

THE
EARTH

A Monthly Magazine of Sense & Science

From A Scriptural Point of View.

EDITED BY E. A. M. B.

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WHICH IS TRUE?

THE GLOBE OF LAND AND WATER

OR

The Level Surface of Water and Land?



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To observe — Think freely — Rediscover forgotten facts

Oppose theoretical dogmatic assumptions

S. SHENTON, Sec., LONDON RD., DOVER, ENG.

THE EARTH.

VOL. IV.

Nos. 47 & 48.

THE EARTH: IS IT A GLOBE?

"The planetary system," said Humboldt, in its relation of absolute magnitude, relative position of the axis, density, time of rotation, and different degrees of eccentricity of the orbits, "has, to our apprehension, nothing more of natural necessity than the relative distribution of land and water on the surface of our globe, the configuration of continents, or the elevation of mountain chains." No general law in these respects, is discoverable either in the regions of space or in the irregularities of the crust of the earth.

The foregoing describes, in Humboldt's language, the condition of the orthodox planetary system of his day. These remarks apply with equal force to the teachings of present-day astronomers of the globular school who call themselves scientists (from *scio*: "I know,") science (*sciens*: "knowledge"). But orthodox astronomy is admittedly a theory, founded upon speculation; and the moment speculation becomes knowledge then speculation ceases. Therefore, it is a misnomer to designate such theoretical astronomers "scientists." On the other hand "plane-earthists" denominate themselves "Zetetics," from the Greek *zetēō*: "I seek, search for, investigate, inquire into"; *zetetes*: "searcher, inquirer." Zetetics are, consequently, those who do not take for granted the theories which may be offered to them, but make investigations to see whether these things be true or not, and, if not, to endeavour to arrive at the truth. They therefore investigate the common statement that "the earth is round or spherical, like a ball or an orange, because ships have actually and repeatedly made the circuit of the globe." They naturally ask: "Are these deductions in accordance with facts?" Vessels and steamers continually go round the Isle of Wight and the Isle of Man; therefore, if the earth be a "globe" "because vessels and steamers go round it," then (by the same line of reasoning) the Isle of

Wight and the Isle of Man are globes *because* vessels continually go round them. Now we have positive evidence, founded upon personal knowledge, that the Isle of Wight and the Isle of Man are *not* globes; hence it follows that the earth is not necessarily a globe because ships have gone round it.

"If the earth is flat, when we go to the edge we may tumble over."

We have been met by this surmise so many times that we feel it is what comes naturally to the mind of the ordinary man, or woman, who has been brought up in the belief that the earth is suspended in space and, therefore, if it were a plane there would be the danger of our walking over the edge, and falling into space. But no one has been able to get to the edge. Beyond a certain point in the Antarctic regions God has not yet permitted men to go; therefore, no one has been placed in such a position where it would be possible to "tumble over." Commander R. F. Scott, R.N., and his party of explorers—who sailed from New Zealand in December, 1901, have undoubtedly penetrated further into the interior of extreme southern regions than any previous explorers, and after three years of courageous exploration their description of the furthest limits of the unknown continent is, that it was "found to be a bleak plateau, rising 9,000 feet above the sea, and stretching *interminably* to the south."

In travelling east or west we go round a centre. In going due south we may make for a certain point; but the voyager, when he has pushed his way as far as possible beyond all known land is stopped by mountains of ice; and he finds himself beyond the regular influence of the sun's rays, or "beyond the limits of light and darkness." And it is clearly evident that no man could possibly continue to travel due south much further than Commander R. F. Scott, reached, because he could not exist far beyond the limits of the sun's rays."

Zetetics when *instituting* inquiries as to the form of the earth, and the phenomena which pertain to the world or all that they can see, are met by a number of questionable theories, but on examining the *rationale* of these theories, which need examination, I shall as far as possible, use plain language.

On the threshold of the argument as to the earth *not* being a globe, we are told that wherever we look—either skyward or seaward—there is an appearance of an arc or the segment of a circle. Ships disappear and come in sight as if they were moving over a sphere—and it is asked: "Can we trust our senses?" Truth replies: "Yes;" but it is necessary that we should not allow our God-given senses to be deceived either by men or demons.

There are men living, people calling themselves "scientists," who would have us believe that they can fathom and define the ways of Eternal Providence better than God Himself—and have them "set in a note, learned and conned by rote," to cast in the teeth of all who would dare to think otherwise. They love to get hold of "a principle," to use their own language, and push it home to its ultimate conclusion. That is being thorough according to their form of judgment. It is being consistent, and they worship consistency. They echo the words of one of Shakespeare's characters:

"Consistency, thou art a jewel!"

It does not occur to these people that it is more important that their deductions shall not be false to facts, and that consistency in pursuing a fixed course which has diverged from good common sense and sound reasoning, is wrong-headed and guilty error. They will not admit that, as a matter of fact, there are even very few wise general principles that are universally true in the sense that they can be made into rigid rules; hence the necessity of bringing all theories to the tests of experience and experiments, and the danger of leaning on general rules for the understanding of the great problems of the world.

The theory that the earth is a globe, whizzing through space at the rate of 63,000 miles every hour, with many additional motions, is based upon an assumption in direct opposition to our God-given senses. If the earth moves at this extraordinary speed, how is it that we do not perceive that it moves? The pseudo-scientists being wedded to the globular theory, instead of reconsidering their deductions, provide us with figures the magnitude of which no intellect can grasp, and the great majority accept their *dicta* because it is considered "the proper thing to do."

If we travel by land or sea from any part of the earth in the direction of any meridian line, and towards the northern central star Polaris, we come to a region of ice, where the star, which has acted as our guide, is vertical to our position, *i.e.*: directly above us. This is not necessarily the centre of the *earth*. We may describe it as a vast lake sea, about 1,000 miles in diameter, surrounded by an immense barrier of ice close upon a hundred miles in breadth. From this region we can trace outlines of lands which project from it, and the surfaces of which are above the water—and we see it demonstrated that the present form of the earth (“dry land” as distinguished from the waters of the “great deep”) partakes of an irregular mass of islands, capes, and bays, terminating in huge bluffs (or headlands) projecting in a direction away from the north, and principally towards the south; and this is in accordance with the teaching of the Holy Scriptures. By sailing with our backs continually to the central star Polaris we arrive at another region of ice; in fact, upon whatever meridian we sail (keeping north behind us) we shall be ultimately checked in our progress by vast cliffs of ice acting as barriers. There is evidently a boundary of ice encircling the southern seas, with irregular masses of land stretching out towards the south, engirdled by packs of ice and frozen barriers, the depth and breadth, and whole extent of which have not been ascertained. How far the ice extends has not, even by the recent *Discovery* expedition, been approximately discovered. The earth and sea’s extremity has not been penetrated by the most powerful telescope yet invented, and the “beyond” is still hidden in gloom and darkness from the human eye.

What the superficial extent or magnitude of the earth is, from northern regions to the south, can only be indefinitely stated so far as actual measurement is concerned. Of course we know that, in 1866, in laying the Atlantic cable from the Great Eastern steamship, the distance from Valentia, on the S.W. coast of Ireland, to Trinity Bay in Newfoundland, was ascertained to be 1665 miles, and we before knew that the longitude of Valentia is $10^{\circ} 30' W.$, and Trinity Bay $53^{\circ} 30' W.$, 43° representing the difference of longitude between the two places, and the whole distance round the earth being divided into 360° , if 43° are 1665 nautical miles (equal to 1916 statute miles) then 360° will be equal to 13,834 nautical miles (15957 statute miles).

THE MUTUAL RELATIONS OF THE SUN AND EARTH

The above is the title of a book which has lately been published. Although the author of this book is a globularist, he differs from the teaching of orthodox Newtonianism in such a marked manner, that Zetetics can but welcome it because of its reasonableness. It deals with that which has been a most difficult problem to many, *viz.*: What is the actual size of the sun?

The book is written with clearness and common sense, the matter being put in a reasonable form. The object of the writer is to prove that the actual size of the sun corresponds with the geographical area of vertical solar rays; and we are reminded that the troops engaged in the South African War, leaving the south coast of England in north latitude about 50° were carried to Cape town in south latitude 33° a distance of over 3,000 geographical miles. Sailing over the northern tropic they crossed the equator, sailed over the southern tropic and into the south temperate zone; when the officers of the transport took their daily observations of the sun’s altitude it was noticed that the sun bore south and that the spectator’s shadow was projected north. After a few days the sun still bore south, but at a higher degree of altitude, and the shadow projected north was shorter. The sphere of the heavens seemed slowly to rotate from east to west, the northern constellations seeming to sink lower and lower in the heavens, new constellations appearing above the southern horizon. In about a week after leaving England the transport arrived near the tropics, a zone (or belt) circling at $23\frac{1}{2}^{\circ}$ of latitude on either side of the equator. On some parallel of latitude in this zone the sun is vertical—*i.e.*, the sun at noon is in the zenith. Whenever that particular parallel is passed the sun’s position is passed.

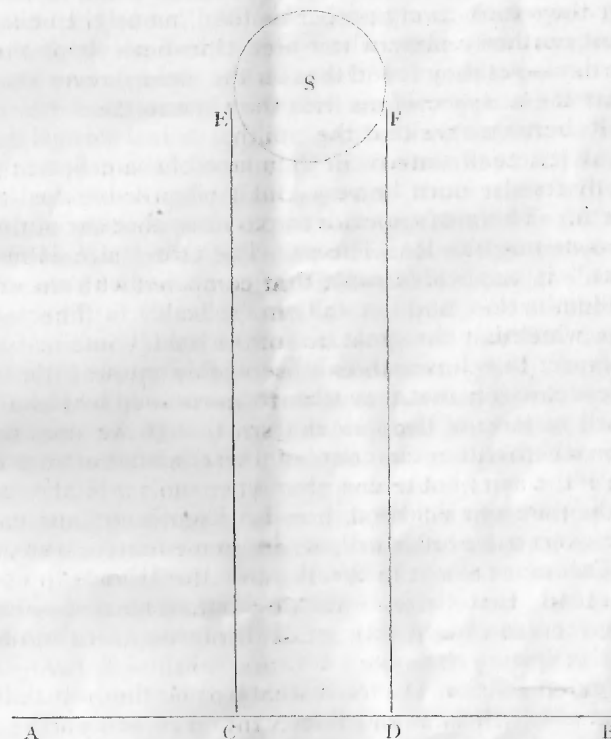
A quotation is made from a newspaper correspondent, who wrote: “On that Sunday we passed to the south of the sun. At noon on that day the ship was in Latitude $14^{\circ} 30'$ north,

and the sun in latitude $14^{\circ} 28'$. Henceforth we were to look at him.....with our back to the south instead of north." Here at noon the ship was in the area of vertical rays; the sun was in the zenith, and the spectator's shadow was projected downwards, and hence invisible; but by the next noon the ship passed south of the area, the bearing of the sun and the projection of the shadow being reversed—*i.e.*, instead of viewing the sun with the back to the north, it was viewed with the back to the south.

If (as has been stated) the volume of the sun is 1,407,000 times that of the earth—how would it be possible for an observer on the earth's surface to pass the position of the sun as recorded by Dr. Robertson? The utter impossibility is self-evident, and it is palpable that compared with the earth's magnitude, the sun is a small body. The doctor demonstrates that the whole area of the sun is contained within 32 miles. The appearances observed in passing the sun's position are somewhat similar to those seen when we pass beneath an electric lamp in the street. If the direction in which one passes under one of these lamps be from north to south it will be observed that when north of the lamp's position, the light will be seen to bear south and our shadow to be projected northward; when immediately beneath it the light will be in the zenith, and the shadow projected downwards—being thus invisible; but, having passed the position of the light, we must turn round in order to see it, *i.e.*, "face it"—for it bears north and our shadow is projected southward. Now whatever be the physical constitution of a self-luminous body, the rays of light emitted by that body are propagated in straight lines in every direction from every part of the luminous surface so long as the rays of light traverse the same medium. Whenever a luminous body illuminates an opaque surface there must always be an area of central (*i.e.*, perpendicular) or vertical rays.

Proceeding on the lines of Euclid, which no mathematician can deny to be based on true mathematical principles, Dr. Robertson proceeds to fully demonstrate by diagrams that the diameter of the area of vertical rays must always be equal to the diameter of the luminous body. The author thus has grasped the very essence of what we have thought for years, and that is: "The real size of the sun may be

found in the area of vertical solar rays." My meaning might be made a little more explicit by representing a globular body thus:



Let S represent the sun, and EC and FD the vertical rays of light falling upon the plane earth, AB. The vertical rays of the globular illuminated body of the sun would be represented by the straight lines continued down to CD. Now it is *self-evident* that CD is the diameter of the globular body S. The base AB on the outer sides of CD will receive the oblique rays, which rays are perceptibly oblique by their casting of shadows.

There is a deflecting influence to which the other solar rays are liable in their passage to the earth, and that is atmospheric refraction; but near and at the zenith it is so

slight as to be practically non-existent. In endeavouring to find out the area of vertical solar rays, we are told that "the ancient geographers found themselves considerably embarrassed in their attempt to fix the northern tropic, for though they took a very proper method, namely, to observe the most northerly place where objects had no shadow on a certain day—yet they found that on the same day no shadow was cast for a space of no less than 300 stadia."*

Dr. Robertson says that the sun has a real annual orbit, and that it actually moves in the plane of the ecliptic; consequently its size must be very small when compared with the earth. There is no evidence to show that the sun is of stupendous magnitude. The principle that "size is as the distance" is applicable only to opaque bodies seen under equal illumination, and is totally inapplicable in the case of the sun, which is "the great source of light."

In respect to eclipses, the author of this unique little book shows conclusively that they are not determined by the above supposed *motions* of the various orbs, though we very much question whether they are calculated on the basis of an orbital motion of the sun; not that we doubt the sun's orbital motion, but if they are so calculated, how did Regiomontanus calculate the exact time of an eclipse, at least twenty-eight years before Columbus saw it in the West Indian Islands in 1504? We contend that there is no calculation needed—simply keeping records of past eclipses, and watching for the recurrence of eclipse cycles.

We must do the Doctor justice by pointing out that he does not admit there is an orbital motion of the earth; yet he says that "the apparent rotation of the celestial sphere" is a term used to denote that appearance, seen on a clear

*The stadium was 630.93 feet, and $7\frac{1}{2}$ stadia were equivalent to a Roman mile which is equal to 4,732 English feet; and 300 stadia would be equal to 31.15 geographical miles. The apparent diameter of the sun, as measured on the sphere of the heavens, is given in the Nautical Almanac for March 22nd, or September 23rd, as $32' 2''$, the average of the two observations. In the practice of nautical astronomy $32'$ of arc on the sphere of the heavens is equal to 32 geographical miles on the surface of the earth.

night, when all the stars appear to move slowly from east to west, across the concave sphere containing all the heavenly bodies, slowly rotating round two fixed pivots or poles. Now this appearance can only have one of two possible interpretations—*i.e.*, the celestial sphere is a real sphere containing all the heavenly bodies fixed in some mysterious manner, and actually rotates on the celestial poles, and an imaginary axis (termed the celestial axis) the earth remaining absolutely motionless in the centre—or: that the earth in a stationary position, has a motion of rotation on its own axis in an opposite direction, from west to east. But why does Dr. Robertson consider it *impossible* that the sun, moon, and stars could actually revolve round the earth every twenty-four hours? Why should he interpret the apparent rotation of the celestial sphere to mean a real rotation of the earth in the opposite direction? Of course we see the difficulty of his position by his retention of the view that the earth is a globe, partly because a ship disappears hull first (owing to a cause which we have explained many times) having nothing to do with the assumed rotundity of the earth's surface.

However, personally, I am grateful to the author for his lucid explanation regarding his conclusions as to the actual size of the sun, and showing so clearly the utter fallaciousness of the popularly accepted theory.

With the following interesting paragraphs, taken from one of the learned Dr.'s letters, I must conclude this short review:

"Modern Astronomy is divisible into two distinct parts or systems, which are not only different but directly antagonistic to each other. There is first, Practical Astronomy, with that most useful and important sub-division, usually called Nautical or Geographical Astronomy. This is the astronomy handed down to us from remote ages, and has been gradually and constantly improved during the lapse of centuries, until now it has reached a state of great perfection. Regarding the accuracy, indeed the extreme accuracy, of this system there can be no reasonable doubt, its practical problems are daily verified by thousands of independent observers."

"The other system, which is variously termed by different authors, The Copernican, Newtonian, or Speculative Astronomy, is the astronomy of hypotheses. It was originated by Copernicus. It was his idea of how the Universe should have been made; he thought that the lamp of the world, the sun, should be placed 'In the midst of the beautiful temple of nature, ruling the whole family of circling stars that revolve round him.' No doubt this idea makes a very pretty little diagram on paper, which is about all that can be said in its favour. It assumes the sun to

be stationary, whereas the first system assumes the sun to travel every hour in the ecliptic. The two systems accordingly, are in direct antagonism. This system of hypotheses quite independent of facts, has gradually expanded since the time of Copernicus until now it has reached a pitch of extravagance which is truly wonderful."

DEGREES.

A Reply.

A "degree," according to the *Encyclopædia Britannica*, is the 360th part of the circumference of a circle, which part is taken as the principal unit of measure for arcs and angles. The degree ($^{\circ}$) is divided into 4 minutes of 60 seconds. Astronomers assume that the earth is a globe, and each 360th part of a circle all round it is called a "degree;" it is also assumed that the earth moves, though it is the sun which appears to do so.

The position of the sun in regard to the earth's surface is changed one degree in four minutes; in other words: 15 degrees per hour, and 180 degrees (or half the circumference of the earth) in 12 hours; hence the hour on a time-piece is divided into 60 minutes. The sun's time varies, but clock time does not vary.

In regard, however, to the earth's surface, we are told that the distance between parallels of latitude in different latitudes is not uniform, the length of the degree being greater at the equator than at the poles.

The length of a degree perpendicular to the meridian has been computed and compared with the length of a meridional degree in the same latitude, giving the proportion of the poles to the equatorial axis. The result differed considerably from that obtained by meridional degrees.

Degrees of longitude radiating from the North have been stated to gradually increase in extent as they approach the equator, beyond which they are again said to converge and gradually diminish in extent towards the south. This is the popularly accepted theory.

The matter might be decided by measuring some distance to the south of the equator at right angles to a given meri-

dian (with non-expanding rods), and between two points where the sun is vertical at an interval of 4 minutes of solar time—*i.e.*, as one degree is a 360th part of the sun's whole path over the earth so is the period of 4 minutes a 360th part of the whole 24 hours, which the sun requires to complete his course; therefore, whatever space on the earth is contained between any two points (where the sun is on the meridian at 12 o'clock and 4 minutes past 12) will be one degree of longitude. If we know the approximate distance between any two places in the South, on or about the same latitude, we can calculate the length of a degree of longitude.

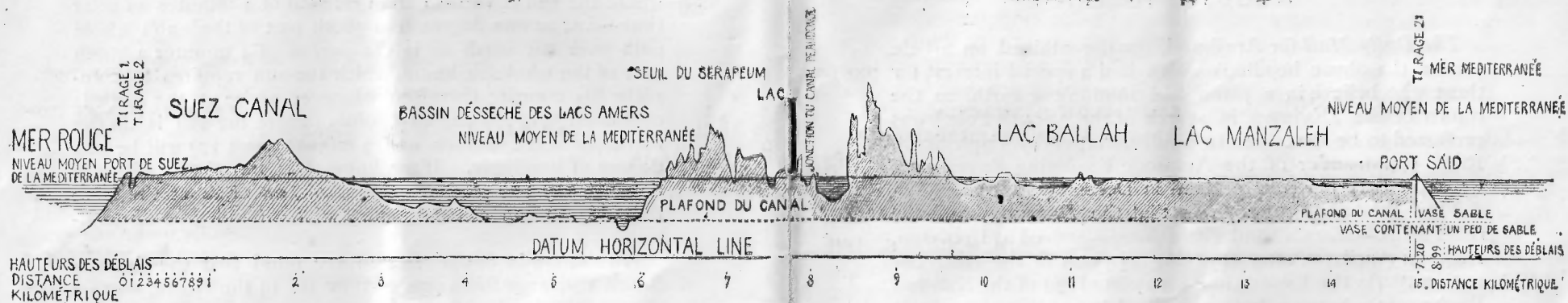
No shadow of doubt rests in my mind that the degrees South converge the same as they do in the North, so that the length of a degree South grows less as we go further from the equator. "Parallax" taught otherwise. I believe I have seen the quotation from his book, but have not read the work through.

If meridians converge south of the equator (as I believe they do) then a degree would measure less at 30° south than at the equator. But taking the ratio of the supposed globe degrees at that distance, both north and south would be about 47 miles long.

I have heard such scientists as decide these things admit that they are far from their measurements of degrees; and I am convinced that no man has yet "perceived the breadth of the earth," nor measured it practically.

The globular idea must be stamped out from a man's mind before he can see things from a true position, and think of the sun's rays, as he proceeds above his pathway in the heavens, falling upon and directly touching the earth's surface so as to form a circle, and the extreme limits of his rays of light forming a larger circle within a larger circle, where sunlight comes to an end, and beyond the limits of day and night.

NOTICE.—In the next issue of *The Earth*, we shall (D.V.) give an illustration showing the photograph taken on the Old Bedford Canal, under circumstances recounted on another page of this issue.



The diagram now presented to my readers of *The Earth*, bears evidence that the earth is a plane. It has reference to the great ship canal which connects the Mediterranean Sea with the Gulf of Suez on the Red Sea; Port Said (Egypt) being the entrance to the canal in that direction. The canal is 100 English statute miles in length, and is entirely without locks. The water within it is really a continuation of the Mediterranean Sea to the Red Sea.

The average level of the Mediterranean is 6 inches above the Red Sea; but the flood tides in the Red Sea rise 4 feet above the highest (and its ebb fall nearly 3 feet below the lowest) in the Mediterranean. The datum line is 26 feet below the level of the Mediterranean, and is continued horizontally from one sea to the other, and throughout the whole

length of the canal the surface of the water runs parallel with this datum. The 100 miles of water in the canal and the surface of the Mediterranean Sea are a continuation of the same horizontal line.

If the earth were globular the water at one end of a canal one hundred miles in length would be 1 mile 1380 feet below the other end. But who has seen such a fall in the Suez Canal, or any other long stretch of water? No one. And who, but a globularist could believe in such a thing against all the evidence of known facts, and against the evidence of our God-given senses?

This canal affords another illustration that the surface of the great waters of the earth are horizontal, and therefore, disproves the theory of the earth's rotundity.

SOUTH POLE.

The Daily Mail for April 2nd, 1904, contained an article (under the above heading) which had a special interest for those who believe in a plane and motionless earth, as the return of the *Discovery* in search of the "South Pole" was professed to be described in a full narrative by Capt. Scott, R.N., Commander of the Antarctic Exploring Expedition, which sailed from New Zealand in December, 1901.

From the account it appears that the *Discovery*, and the relief ships—*Morning* and *Terra Nova*—arrived at Lyttleton, N.Z., on April 1st, after voyaging $2\frac{1}{2}$ years in the Antarctic regions. As the Expedition was assisted out of the National Exchequer, whatever facts may have been elicited ought to be made public.

It may be stated for our readers' information that it was in January, 1902 (six months after sailing from Cowes) that the *Discovery* entered the ice-field; a month later, when 2,000 miles south of New Zealand, she became gripped in the ice. This occurred in a region near the volcano Erebus, an active crater, named after the leading ship of the expedition commanded by Sir James Clarke Ross, about 60 years ago.

In that voyage the evidence pointed to the fact of the earth being a plane, the extremities of which are bounded by vast regions of ice and water, and irregular masses of land.

I believe when a true plan of the earth is known, it will be found to have four "corners." Three of them are known, and the fourth exists, possibly under the water. It has not yet been discovered. Mr. E. E. Middleton, I am convinced, is on the right track.

That the sun's path has been moving southwards in a concentric course may reasonably account for the changes in temperature that must have taken place on portions of the earth's surface, where remains of verdure that could only have existed in a different climate are found. We may note the discovery that certain specimens of flora found in the North polar regions exist in the southern ice fields. The fossil remains of plants discovered by certain explorers, are thought to point to the fact that, at some period in the past, the now icy south was once warmer. At present, at the

point to which the *Discovery* expedition penetrated, the mean temperature for the year is below zero; they once experienced 100 degrees of frost. In such a locality scanty moss, with a few lichens, form the only plant life.

When the explorers were sleighing through a blizzard, we are told that "if their gloves were not securely fastened on, they would instantly be blown away" (!) This corroborates our personal conclusions, viz.: that the furthest south being beyond the vision of light and darkness—or day and night—is piercingly cold, and subject to boisterous winds, which sweep with intense force across the clashing icebergs.

The narrative given in the above named paper, is, as far as it goes, favourable to the deduction that the earth rests upon and within the waters of the great deep, and that it is a floating island, or series of islands, buoyed up by the waters, and probably supported by submarine land connected with other land beneath the ice in the extreme south.

Commander Scott, in describing his winter sojourn in the wild Antarctic regions of solitude, was most persevering in his attempt "to look on the frozen page of God, and see what the letters meant." By his sledge journeys into the interior of the unknown continent, he says, he has succeeded in finding it to be a bleak plateau (elevated plain) rising 9,000 feet above the sea, "and stretching interminably to the south." This goes far to put the stamp of proof upon what we have expressed as our belief in respect to what exists far south.

Captain Scott, with Mr. Skelton and party, found a new route to the West, and established a depôt 2,000 feet up the glacier, 60 miles from the ship. On October 6th, 1903, one section of the explorers started for the strait in lat. 80 S, and they found it contained a large glacier formed from the inland ice; and they obtained information as to the point of junction between the barrier-ice and the land. A depôt, established the previous year, was found to have moved a quarter of a mile to the north. Six of the party reached a point 160 miles S E of the ship, travelling continuously over a level plain. No trace of land, and no obstacles in the ice were encountered, "and evidence was obtained showing this vast plain to be afloat."

When the party crossed the 80th parallel (for the first time in the world's history) the compass pointed the wrong way.

It is something to know that the expedition was within 500 miles of the so-called "South Pole," and that all this way off the compass was reversed.

During the return journey the Possession Islands were found to be more numerous than shown on the charts; but Wilke's Land, Ring Gold Knoll, and other lands marked on the chart, were apparently *not* in existence; and the *Discovery* sailed right over the spot where they were supposed to be located.

When steaming along the great Ice Barrier, discovered by Sir James Clarke Ross in 1842, at the furthest easterly point Captain Scott discovered new land, which His Majesty has been pleased to have called after himself, viz.: "King Edward VII. Land."

We may note that the *Discovery*, in settling down into winter quarters in February, 1902, was frozen in, "and endured a long dark winter, with a night of 122 days, when the temperature fell to 62° below zero, and it was unsafe to venture from the ship, for even a mile, because of the blinding blizzard that raged almost continuously." This quotation is an excerpt from the statement of Lieut. Shackleton, of the *Discovery*. "Does the phrase, 'a night of 122 days' mean that the sun was not seen for that long period?" was a question put to me; and I replied, "Certainly." And as such is undoubtedly the case, I ask, how would it be possible to experience "a night of 122 days," if the earth be a globe careering round the sun, as they say it does?

It is with decided satisfaction that I read of a western route having been located, and a depôt being established up the glacier, 2,000 feet above sea level; but it appears to me a little premature for the Royal Society Executive to determine that the form of the presentation to Capt. Scott shall be a silver globe, with the route marked to scale, seeing that the *Discovery* expedition has in no way strengthened the hypothesis that we are living on a globe. If a globe is a suitable present on which to mark the route of the ship, why was the ship, in the first instance, not navigated by the aid of a globular chart? We do not think that the gallant captain would have ventured out to sea with a globular chart; had he attempted to do so, I feel assured that the voyage would never have been as successful as it has.

I would suggest, therefore, as a more suitable form of

present, a large silver block in the form of the great "level plateau," which he discovered, "stretching interminably to the south."

IS WATER LEVEL? BEDFORD LEVEL EXPERIMENTS

BY
LADY BLOUNT AND PARTY.

Lady Blount—Ed. of *The Earth*,—assisted by Messrs. Shackleton, Watts, Clifton, and others, met at the Old Bedford Sluice Bridge, about two miles from Downham in Norfolk, on Tuesday, May 10th, 1904, in order to make experiments upon the Old Bedford Canal. This canal is more than twenty miles in length, and, with the exception of a very small part, passes through that part of the Fens called the Bedford Level. From the furthest end to the Old Bedford Bridge, at Salter's Lode, there is no interruption from locks or water-gates of any kind.

Standing on the bridge, and looking towards Welney Bridge, a distance of 6 miles, those of the party who had not been to the place before at once corroborated the statement that "it is the straightest canal in the kingdom." The water is nearly stationary, and well adapted for ascertaining whether any convexity really exists—and, if so, to what amount,—for according to the accepted theory of the earth being a globe, 25,000 English statute miles in circumference, the surface of all standing water must have a certain degree of convexity—*i.e.*, every part must be an arc of a circle. In brief, there will be a curvature of 8 inches in the first statute mile—and (according to the rules of geometry and geodesy) the curvature will be 32 inches in the second mile, the curvature increasing as the square of the distance multiplied by 8 inches; thus the curvature in six miles would be arrived at by multiplying 6 by 6, and again by 8:— $6 \times 6 \times 8 = 288$ inches, and 288 inches equal 24 feet; hence a flag-staff, with the top part exhibiting a white square, was hoisted at Old Bedford Bridge, showing the assumed curvature of 24 feet, that being the necessary elevation to get over the curvature represented in the distance between Old Bedford Bridge and Welney Bridge.

At the edge of the water, in the same canal six flags in the shape of discs distinctively marked, were placed one mile from each other, the top of each being five feet above the surface, the last flag being near Welney Bridge. A good telescope was brought to the lowest point nearest the water's edge at Old Bedford Bridge, and levelled to the altitude of the flags. Upon looking through the telescope the outlines on the flags were plainly seen, and each intervening flag had the same altitude; and this would have been an utter impossibility were it a fact that the earth is a globe, for the flag nearest to Welney Bridge, instead of being 19 feet below the line of sight was of the same altitude to the observer as the other flags; in other words, the surface of the water was for six miles absolutely horizontal.

A further proof was afforded by Mr. Shackleton—who superintended the proceedings for Lady Blount—entering a flat-bottomed boat, as near to the water's edge as possible, and at 8.30 o'clock at night he generated acetelyne gas by means of aceteloid. The lamp used permitted of a naked light being seen. This lamp he held close to the water when standing in the boat. When he lit the lamp, at Welney Bridge, at the time specified, Lady Blount, with others of the party, from a platform under Old Bedford Bridge, with their eyes less than 18 inches from the water, distinctly saw, not only the light but its reflection in the water beneath it starting from Welney Bridge, six miles off, which would have been impossible according to the globular hypothesis. The light flashed out straight to the eye of the observer—no hill of water intervening the whole of the distance.

THE NEW PHOTOGRAPHY.

Lady Blount and party proceeded on Wednesday afternoon, May 11th, to Welney Bridge, for the express purpose of putting into practice the new photography. The name of Dallmeyer stands in the foremost rank in respect to long distance photography, and the firm (with which is associated the Earl of Crawford) permitted Mr. Clifton, an expert photographer acting for them, to bring down from their London establishment an instrument embodying the latest development of telescopic photography. Before leaving Old Bedford Bridge, a white sheet with a black centre was spanned across the canal down to the water's edge. A platform of planks, flush with the water and abutting upon

Welney Bridge, was erected, and formed the position of operation for the photographic arrangements, and here the centre of the camera was exactly two feet above the water, and focusing the white screen near Old Bedford Bridge. The important question: "Can a photo be taken six miles distant under such circumstances?" could not be decided on the Wednesday, but after Lady Blount stepped on to the platform, at the Institute Hall, Shanklin, Isle of Wight, (where her ladyship was about to deliver a lecture,) on Thursday evening, a telegram was handed to her from the photographer, to the effect that the screen was visible in the photo—an undoubted proof that no curvature could have intervened along the six miles from Welney Bridge to Old Bedford Bridge.

The railway bridge, 3 miles beyond Welney Bridge, was observable even with the naked eye, and looking from Old Bedford Bridge, through the arch of Welney Bridge, trains could be clearly seen crossing the water. Therefore we ask: **WHERE WAS THE FIFTY-FOUR FEET DROP.**

Even before the operations could be commenced, owing to dull weather, telegrams reached Lady Blount from notable people eager to learn the results.

LLOYD OWEN.

[Copied.]

The Ed. of *The Earth* proves the unglobularity of the earth's surface, by the aid of the latest discoveries and improvements in the Art of Photography.

Proctor's admission that "*if with the eye a few inches from the surface of the Bedford Canal, an object close to the surface, six miles distant from an observer, can be seen, there manifestly would be*

*SOMETHING WRONG IN THE ACCEPTED THEORY,**

is to-day practically proved to be a fact. No "ifs" are left in the case. "Parallax" is corroborated; and the position of John Hampden, Esq., is vindicated and proved to be true, and the decision in his case was unjust.

Mr. Clifford (acting on behalf of J. H. Dallmeyer, Ltd., of 25, Newman St., London, for Lady Blount,) placed a specially

prepared and extended camera, with an extraordinary telescopic lens, on a platform which was fixed under Welney Bridge, close upon the water, and lying quite flat upon that platform, face downwards; he focussed a square screen which was fixed with lower edge close to the water under the Old Bedford Bridge, six miles distant. The result being that not only is the screen visible in the photograph, but also its shadow, reflected in the water below.

A number of copies of this photograph, taken (as described above) on May 11th, 1904, at about 2 p.m., will be issued. Those who desire to possess a copy are requested to send whatever they can individually afford to pay for one, to help defray the heavy expenses incurred by the Ed. But the Lord will provide. A few copies will be presented gratis to those who cannot afford to pay for one. No one can have two copies.

* "Myths and Marvels of Astronomy."

STRETCHED OUT UPON THE WATERS.

BY E. H. RICHES, LL.D., F.R.A.S.

Member of the "London Mathematical Society,"
late Cantab, etc.

(continued from p. 367.)

This star, however, has been seen as far south as the tropic of Capricorn. I am given to understand that, in the "Naval and Military Intelligence" of the *Times*, of 13th May, 1862, it is distinctly stated that Captain Wilkins distinctly saw the Southern Cross and the Polar Star at midnight, in $23^{\circ} 53'$ lat., and $35^{\circ} 46'$ long. It would seem therefore, that this fact, with reference to the Polar Star being visible below the equator at such a distance, might form a strong argument against the rotundity of the earth.

Some time since, it was a common practice amongst surveyors, and men laying out canals and railways to allow 8 inches for every mile, for the consideration of the convexity of the surface of the earth. It was supposed that, if this were not done, the water in the canal would not remain stationary. It has, however, since been discovered that things are more satisfactory when the allowance of 8 inches to the mile is not permitted to enter into the calculations at all; in fact in those cases where an allowance is made, every thing turns out most unsatisfactory.

The allowing then for convexity, or what was called by engineers "forward levelling," has given way to the method of "back-and-fore" sight, or "double sight," where no allowance whatever is made for convexity. Those who argue in favour of the earth's surface being a plane, point proudly to the fact that all the most practical scientific men of the day totally disregard the sphericity of the earth's surface, and regard it, for all practical purposes, as if it were a plane.

What has been thus far said, with reference to the form of the earth, is intended to be of interest to the reader; and it is not to be supposed that the theory of the earth being a *fixed plane* has been supported in opposition to the generally received idea of the sphericity of the earth, and of its orbital and axial motion. Some of the leading arguments in favour of the Newtonian theory, have been briefly touched upon and in such a manner that the soundness of the same is brought in question; still if the way in which I have treated the same be in accordance with the *truth*, it will not be necessary for any one to be offended.

The reader who is not versed in astronomy, and is unacquainted with the methods adopted for the calculation of various astronomical phenomena, will readily point to the splendid exactness with which astronomers foretell a coming eclipse, and hold that up to those who would advance the theory of the earth's surface being a plane. It might at first seem fair and just for him to do so; but when it is known that these astronomical calculations, exact as they are, are not dependent upon any theory whatever, and would hold even in the event of all known theories being disregarded, he will be led to see that the theory of the earth's surface being a plane, does not seriously affect astronomy in the main. Those acquainted with astronomy know full well that the necessary data for managing calculations are tabulated, and used without necessary reference to any theory. And again, at the will of the calculator, *any* theory might be adopted, and equally true results will follow. From years of practical observation, certain tables of the moon's relative position have been made, and may, if it please the astronomer, be used in connection with any theory whatever. It is a known fact that Ptolemy, who lived in the second century of the Christian era, did not fail, notwithstanding the considered defects of his system—to calculate with exactness

all the eclipses that happened during the period of the coming 600 years.

In his lectures on Natural Philosophy, Professor Partington observes:—"The most ancient observations of which we are in possession, that are sufficiently accurate to be employed in astronomical calculations, are those made at Babylon, about 719 years before the Christian era, of three eclipses of the moon. Ptolemy who has transmitted them to us, employed them for determining the moon's mean motion, and probably had none more old on which he could depend. The Chaldeans, however, must have made a long series of observations before they could discover their 'saros,' or lunar period of 6,585 days, or about 18 years; at which time as they had learnt, the place of the moon, her *node* and *apogee*, return nearly to the same situation with respect to the earth and the sun, and, of course, a series of nearly similar eclipses occur."

In Somerville's *Physical Sciences*, it is said: "No particular theory is required to calculate eclipses; and the calculations may be made with equal accuracy *independent of any theory.*" And, again, Sir Richard Phillips, in his *Million of Facts*, says: "The precision of astronomy arises, not from theories, but from prolonged observations, and the regularity of the motions, or the ascertained uniformity of their irregularities. Ephemerides of the planets' places, of eclipses, &c., have been published for nearly 300 years, and were nearly as precise as at present."

According, therefore, to my intention, as stated at the commencement of this pamphlet, we will suppose the earth to be a plane, and free from any orbital or axial motion. The earth then being *fixed*, we must suppose the sun to move and we shall be led to see that with these suppositions,—namely, the surface of the earth being a plane, and fixed, and the sky to move in such a manner as will be described, the change of seasons, sun-rise and sunset, the position of some countries, necessitating a higher temperature than that of others, can all be accounted for, and perfect harmony may exist between our *suppositions*, and those facts with which we are acquainted.

(to be continued.)

All communications and enquiries respecting this Magazine and the teaching it upholds, and all questions and matter for insertion, should be addressed to E.A.M.B., 11, Gloucester Road, Kingston Hill.

"THE EARTH'S" OBSERVATORY.

The Ed. does not necessarily endorse statements made under the headings of "The Earth's Observatory," Letters, etc., unless signed Ed. The Earth.

"Seest thou a man diligent in his business? he shall stand before kings."

The Holy Scriptures are the essence of verity, and it is impossible for any statement made therein to fail in its general meaning. I am led to quote the above verse from *Prov.* xxii. 29, by the success of Mr. Maurice Graham (connected with the company of Graham, Morton, & Co., Ltd.); this gentleman having been congratulated by Royalty. "Wake up," were the stirring words spoken by H.R.H. the Prince of Wales, and it is evident that they fell deeply into the hearts of Maurice Graham, Esq., and Joseph Morton, Esq., the celebrated engineers of Hunslet, Leeds. And this admonitory phrase inspired these gentlemen to a determination to awake to action, and press forward beyond lines which had hitherto been the limit to English and American achievements in the rapidity of construction and equipment of unique engineering works of the most advanced and permanent description. The fact that H.R.H. the Prince of Wales personally congratulated these gentlemen on their great ability, should convince every person—in this country at least—that they deserve high commendation, and that "Mr. Maurice Graham is the presiding genius" is universally acknowledged.

I am proud to state that Mr. Maurice Graham takes an interest in *The Earth*.

QUERY.

[Received from a Lady in the Isle of Wight.]

"He made the round earth [world] so fast that it cannot be moved, still 'those things which cannot be shaken shall remain.'—*Heb.* xii. 27: *Peter* iii. 7, 10, 12, 13. Also: 'When the earth shall be removed like a cottage,' and which has been shaken already considerably *out of its orbit*, as modern writers assert, and really the geographical chapter re tempests, and cyclones, and floods, and *earthquakes*, in the 7th vial of Dr. Cummings, also accidents, endorses *much* for the last few years—earth tremours, and quakes which have been *most remarkable*, and *instructive* and seem to have *significance* however *round or flat*, still *this is the same*—certainly the part of the world you quoted about is a *remarkable specimen* to corroborate your theory, still there are *great levels* and *plains* in many parts of the world. In seeking the deep things of God and his deep counsels, scripture must be at *unity*, or a failure otherwise, and though the unbeliever cavils re '*verses*' which do seem to contradict themselves without references and right translations especially, still there is *not one* re the dissolving of *this world*—and 'what manner of persons we ought to be,' and the *signs* and *tokens* of an '*evil time*,' which don't seem a *convenient* topic to those so attached to their riches and the good things of this life moreover *lies, injustice, and oppression, and falseness* increase, and reign *incarnate* with *some*, I am grieved to know, and realize as only stubbornness and hardness of heart.—As to the astronomical question, I should feel only too interested to meet you again. Re this matter Sir I. Newton quotes, 'that on a *specified* number of years, a comet shall so damage the sun that it will cease to give light and heat to the earth,' if so it only corresponds with the plague of dense darkness as within."

The quotation you give about "the round earth" is from the Prayer Book. It is not in the revised version of the Bible nor even in the authorized version. It is not in the original. But even if it were, a thing may be round and flat like a penny.

The word earth in the Holy Scriptures refers always to the land portion of the world as distinct from the waters of the sea.

All water is level, and the different portions of land are therefore flat. The earth or land may be shaken by an earthquake but that does not show it is moving regularly and continually in an orbit.

The 7th vial is still future. When it comes the world—I believe—will pass through an awful crisis. The texts I quoted from the Bible about the shape of the earth are clear, and every christian ought to believe them. And there are none in support of the globular theory. Not one when rightly understood. The Bible harmonizes itself. It is the false exposition of difficult parts that make it appear to contradict itself. But God is one, and so is truth, though there may be different branches of it. You refer to Sir Isaac Newton's prophecy about a comet. But that prediction has *not* been verified. The comet may have come at the time specified, but if it did it failed to damage the sun, in fact some astronomer's teach that the sun's light is fed by comets. But both theories are absurd.

But as you remark many are too engrossed with the riches of this world to study these things, and so they are left in their delusions.

Therefore let us follow God's truth wherever it leads us, and at all costs.

Q.—You say we should fall off the earth if it were a whirling globe. You therefore believe in ex centrifugal force, but not in counteracting force of gravitation. Why, then, does a ball thrown up, or shot from a cannon, descend to the earth again? Why doesn't it fly off the earth?

A.—Zetetics neither believe in centrifugal force nor in gravitation. They are simply the inventions of those who promulgated the globular theory. Zetetics don't need them. But we know, by practical experiments, that heavy bodies fall when their supports are taken away; if therefore the earth were a rotating globe we should all fall off as soon as the earth turned us topsy turvy.

Q.—Can you give date and particulars of Sir Henry Holland's statement, that the sun and moon were both above the horizon during a lunar eclipse.

A.—Sir Henry Holland stated in his "Recollections of his Past Life," quoted in the "Story of the Solar System," that the sun and moon had been both seen above the horizon at the same time, when the moon was eclipsed, on the 20th April, 1837; therefore his book must have been written since then. Of course the moon has risen eclipsed before the sun had set somewhat recently—within the past two years. I remember the occurrence quite clearly.

Q.—Can you explain what becomes of sun, moon, and stars? They rise in the east, disappear in the West, re-appear in the East. Where do they go?

A.—These bodies revolve over and around the plane earth; when they get too far from us, they disappear and go over other parts of the world. They are not able to shine over all the world at one time, no more than we can see all over the heavens at one time.

Miss L. HODGES.

Q.—You say that fresh water (canals, &c.) is level, but this does not prove that the sea is also level. How do you explain the fact of the tides, which are very evident? Do you believe that the moon affects the tides?

A.—We say that the surface of water is level, both sea water and fresh water. Of course its horizontal surface may be disturbed at times by storms, or tides. Tides are caused by the alteration in the respective levels between the earth and sea. We may know that the surface of the sea cannot rise above its level, for water will rise up to its level, but not above it. And as the earth (or land) rises upon the waters of the great deep, like everything else which rests upon the water, it has a sort of undulatory motion, rising and falling at slow intervals. The motion evidently regulates these intervals, but the motion is not the *cause* of the tides.

Q.—How is it we get night and day? The sun always rises in the east and sets in the west. How does it return to the east every morning if the earth is not a globe?

A.—The sun returns to the east every morning because it goes all round, and

above the plane earth. I have answered this question scores of times. (See further in answer to third question).

Q.—Where are the moon and stars by day?

A.—This seems an absurd question. *Sometimes* the moon is overhead, and can be seen in the daytime. And some of the stars are always overhead, but their light cannot be seen as it is swallowed by the greater light of the sun. Enquirers should watch for themselves. Stars can be seen in the daytime from the deep and dark shaft of a coal mine, or with suitable telescopic arrangements.

M. F. CANNELL.

Shanklin, I.W. May 13th, 1904.

Dear Lady Blount,—Doubtless you will be surprised to hear from a stranger. Your lecture last night afforded me intense pleasure, and deep interest to listen to, though I have heard of the theory you so skilfully manipulated re the earth. However, more anon re this interesting subject; and the queries I should like to ask are enclosed. I consider it was a kind providence which led me to attend your lecture.—Yours faithfully, C. E. D. C.

Dear Lady Blount,—Will you kindly give me, in your next issue, the rate of the earth's curvature at a distance of 100 miles? I think you could make some telling experiments in the Lake district. I congratulate you upon your photograph of the Old Bedford Canal, which you have sent to our mutual friend. It is very convincing! Can you come and speak for us on the 22nd?

E. DANIELS.

The amount of the earth's curvature in 100 statute miles, according to the teaching of modern "science," would be about 1 mile and 460 yards. I regret that I was booked to give a lecture in Croydon, on the date named, before I had the pleasure of receiving your kind letter. Your suggestion re Lake district I value, and will endeavour to carry it out when possible.—Ed.

EXTRACTS FROM LETTERS to the Editor of *The County Press*, I. of W.

"Lady Blount's lecture at Shanklin on the Earth subject, which has found a place in your columns, was worthy of an audience filling the Institute Hall, and big crowds do not usually uphold the teachings of the minority.

Mr. Editor, it gave me more than momentary satisfaction to hear you admit that Lady Blount's lecture was learned, and I, as one who did my best to puzzle her Ladyship, from a Globularist standpoint, must say it would be difficult to find a more logical reasoner than Lady Blount, whose ably edited magazine, *The Earth*, will compare favourably with the best publications devoted to the exact sciences.

I am an inquirer into plane-earth teachings since readings *The Earth*, and learning her Ladyship's most convincing proofs that the Earth cannot be a globe careering through space at the rate of 10 miles a second. I am more than ever assured that Lady Blount, is one of the leading lights of the 20th century, and the pioneer in pointing the way to the truth."

"I think Lady Blount is to be congratulated on the result of her visit to Shanklin. Besides the attraction of her musical compositions there was a considerable attendance to hear her address, and this was continued with much readiness and fluency for a good hour, the speaker's voice retaining its clearness to the last word. It is no slight thing to stand and face an audience, largely out of sympathy with one, and to continue one's arguments, while smiles of dissent are plainly visible. Yet her hearers showed every courtesy and refrained from audible disapproval, patiently following statements which in many instances were not worthy of evidence. Certainly a clerical gentleman soon turned his back upon the Priestess of the Flat Earth dogma, and marched out the whole length of the room, but the speaker was not often disturbed. [This gentleman had previously been anxiously inquiring the time of the last train, we are told.—Ed.]

THE EARTH A GLOBE.—LECTURE BY MR. R. STROUD.

"On Monday evening Mr. R. Stroud, of Shanklin, gave an interesting lecture at the Palmerston Hall, as an answer to Lady Blount's theories at the Institute; it was before a small but appreciative audience. He contended that it was a well-verified, immutable truth, and not an hypothesis, that the earth was a globe and not a plane.

[If space allows, in my next issue I hope to print some quotations from the above with a few remarks thereon.—Ed.]

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