assumption, and that it is not and cannot be the cause of its so-called *eclipse*, therefore, we must produce some other cause for this phenomenon. But many seem to think that if we fail to do so, we consequently fail in proving our main contention, viz.: that the earth is not a whirling globe or "planet."

Yet would it not be folly on our part to attempt to follow our opponents' example by building up and establishing another hypothesis upon the ruins of that which we have just dismantled? Yes, it would! For the vivid object lesson of indiscretion which is before our eyes when we behold our opponents' position, should warn us from following their example, and ever deter us from rashly endeavouring to enthrone unproven hypotheses upon the pedestal of truth.

Therefore, speaking personally, although I may make suggestions for the due consideration of those who are competent to investigate them, nevertheless, I shall stren-

uously avoid the folly of building up another foundationless reason for the moon's eclipse upon the ashes of our opponents' baseless hypothesis.

Now it would be well to remember a known fact, and one I would impress on all our friends, viz. : that eclipses were calculated long before the Copernican theory was taught; and much longer still before that theory was "established."

For instance, Prof. Olmsted, in his work on the *Mechanism of the Heavens*, says :

"It is not difficult to form some general notion of the process of calculating eclipses. It may be easily conceived that by long continued observations of the sun and moon the laws of their revolution may be so well understood, that the exact place which they will occupy in the heavens at any future time may be foreseen and laid down in tables of the sun's and moon's motions, that we may thus ascertain by inspecting the tables, the instant when these bodies will be together in the heavens, or be in conjunction."

This being so, it follows that eclipses whether of the sun or moon are calculated not on any theory of the shape of the world, or on the theory of its so-called motion, but upon an observed sequence of events.

Wherefore, those people are wrong who argue that because astronomers can foretell eclipses, *therefore* their theory of a rotating earth must be correct.

**The Egyptians and Chaldeans calculated eclipses beforehand for hundreds of years, yet our modern astronomers would not thereby own that their theories of the universe were correct.**

On the same lines we deny that it follows as a matter of course, that the theories of modern astronomers are correct, because they can foretell eclipses. As I have many times pointed out, the behaviour of the heavenly bodies forms no logical basis as to what is the shape of the earth.

But these professors pretend 'tis the greatest assumption  
For anyone to have the "audacity," and bumpion—  
With mere common-sense and ordinary gumption—

To question *their* planet-earth "science" at all!  
But why? Tell us, why? When we ask science-men most kindly, to try,  
To give us some proofs—not up in the sky!—  
But practical proofs that no man can deny—  
"They of proofs based on facts seem both wary and shy!  
But why? We ask them, why?"

Some arrogant globites too frequently bawl,  
 "You planists can't explain eclipses at all ;  
 This upsets your teaching, so down it must fall  
 With the errors of Moses"—I reply,  
 Eclipse calculations on tables were wrought,  
 Long before the Copernican theory was taught,  
 And so this one *Fact* brings your boastings to naught,  
 And your theories I humbly deny !

But a rule I will give for eclipse calculations,  
 Comprehensive and clear from all lines and all stations,  
 Without mathematics or mystic rotations,  
 Which every Zetetic may learn.  
 A cycle of eclipses will furnish the key,  
 For the past nineteen years, and there you will see,  
 That each eighteen years (and eleven days) as near as can be  
 The same set of eclipses return.

Regarding eclipses of the moon and the sun,  
 Our "scientists" modern, in false colours run,  
 Deck'd with honours they've pilfered, or not fairly won,  
*But let it forever* be known—  
 To Antediluvians this honour should stand,  
 Through Adam, received from the Creator's own hand,  
 And Josephus tells us that, by God's command,  
 Seth wrote those eclipse tables on stone.\*

The Law of the Lord is reliable, sure,  
 The Creator's description is perfect and pure,  
 And the Word of our God shall for ever endure,  
 While the wisdom of worldlings shall fall :  
 And heaven's "above," saith the Lord, the Most High,  
 The earth is "beneath" the grand dome of the sky,  
 And "under the Earth" is the "water," then why  
 Believe in the infidel's "ball" ?

Professors of modern whirling-globe "science," and their followers, are constantly asserting in numerous private letters to myself, and in printed letters, that their eclipse calculations prove their position to be true, but when I simply ask them how they can establish or prove

---

\*The knowledge of astronomy, or rather, as it was then called astrology, was imparted to man before the nations existed. And Josephus informs us that Seth having received instructions in its principles from Adam, foreseeing the Flood, engraved the rudiments of the science upon two permanent pillars of stone, which he (Josephus) had himself seen. And he says that the science was taught by Enos and Noah, who preserved it to the days of Abraham. Eusebius states that Abraham was thoroughly versed in the Chaldean Astrology (it then being one and the same thing as Astronomy), and Aristotle says that the Chaldean Magi were prior to the Egyptian priests, who were contemporaneous with Moses. Parallax informs us that "tables of the phases of the sun and moon, of eclipses, and kindred phenomena, have existed for thousands of years, and formed independently of each other by the Chaldean, Babylonian, Egyptian, Hindoo, Chinese, and other ancient astronomers ; and this was long before the globular theory was accepted."

their claim—it being a known fact that the Ancients foretold eclipses as well as the moderns?—then they are dumb, for proofs of their claims are not forthcoming.

For knowledge of the shape of the earth we must come to the earth itself, and carefully examine its surface, or the surfaces of long stretches of still water. This has been done again and again by Zetetics, in England, America, and other countries, and with the same result generally. My recent telephotographic experiment proves beyond doubt that *water is level*—(see my pamphlet, entitled *The Horizontality of Water*) wherein I show how I have proved unquestionably that the earth is a plane.

But whether we can understand eclipses or not, we should be like the old puritan spoken of by Dr. Smiles, in his book on Duty. He says: “An eclipse of the sun happened in New England about a century ago. The heavens became very black, and it seemed as if the day of judgment was at hand. The legislature of Connecticut happened then to be in session, and, on the darkness coming on, a member moved the adjournment of the house, on which an old Puritan legislator—Davenport of Stamford—rose up and said, that if the last day had come he desired to be found in his place, and doing his duty, for which reason he moved that candles should be brought so that the house might proceed with its business. Waiting at the post of duty, was the maxim of wise men.” He carried his motion.

Another fact in connection with eclipses may be referred to, viz.: both the sun and moon have been seen above the horizon at the time of an eclipse of the moon, and this phenomenon would, we believe often be observed were we at an elevation suitable for observation.

I will give two dates on which this phenomena was witnessed: April 20th, 1837; and April 22nd, 1902. Sir Henry Holland quotes the former in his *Story of the Solar System*, and the latter occurred while Mr. John Smith, in company with Mr. G. J. Shackleton, myself, and others, were driving to Todmorden, near Halifax, to speak on Scriptural Cosmogony. Mr. John Smith asked me to refer to this phenomenon in my lecture, which I did: and prominence was given to it in the newspapers.

Other instances of the occurrence of this phenomenon might be quoted, but, if only once observed, it is sufficient to prove that when the moon is eclipsed it is not by the earth's shadow, but by some other cause. It may be

through some dark body or shadow coming over its disc, and thus obscuring its light.

There are other reasons which could be given against the astronomical explanation of the moon's eclipse, but the above is quite sufficient to discredit that explanation to a logical and truth-seeking mind. The astronomers try to shroud the whole affair in mystery and mathematics. True astronomy should consist of the tabulated facts of observation, in short it should be a science of observation. But astronomy consists largely of a system of mathematics applied to unreasonable and varying hypotheses. The late Mr. P. J. Morrison, F.A.S.L., Commander R.N., in his *New Principia*, says :

"Eclipses, occultations, the positions of the planets... may all and every one of them be as accurately, nay more accurately known without the farago of mystery mathematicians have adopted to throw dust in the eyes of the people, and to claim honour to themselves, to which they have no just title."

I will give a simple rule by which any intelligent Zetic<sup>v → 1</sup> can calculate eclipses for himself. Let him first obtain a table of eclipses for the past 18 or 19 years. This he might get from a number of old almanacs, and tabulate himself. Then all he has to do is to remember that the same set of eclipses re-appear in order after the expiration of 18 years 11 days, 7 hours, and about 43 minutes; that is 18 years, 11 days, and about a third of a day. It is a few minutes less than a third of a day; and it is these few minutes less which have enabled the astronomers to shroud eclipse calculations in mystery and mathematics.

If this 18 year period consisted exactly of  $6,585\frac{1}{3}$  days then it would easily be seen that the same set of eclipses would recur in the same longitude, so that almost any educated person could foretell eclipses for such a period. But as I have shown, the period covered makes the calculation a little more intricate, and thus affords the astronomer an opportunity for bringing in the mystery of mathematics.

The astronomers themselves sometimes admit that eclipses go in cycles, and that they may be grouped in a series of about 18 to 19 years. This period is known as the Saros cycle. Of course there are some slight variations which cannot be dealt with in a general article, but the Saros cycle is a well-known eclipse cycle, and was known to the ancients, from whom we have received it. This cycle is subject to some insignificant variations, and these variations make a double cycle. The progress of such a series over the different parts of the earth, is described by Mrs. Todd :

"The advent of a slight partial eclipse near either pole of the earth will herald the advent of a new series. At each succeeding return, conformably to the series, the partial eclipse will move a little farther towards the opposite pole, its magnitude gradually increasing for about 200 years; but during all this time, only the lunar penumbrae will infringe upon the earth. But when the true shadow begins to touch the obscuration will have become annular, or tolerably near the pole where it first appeared. The eclipse has now acquired a track which will cross the earth slightly farther from that pole every time it returns for about 750 years."

This shows that the variations in the Saros cycle, themselves, form a cycle, but it will be sufficient if we give an illustration of the Saros cycle, so that my readers may learn practically to calculate eclipses themselves within certain limits.

The following series of eclipses is copied from the *Story of Eclipses* by George F. Chambers, F.R.A.S.

#### HALF A SAROS, OR NINE YEARS.

Time of	Eclipse	Approximate mid-interval.	Time of	Eclipse	Approximate mid-interval.
1894			1898		
Mar. 1	moon } sun } moon } sun }	Mar. 29*	Dec. 13	sun } moon }	Dec. 27*
April 6			" 27		
Sept. 15		Sept. 29**	1899		
" 29			Jan. 11	sun } sun } moon }	June 15**
1895			June 8		
Mar. 11	moon } sun }	Mar. 18*	" 23	moon }	Dec. 9*
" 26			Dec. 2	sun }	
Aug. 20	sun } moon }	Sept. 4**	" 16	moon }	
Sept. 4			1900		
" 18	sun }		May 28	sun }	June 5**
1896			June 13	moon }	
Feb. 13	sun } moon }	Feb. 20*	Nov. 22	sun }	Nov. 22*
" 28			1901		
Aug. 9	sun } moon }	Aug. 16**	May 3	moon }	May 10**
" 23			" 18	sun }	
1897			Oct. 27	moon }	Nov. 3*
Feb. 1	sun }	Feb. 1*	Nov. 11	sun }	
July 29	sun }	July 29**	1902		
1898			April 8	sun }	April 22**
Jan. 7	moon }	Jan. 14*	" 22	moon }	
" 22	sun }		July 10**	May 7	sun }
July 3	moon }		Oct. 17	moon }	
" 18	sun }		" 31	sun }	

He further says, that the "Epochs in the last column, marked with \* or \*\* as the case may be, represent corresponding nodes, so that from any one single star-date to the next nearest star-date means an interval of one year, less (on an average) the  $19\frac{2}{3}$  days spoken of."

That is, the shifting of the nodes of the moon displaces the eclipse season backwards by about twenty days. If, for instance, we took the eclipse seasons which fell in June and December, 1899, the middle of the eclipse season for the next 20 or 30 years will be found by taking the dates June 8th and December 2nd, and working the months backwards by  $19\frac{2}{3}$  days for each year. When we examine the succession, comparing the dates, we shall see the practical retrograde movement of the eclipse times.

Mr. Dimpleby has also shown that the eclipse cycle is useful for chronological purposes.

It has been demonstrated that an eclipse of the moon arises not from a shadow of the earth. It would be an impossibility for the earth to come between the sun and the moon, because *the earth is not a heavenly body*; and we are also told by the Creator Himself, in the second Commandment, that

"Heaven is ABOVE,  
The Earth BENEATH,  
And Water UNDER the earth."

Alas! many scientists—so-called—and adepts in this world's wisdom, hold God's Word in very light esteem, as even the following, from *Things to Come*, edited by Dr. E. W. Bullinger, will portray—

"NEARING THE END.—In *The British Weekly* (Nov. 14th, 1901) R. J. Campbell, of Brighton, recommends an Inquirer about Inspiration to read Dr. Clifford's work on that subject, and recommends Canon Cheyne "as a distinguished Biblical scholar." In the *Nineteenth Century Magazine* for January, 1902, Canon Cheyne practically endorses Winkler's view that Abraham was not a historical personage; that Abraham, Isaac, and Jacob, are lunar heroes; that Sarah is the counterpart of Istar (the moon-god) the wife of Tammuz, and therefore Abraham's wife. When scholars thus agree with Winkler's Textual Criticism, Canon Cheyne says, 'we are not bound to tell the least advanced Bible readers everything.' (!) Thus is fulfilled

2 Tim. iv. 4: 'They shall turn away their ears from the truth, and be turned unto fables' (Greek, 'myths')."

But to return to Eclipses. We observe that it is not the shadow of the earth which causes the eclipse of the moon. We may not be able to tell with certainty what it is, though notable men among us have made likely suggestions. "Zetetes" thinks that the moon's eclipse may be caused by its getting into a focus of thick darkness, which revolves around and over the earth in opposition to the sun.

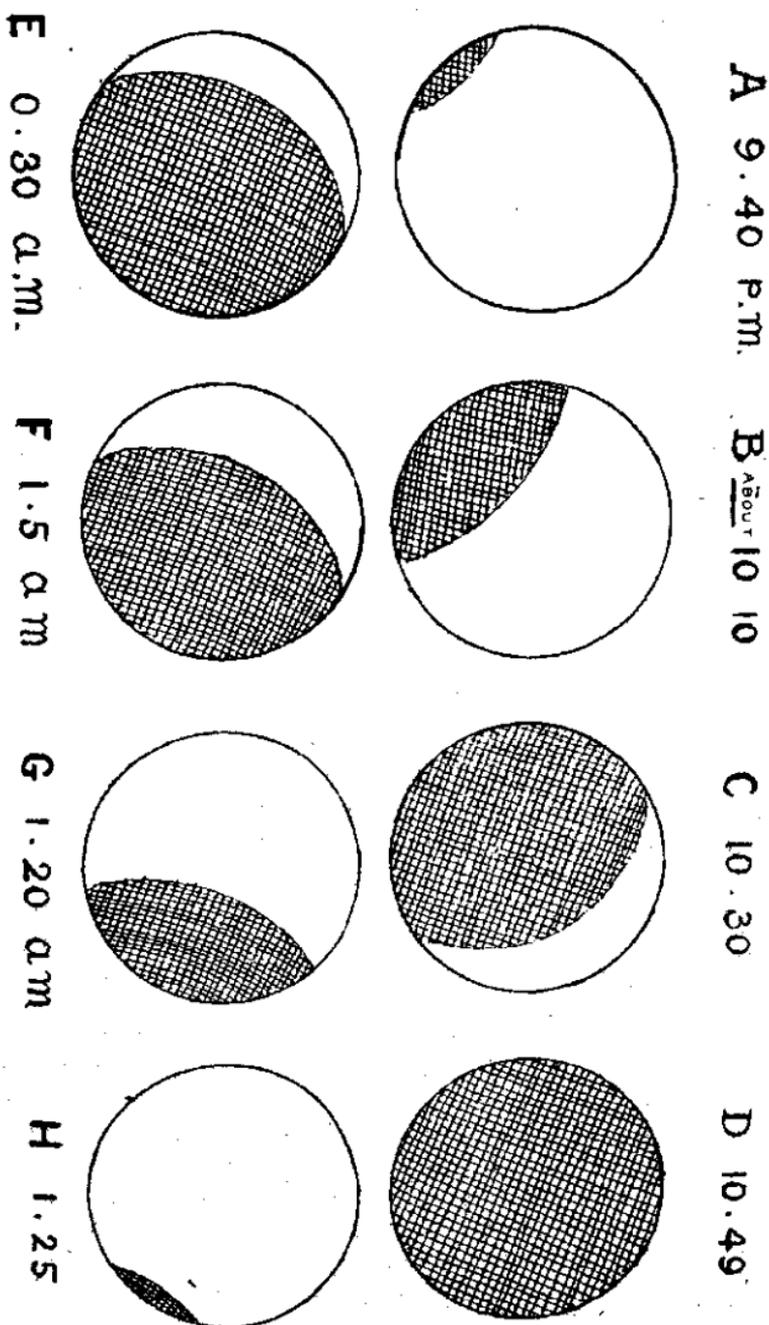
Of course as regards a solar eclipse it is the result simply of the moon passing between the sun and the observer on earth.

"Parallax" states that "tables of the phases of the sun and moon, of eclipses, and kindred phenomena, have existed for thousands of years, and were formed independently of each other by the Chaldean, Babylonian, Egyptian, Hindoo, Chinese, and other ancient astronomers; and this was long before the globular theory was accepted. Modern science has had nothing to do with these tables further than rendering them a little more exact, by averaging and reducing the fractional errors which a longer period of observation has detected." Therefore the power to forecast eclipses does *not* prove the truth of the globular theory which is condemned already on other grounds.

Having intimated in a general way how we may know when to expect the various eclipses in a cycle of about 18 to 19 years, we will proceed to discuss the phases of a single eclipse, as viewed from a situation almost central in England, by Mr. Albert Smith, who has also made further observations for me. This will give Zetetics generally, an idea how to observe eclipses, and how to make drawings and observations of the same without the aid of telescopes, etc. Of course, it would be better for those who have telescopes to use them, as the observations would be more accurate. But, even with the naked eye, we think that observations of an eclipse of the moon can be made with sufficient accuracy to show that the phenomenon is not altogether consistent with the globular theory and the hypothesis that it is the shadow of the earth which crosses the moon's disc.

The date, on which the following observations and drawings were made, was December 27th, 1898, on the occasion of the total eclipse of the moon, visible at Greenwich; and I have lettered the various drawings, A, B, C, etc., for convenience.

The magnitude of this eclipse was 1.383; that is, taking the moon's diameter as 1.0. It occurred of course at the time of full moon, as all eclipses of the moon, of whatever magnitude, always take place at the time of full moon.



I may cull the following items respecting eclipses from the Ephemeris, or almanacs for that year.

#### ITEMS REGARDING THE ECLIPSE.

Time.	Dec. 27th, 1898.
8.26 p.m.	—First contact of the penumbra.
9.39 „	— do. do. 'shadow.'
10.49 „	—Beginning of totality.
11.34 „	—Middle of the eclipse.
Time.	Dec. 28th.
0.18 a.m.	—The end of the total phase.
1.28 „	—Last contact of the 'shadow.'
1.41 „	— do. do. penumbra.

The sun was in the celestial sign Capricorn, about the 6th degree; and of course the moon was about 6° of Cancer. The moon was on the east of the meridian of Greenwich when the eclipse began. At 9.40 p.m. there was a small but distinct shadow, or darkening, visible on the moon's lower limb towards the left hand side, as indicated in the diagram below, at A. About 10.10 p.m. the shadow had enlarged as at B. At 10.30 p.m. it covered about three-quarters of the moon's face, still travelling upwards and towards the right. And at 10.49 p.m., when the moon was nearing the meridian, totality commenced as shown at D.

Now if the earth were a globe, and if the earth's shadow crossing over the face of the moon were the cause of the eclipse, as astronomers affirm, we should expect the shadow to pursue its journey across the face of the moon in the same general direction in which it started, that is from the left hand side towards the right and upwards. In this case the light part of the moon, after the total, would follow the direction of the shadow as in A, B, C, D. But the shadow did not so behave itself. It seemed to be at no pains to accommodate itself to astronomical teaching. Nay further, it positively behaved itself in an unseemly manner in regard to astronomical theories, as will be seen on referring to the diagram E, F, G, H.

There are other points relating to these eclipses of the moon, which further bear out our contention; but surely the above is sufficient, for any candid enquirer; and to show that it cannot be the shadow of the earth which is the cause of the eclipse of the moon. We think it is sufficient for our present purpose that we have proved

that the eclipse of the moon when carefully observed, not only affords no proof of the whirling globe theory, but that the phenomenon when properly observed and understood is seen to be inconsistent with that theory.

We used to be told that ships having sailed round the world proved it to be a globe, but, as I have shown, this circumnavigation 'proof' has been exploded.

Richard A. Gregory, F.R.A.S., in his book entitled *Elementary Physiography*, although he appears to hold the common belief that the path of a ship is necessarily spherical, at the same time admits that circumnavigation in an easterly or westerly direction does not prove the earth's surface to be globular.

So it also seems that the "shadow of the earth upon the moon" proof is on its last legs; and we hope ere long to see it openly admitted that the periodical lunar eclipse (even as it has been admitted regarding circular sailing) is "no proof of the earth's globularity" printed in books for instructing the young; for at last some of our opponents are *beginning* to realize the fact that the sun and the moon having been both seen above the horizon at the time when a lunar eclipse occurred, proves, *even from their stand-point*, that it is *not* the shadow of the earth which causes the so-called eclipse of the moon. If the sun and moon have ever been seen above the horizon at the same time during an eclipse of the moon, it is a proof that it is not the shadow of the earth which eclipses the moon.

The following diagram illustrates my statement.



Let A be the earth and its horizon, and let B be the moon, and C the sun. Now it is evident that any shadow cast by A could not fall upon B but would fall below at D, because shadows always fall directly opposite to the light, and as the light comes from C to A the shadow from A could not fall upon B but must be cast towards D. Therefore an eclipse of the moon under such conditions proves that the earth cannot be a globe.

Planists cannot for a moment admit that it is the shadow of the earth which is cast upon the moon, for we deny, that the earth is a heavenly body. We may, or may not be able to say what this 'shadow' is with certainty. We are not above saying that 'how' or 'why' God darkens or eclipses the moon may be as "inexplicable a mystery to us as is the growth of a blade of grass." Our Lord's words regarding the Holy Spirit, when He said: "The wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh, or whither it goeth. And so is every one that is born of the Spirit," should bring us to remember that God hath not yet revealed unto us the "whys" and "wherefores" of all things.

"An eclipse of the moon" (wrote Professor Lynn, of the Greenwich Observatory) "is in many respects a different phenomenon from one of the sun; for whereas the moon's shadow sometimes does not reach the earth, and when, from her greater proximity, it does reach our globe, it can at most cover only a zone of about 170 miles in diameter, the duration of totality of an eclipse can never exceed eight minutes; but the earth's shadow extends far beyond the distance of the moon, and when the latter is centrally eclipsed, the complete obscuration exceeds an hour-and-a-half, and may last as much as an hour and fifty minutes."

If there was any truth in the theory that an eclipse of the moon is caused by the earth intervening between the sun and the moon, and the earth is reckoned to travel 1,100 miles each minute, while the moon is travelling 180 miles per minute—then the earth could not be four minutes passing the moon; yet the eclipse of the moon on February 19th, 1905, from the first to the last contact, lasted 2 hours and 13 minutes, and one in February, 1893, lasted  $4\frac{1}{2}$  hours, and both luminaries were above the horizon when the eclipse commenced.

After the lunar eclipse of February 19th, 1905, one of the London papers re-echoed the oft-quoted statement that "astronomers can, by their calculations, forecast the position of any luminary, at any time, for many years to come. By this means they can foretell to a second the commencement, duration, precise aspect, and the ending of all eclipses that will occur for a lifetime hence—and more—without limitation. Such being the case, the theories upon which they are based must be true, or the correctness of such calculations would be impossible."

I have already exposed the fallacy of such arguments as

the foregoing. But ere passing on, I would remind all who read this page that eclipses ever afford silent and unassailable evidence, on our side, of the highest value, for proving that the old astronomy was true: for, as I have before stated, as a matter of fact, eclipses, occultations, the grand phenomenon of the sun's course, and the return of the comets, were all of them, long before globular astronomy was foisted upon popular credulity, discovered and acted upon. More than 2,000 years ago the Chaldeans presented to Alexander the Great, at Babylon, tables of eclipses for 1993 years. The ancient Greeks made use of the cycle of 18 years and 11 days: the interval between two consecutive eclipses of the same dimensions.

Such being the case, it is throwing dust into the eyes of the people for present-day editors or astronomers to pose as if *they, only, by their calculations* of the movements of the various orbs in the firmament, can measure the time when there will be a lunar eclipse, when it is not a question of measurement, but simply the keeping of records of past observations, so as to see when there is a recurrence of an eclipse cycle. Of course the continued sequence of close observations is not only resultant in confirming the accuracy of data handed down from the earliest ages, but it leads to further reliable data. All lines of truth blend in perfect harmony both in spirit, and in fact. But when two hypotheses are distinctly inconsistent with each other, one or both of them must eventually be discarded. It is true that in certain cases hypotheses which have proved to be untenable may, for a time, be serviceable as working hypotheses, in a secondary sense, as mere devices for holding together facts which have been collected by means of, or with reference to, them. So long as they are used for this purpose alone, and with the clear understanding that they are not propounded for any other, there can be no serious objection to their use: but it is otherwise when the specialist seeks to obtrude his own particular hypothetical figment as a finality upon science generally and to make it the basis of assertions respecting the ultimate constitution of things, and universal order of Nature.

The universal ether cannot be soft and mobile to please the chemist, and, at the same time, rigidly elastic to satisfy the physicist. Nor could it be continuous at the command of Sir William Thompson (now Lord Kelvin), and discontinuous on the suggestion of a Chaucy or Fresnel; but if we are ever to discover the laws of nature—which are the “thoughts of God”—we must do so by ob-

taining the most accurate acquaintance with the facts of Nature observed by our God-given senses; *e.g.*: it is a "fact" that the tides vary during the different phases of the moon; but in certain localities it is high water directly under the moon, and low water in other similar localities, with variations all round the coasts of the United Kingdom and elsewhere. It consequently follows that the hypothesis *re* the moon being a tide-producer must be discarded; but we may retain the working hypothesis on account of the moon's phases being useful guides as to local tides. The moon's motions may to some extent be *co-incident* with certain tides, and yet not be the *cause* of them. It may be a case of the Goodwin Sands and Tenterden Steeple, and it would be just as reasonable to argue that the tides were the cause of the lunar motions instead of the consequence.

The electro-magnetic currents in connection with the ethereal vortices in which the sun, moon, and other orbs, move over and around the world, provide us with evidence to show that there is no need for assuming that universal attraction exists. Our common-sense tells us that "universal attraction" is a *non-sequitur*, *i.e.*, "an inconsequential proposition;" while the known and practical forces of electricity and magnetism are quite sufficient to account for all celestial phenomena.

The vortices of Descartes occupied the attention of the learned for nearly a century, and although Newton's book on Principles (*Principia*) was published in 1687, Fontenelle—one of the Forty belonging to the French Academy, and Secretary to the Academy of Sciences—always retained his educational credence in favour of the vortices.

Professor Hovenden says that when an atom or molecule in the liquid condition increases to a certain volume under a given intensity of flow of ether it *suddenly* absorbs a considerable quantity of ether and becomes a vesicle of ether. This is the gaseous condition of the atom or molecule. Vapours are atoms or molecules in the gaseous condition super-saturated with ether. In consequence of the internal pressure exceeding the external pressure they are usually spherical or spheroidal, or tend to these conditions of form. Ether being incompressible, and all other atomic and molecular matter being capable of expansion, contraction, and conduction, it follows that there must be a potentiality in ether to pass into, through and from atoms and molecules. When this takes place without increasing or decreasing the dimensions of the atom or molecule, it assumes the condition of radiation. Matter without ether.

or with a minimum of ether, would, as it were, sleep; and the world in such a condition would be dead.

The conception of the physicist is that the motion of the particles of which matter is built up is called "heat." Boyle, Hooke, and Lock, considered heat to be motion—as Tyndall pointed out in his book:—"Heat: a mode of motion;" but electricity is designated a "mode of motion." It is however evident that some forms of electricity have not heat as a resultant.

If motion on the part of a body generates heat—"how is it that the moon, in its motions, does not generate, or give out heat—whereas the sun's rays are always accompanied with heat?"

The logical deduction of the last paragraph is that the two "light-holders" (the sun and moon) cannot but be different in their constituents. If the moon reflected the light of the sun it must also reflect its heat; but we know, as an indisputable fact, that moonlight is cold, and the nearest approach to moonlight is phosphorescent light. This light of the moon is generated from within itself, and, in its differentiated phases, the proportions of the surface illuminated necessarily vary.

Under ordinary conditions ether is, like most gases, invisible, or (to use the term proposed by Tyndall) both ether and gases are generally "optically empty;" if they were not so, then objects in stellar space could not be seen; and when vibrating at a certain intensity luminiferous ether is the result.

If in an analyzer charged with notes an illuminated beam of light enters from a lantern, and lower down a jet from a lighted spirit-lamp passes into an aperture of the analyzer a mass of "black something," which consists of molecules of gases super-saturated with ether and free ether, will be the result of chemical re-action. The only possible notion the mind can grasp in order to understand the physical re-actions called "chemical combination" to form a free object, is to know that when the vesicles of ether are expanded to certain dimensions they overwrap each other in a concentric manner: but if we take a mass of incandescent vibrating molecules such as we have in a lighted lucifer-match, an outer zone is formed and goes on increasing for a time until it disappears.

Personally, I believe that, the moon, being a phosphorescent body, and, possibly, possessing all the potentialities of generating within itself vapours which periodically assume the shape of "shadows" over her face. These

shadows, which are called "eclipses," not only mark the periods and progress of time from creation with unswerving punctuality, but each recurrence of this phenomenon should remind us that we are one point nearer to the time when He whose word is greater than that of any human astronomer has said "the sun shall be darkened, and the moon turned into blood," or, "shall not give her light," before the great and notable day of the Lord come." When this prophecy comes to pass, it will afford final proof that the moon shines with a distinct light of her own, and is not—as stated by the upholders of modern "science"—a mere reflector of sunlight.

The following letter refers to our subject :

To the Editor of *The Earth*.

Madam,—In your Exeter Hall address you stated that you "were of opinion that eclipses of the moon arise from the moon itself." Is it not a fair question to ask, that if Sir Robert Ball can show us how the moon causes the tides, with high and low water,—is it not probable that what he says as the cause of the moon being eclipsed is correct?

#### REPLY TO LETTER.

In answer to your question I would state that it does not necessarily follow that because a man can answer a question correctly on one point that he must be correct on every other. Besides I do not believe that Sir Robert Ball can "show us how the moon causes the tides." He has never shown "how" this is done, and if he attempts to do so on lines which are based upon, and in harmony with his scripture-contradicting ideas about a globular and rotating earth (and sea) ball, his efforts could only lead to results which are discordant with the Bible and reason.

But at the same time, I wish it to be distinctly understood that while I should essentially regard everything that is founded upon the whirling globe hypothesis simply as the offspring of fallacy: nevertheless I do not deny the fact that secondary calculations will agree with primary calculations—if correctly reckoned. But this fact affords no proof that the former are based upon truth.

Sir R. Ball asserts that the moon does cause the tides, but I have not yet seen in any of his writings that he explains "how" it is done. Can you show us "how" it is done by the moon? Until either he, or his disciples can show this, your question has no force.

If you can find the required explanation I shall be glad to receive it from you, and then answer your question further.

Sir Robert Ball, in his book, *Time and Tide: a Romance of the Moon*, says on pp. 18 to 24: "That the moon should pull the water up in a heap on one side seems plausible enough. High tide of course will be there; and the student might naturally think that the water being drawn in this way into a heap on one side, there will of course be low tide on the opposite side of the earth. A natural assumption perhaps, but nevertheless a wrong one. There are at every moment two opposite parts of the earth in a condition of high water; in fact, this will be obvious if we remember that every day, or, to speak a little more accurately, in every 24 hours and 51 minutes, we have on the average two high tides at each locality. Of course this could not be if the moon raised only one heap of high water. The first question then is, as to how these two opposite heaps of water are placed in respect to the position of the moon. The most obvious expectation would seem to be that the moon should pull the waters up into a heap directly underneath it, and that therefore there should be high water underneath the moon. As to the other side, the presence of a high tide there was, on this theory, to be accounted for by the fact that the moon pulled the earth away from the waters on the more remote side, just as it pulled the waters away from the more remote earth on the side underneath the moon. It is, however, certainly *not* the case that the high tide is situated in the simple position that this law would indicate."

In continuation of the subject Sir R. Ball goes on to say: "I take the fundamental issue so often debated as to whether in the ocean, vibrating with ideal tides, the high water or the low water should be under the moon..... If the ideal tides were in any degree representative of the actual tides, so fundamental a question as this could be at once answered by an appeal to the facts of actual observation..... But a study of the tides at different ports fails to realize this expectation. At some ports, no doubt, the tide is high when the moon is on the meridian. In that case of course, the high water is under the moon, as apparently ought to be the case invariably, on a superficial view. But, on the other hand, there are ports where there is often low water when the moon is crossing the meridian. Yet other ports might be cited in which every intermediate

phase could be observed. If the theory of the tides was to be the simple one so often described, then, at every port, noon should be the hour of high water on the day of the new moon or of the full moon, because then both tide-exciting bodies are on the meridian at the same time. Even if the friction retarded the great tidal wave uniformly, the high tide on the days of full or change should always occur at fixed hours; but, unfortunately, there is no such delightful theory of the tides as this would imply. At Greenock no doubt there is high water at or about noon on the day of full or change; and if it could be similarly said that on the day of full or change there was high water everywhere at local noon, then the equilibrium theory of the tides, as it is called, might appear beautifully simple."

But this is *not* the case. Even around our own coasts the discrepancies are such as to utterly discredit the theory as offering any practical guide. At Aberdeen the high tide does not appear till an hour later than the doctrine would suggest. It is two hours late at London, three at Tynemouth, four at Tralee, five at Sligo, and six at Hull. This last port would be indeed the haven of refuge for those who believe that the low tide ought to be under the moon. At Hull this is no doubt the case; and, if at all other places, the water behaved as it does at Hull, then it might follow that the law of low water was generally true. But then this would not tally with the condition of affairs at the other places I have named; and to complete the cycle I shall add a few more. At Bristol the high water does not get up until seven hours after the moon has passed the meridian, at Arklow the delay is eight hours, at Yarmouth it is nine, at the Needles it is ten hours, while lastly, the moon has nearly got back to the meridian again ere it has succeeded in dragging up the tide on which Liverpool's great commerce depends. Nor does the result of studying the tides along other coasts than our own decide more conclusively on the mooted point. Even ports in the vast ocean give a very uncertain response. Kerguelen Island and Santa Cruz might seem to prove that the high tide occurs under the moon; but unfortunately both Fiji and Ascension seem to present us with an equally satisfactory demonstration that beneath the moon is the invariable home of low water."

It would puzzle a Zetetic to give a more sweeping condemnation of the theory that the moon is the tide producer, than Sir Robert Ball has given in the quotations I have now produced from his own book. His statements in these

extracts prove that the tides in different localities rise at specified times during the lunar month; and the moon being the great clock of the universe the times of such tides may be calculated by the moon's phases. That is all—and nothing more.

Consequently Sir R. Ball does *not* show "how" the moon causes the tides, with high and low water. And it follows as a natural sequence, that it is *not* probable that what he says is the cause of the moon's eclipse can be correct; in fact it amounts to an absolute certainty that the shadow of the earth cannot fall on the moon and cause an eclipse.

In reply to questions put by another correspondent: There are regular spring tides and neap tides. The ordinary tide consists of an apparent rising and falling of the waters of the ocean, due to the heaving of the earth, like a sort of breathing. The spring tide is the full tide, or the tides at their greatest; these are thought to be due to the attraction of the sun and moon because they occur at the time of the full moon. But they cannot be due to "attraction," because the moon at full is in opposition to the sun, and so ought to be "pulling" or dragging in the contrary direction; and two contrary forces tend to nullify each other.

Neap tides occur when the moon is in square aspect (*i.e.*, at right angles) to the sun; that is at her first and last "quarters." The tides then are less than usual. We believe that the sun and moon can affect tides so as to regulate them; but to regulate them is a different thing from causing them.

The cause of the tides is due to the fact that the earth or land rests upon the waters of the sea, as taught in the Holy Scriptures. This evidently causes the earth to fall, and so to alter the relative "levels" of land and sea. The sun and moon have an effect upon *the Barometer*, and thus may *regulate* by their respective positions the amount of the daily vibrations of the earth. Of course, other things affect the tides, such as the winds, currents, and configuration of the coast lines of the continents. And it is no doubt due to such causes that the tide rises so high, and is so peculiar in some localities.

After having read the above article, a friend writes as follows: "Thanks for sight of proofs of your deeply interesting article on Eclipses. Your remarks on page 16 remind me of some remarks on the moon, which were made to me some years ago, by Mr. J. Steer Christopher. As nearly as I remember, he said that, the word moon

really meant *the reflector*; not in the sense that it reflected light from the sun, or anything else, but that it was in itself a reflector, or, as he graphically explained, a self-luminous mirror; and that being so, the markings which are observable on the face of the *full moon* would be the exact images of those portions of the earth *over which the luminary was vertical at the time*.

“He also stated that, if drawings or photos of these markings were taken at every full moon in *all* latitudes, and these drawings pieced together, he thought, a *correct projection* of the world of land and water would be obtained. Now, this feasible and original idea has been rolling about in my mind ever since, and I am inclined to think that our far-seeing navigating friend was right. Had he been spared, I and he intended to look closer into this matter; but ‘the best laid plans of mice and men gang oft a-gley.’”



# CIRCUMNAVIGATION.

---

An exploded "proof."

---

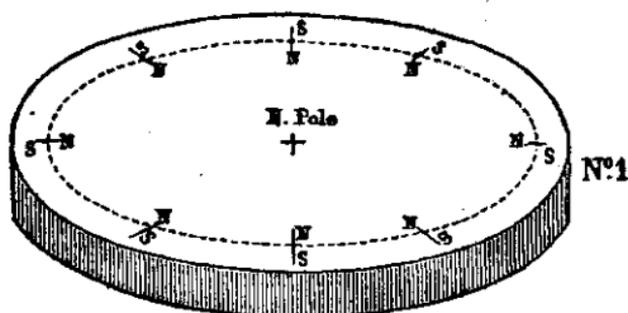
When one "proof" fails to convince the reader of an astronomical work, and perhaps the writer also, another is added to make up the deficiency. But one proof, if it were a good one, would be sufficient; and no amount of "proofs," when they are defective and don't really prove, can establish the astronomical theory of a globular earth. We have already shown the fallacy of "one of the best proofs" afforded us, so that it will not be difficult to deal with those which are inferior. One of these, which may be frequently met with in school books, and in some astronomical works, is the so-called proof of circumnavigation.

It is sometimes asserted that a vessel can sail in a straight line, either due East or due West, without ever turning back, and come again to the port from which she started. This is manifestly untrue. For if the earth were a globe, it would be impossible to sail "round" the world in "a straight line." It is impossible to make a straight line on any sphere. If we make a continuous line on a globe, coming back to the starting point, that line will be a circle. So that a vessel sailing always due East or due West, if such a feat were possible, would simply describe a circle! Yet many people imagine that the directions East and West are straight lines, on opposite sides of a spectator. They are really arcs of a circle; but the circle is so large, being about 25,000 miles in circumference at the equator, that the portions which we may see at any time, appear like straight lines. It is clear therefore, that, however far a vessel goes in one general direction, it must make a turn, though gradual, before it can return to the same place. Nobody can move onwards and onwards for ever in a straight line, and return to the same place. This is a self-evident impossibility.

Except in extreme southern latitudes, no vessel can sail onwards in a continuous circle, owing to the various configurations of the earth; but even if it were otherwise, that vessel, on arriving at  $180^\circ$  from its starting point, must begin to turn backwards, or she could never return to the place from which she commenced her voyage. When these simple truths are realized, it is easy to see that circumnavigation does not at all prove the earth to be a globe. An island may be circumnavigated, like the Isle of Man, or the Isle of Wight. No one thinks of claiming that these islands are "globes" because of the fact that navigators have "sailed round them." The idea would be preposterous, and is too childish to need exposing. Yet this idea has been seriously advanced in astronomical works in support of the Globular theory! and it was not until "Zetetics" had exposed its inherent falsity and absurdity, that some astronomers have given it up as one of their standard "proofs."

The following extract is taken from a book entitled "Elementary Physiography," by Richard A. Gregory, F.R.A.S., Computer to the Solar Physics Committee, etc., etc. :—

"Circumnavigation in an Easterly and Westerly direction does not prove the earth to be globular. In A.D. 1519, the Portuguese Fernando de Magelhaens, starting from Seville, in Spain, sailed through the Straights at the end of South America, named after him, to the Pacific Archipelago, and thence his ship returned round the Cape of Good Hope to Spain! Since then the earth has been circumnavigated a great many times. And it is a common occurrence for a ship to leave England, and, by steering westward all the voyage, to arrive in England again without retracing an inch of her way. Similarly, we can journey around the globe (it must be a globe of course!), sometimes travelling on land, and sometimes on sea, but eventually returning to the starting point without at all turning back on our course (the ship really does turn back, though gradually, as I have shown above). This would appear to be a certain proof that the earth's surface is curved, nevertheless it has been pointed out (by Zetetics, of course!) that circumnavigation would be possible if the earth had a flat surface, with a north magnetic pole at its centre. A compass needle would then always point to the centre of the circumference, and so a ship might sail due East or West, as indicated by the compass, and eventually return to the same point by describing a circle." See figure 51 in his book, which is the same as diagram 5 given on following page.



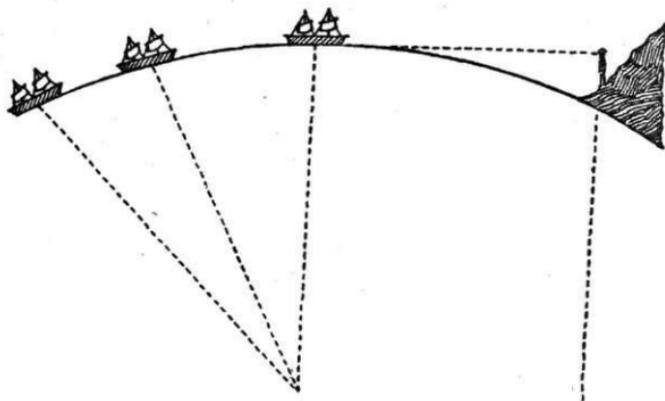
With the figure, Mr. G. adds:—"Figure 51 proves that circumnavigation would be possible if the earth were flat."

Now Mr. R. A. Gregory has been candid enough to own that circumnavigation does *not* prove the earth to be globular. Yea, further, with his figure 51, he gives "proof that circumnavigation would be possible if the earth were flat." This is good. Yet, although he owns that circumnavigation is an exploded "proof," he still sticks to the idea that the earth is a globe. And he pens the self-evident contradiction that "we can journey round the globe, sometimes travelling on land and sometimes on sea, but eventually *return* to the starting point without at all *turning* back on our course." This is a specimen of astronomical logic! To return means to "turn back," so that this gentleman in effect says:—"We can turn back without at all turning back!" But we must remember that this man is a "Fellow of the Royal Astronomical Society," and some of these "fellows" are very dexterous at some feats of legerdemain, but very poor logicians.

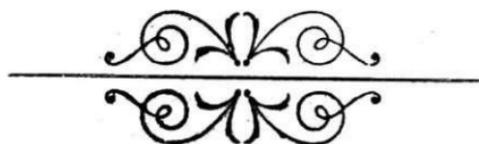
On the previous page of his book, Mr. Gregory gives a diagram of ships at sea having one common centre of gravity, and an impossible spectator, standing away on a rock, at a considerable distance from the *top* of the diagram, with quite a different centre of gravity. This is done so that the diagram may represent the spectator looking down, or at an angle, to the distant horizon, a position in which no spectator in this world ever found himself, the horizon always being on a level with the eye. A writer in his position ought to know this, yet he puts these words below his diagram, figure 50. "Apparent sinking of a ship below the horizon, caused by the curvature of the

earth's surface!" So that these ships sink below his horizon owing to the curvature of the earth!

The following (No 6) is a similar diagram.



However, as he confesses that this sinking is only "apparent," we will spare him further castigation for the present. But the diagram is a fraud, and the lesson it would teach is untrue, as we have shown in the previous chapter.



## CREATION'S CHRONOLOGY.

### V.

By LADY BLOUNT.

Mr. Tartas published a statement, some few months ago, to the effect that the Hebrew text dates are discredited, and that the Septuagint version is to be taken in preference. He said that "we have no basis for fixing an earthy time date for the commencing period of creation." I, however, claim that God's Word means what it says. If it does not, who among the sons of men is invested with authority to tell us assuredly what it *does* mean? God has given us His written Word, in order to interpret Himself to us just as Christ the living Word interpreted Him (NOTE—John i., 18; the word there means *to interpret*—the verb from which we have *exegesis*).

It is for us to believe His Word, not merely to interpret it; for it is His own interpretations of His creative acts to us.

In Gen. i., 1, He tells us of "the world that then was" (2 Pet. iii., 6). In Gen. i., 2; ii., 3, He tells us how he created "the heavens and the earth which now are" (2 Pet. iii., 7). In Gen. i., 14, He tells us how He created the great light-holders, the sun and the moon, and that "He made the stars also," as though they were quite subsidiary and insignificant compared with the Sun and Moon and Earth. I believe God. I believe what He says. It is written: "Abraham believed God, and it was counted to him for righteousness" (Gal. iii., 6). It does not say that Abraham *understood*, but that he "believed." And is not this the best way of getting to understand?

When God says He set the Sun and Moon "for signs and for seasons," I believe what he says. I see the "signs" in the Zodiac and Constellations; and I see the "seasons" in the days and years which we call Chronology.

I have been told that "God's idea of days in heaven may be quite different to those of man's upon earth." I have also been referred to the passage that "one day is with the Lord as a thousand years, and a thousand years as one day"; but, supposing we grant this, there is nothing whatever in this to justify the belief that God's idea of *on earth* are different from ours upon earth. When God commands His creatures to work during "six days," He means six days of 24 hours each, and when He tells us that He worked "six days," why should it be assumed that He means "periods," and not days as we understand them?—especially when He bases His fourth commandment on the fact of both being such days. It is palpable that literal days were understood when God showed to Moses how the world had been created. Bearing upon this phase of Creation's Chronology, I have come across a passage in 2 Esdras xiv., 4-6, R.V., which, though not canonical, is nevertheless of interest. The text reads thus:—"And I brought him up to the Mount of Sinai, where I held him by Me for many days, and told him many wondrous things, and showed him the secrets of the times, and the end of the seasons, and commanded him, saying:—These words shalt thou publish openly, and these shalt thou hide."

Though agnostic editors, ministers of paganised Christianity, and globularist astronomers may jest at Moses, yet the writings of Job and the Pentateuch still stand as the oldest historical monuments extant; and are so well authenticated, and full of unassailable internal evidence, and plain endorsements by the Lord Jesus, that no lover of Truth can question.

It is not generally noted that the first two chapters of Genesis are referred to thirty times in the New Testament!

- Gen. i., 1. 2 Pet. iii., 6.  
 3. 2 Cor. iv., 6.  
 5. 1 Thess. v., 5.  
 11, 12. 1 John iii., 9.  
 14. Phil. ii., 15. Rev. xxi., 11.  
 24. Acts x., 12; xi., 6.  
 26. Jas. iii., 9.  
 26, 27. Col. iii., 10.  
 27. 1 Cor. xi., 7. Matt. xix., 4. Mark x., 6.  
 28. (Ps. viii., 6-8). Heb. ii., 5-9. 1 Cor. xv., 25. Eph. i., 22.

- Gen. ii., 2. Heb. iv., 4-10.  
 7. 1 Cor. xv., 45-47.  
 9. Rev. ii., 7; xxii., 2, 14, 19.  
 18. 1 Cor. xi., 9.  
 22. 1 Tim. ii., 13.  
 23. Eph. v., 30.  
 24. Eph. v., 31. Matt. xix., 5. Mar. x., 7. 1 Cor. vi., 16.

With the date of "Creation Week" gathered from Genesis, followed by the Patriarchs' ages, compared with periods of time notified by the Hebrew historians following Moses, we are enabled to calculate down to the first year of Cyrus, where we are assisted by Josephus and Greek historians, thereafter, by an unbroken chain of literature down to the present year (including the lunar eclipse on Sunday evening, February 19th, 1905); and these calculations are not in any way nullified by any supposed differentiation in the Hebrew and Septuagint, or of Usher's chronological system. When sceptics say that the Samaritan (Pentateuch) and the Septuagint Versions of the Old Testament give figures for the ages of Bible characters who lived before the Flood, which differ from those found in our Hebrew Bible; they run away with the notion that they have "wiped out" the belief that the age of the world is known. All the important dates mentioned in the Pentateuch can be tested in a truly scientific manner by the various solar and lunar eclipse cycles, transits of Venus, etc. As a case in point, it has been demonstrated to absolute correctness that the Flood year was A.M., 1656, and that, in the beginning of the following year, on the first day of the first month, "the waters were dried up from off the earth" (Gen. viii., 13), and, on the 27th day of the second month, the earth being thoroughly dry, God commanded Noah to come forth from the ark, after being in it 365 days. Certain Sunday papers published a paragraph on February 26th, 1905, to the following effect:—"To-morrow is the anniversary of Noah leaving the ark."

In giving the last item respecting Noah leaving the ark, I do not say that it was on our February 27th, but I do say that it was on the 27th of the 2nd. month, A.M., 1657. Globular scientists have, by their theorising about the sun and moon (the great unerring clocks of time), thrown present-day chronology and the calendar

into confusion, and these sophists cannot agree as to the world's age—their year absurdly beginning on January 1st, instead of at the vernal equinox; yet it can be shown that, with eclipse and star transit cycles, the greatest accuracy as to dates may be attained. For instance: from January 11th, 1861, through a period of 36 eclipses (651 years), we find that a total eclipse also occurred on January 11th, 1210. Going backwards by such cycles, we arrive precisely at the date of Creation Week as given by Moses in Genesis.

Various dates, in proof of the deductions now brought forward, have been given in previous articles, and they will be continued.

