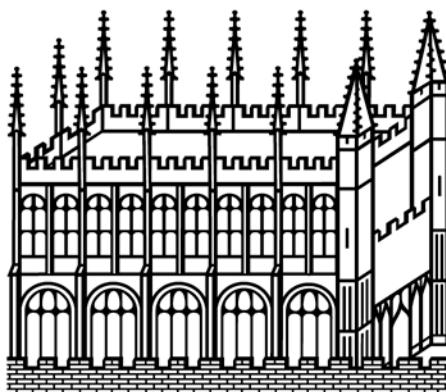




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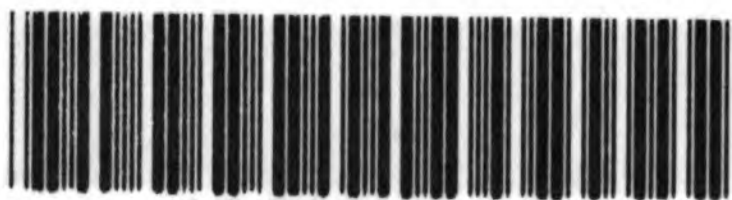
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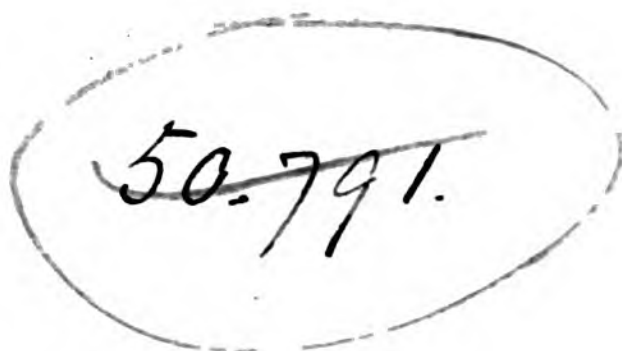
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The image shows a close-up of a marbled paper pattern, likely from an old book. The pattern consists of dense, repeating, teardrop-shaped motifs in dark brown and black on a light tan background. A small, rectangular, light green label is affixed to the upper left edge. At the bottom center, there is a small, rectangular, light-colored label with handwritten text.

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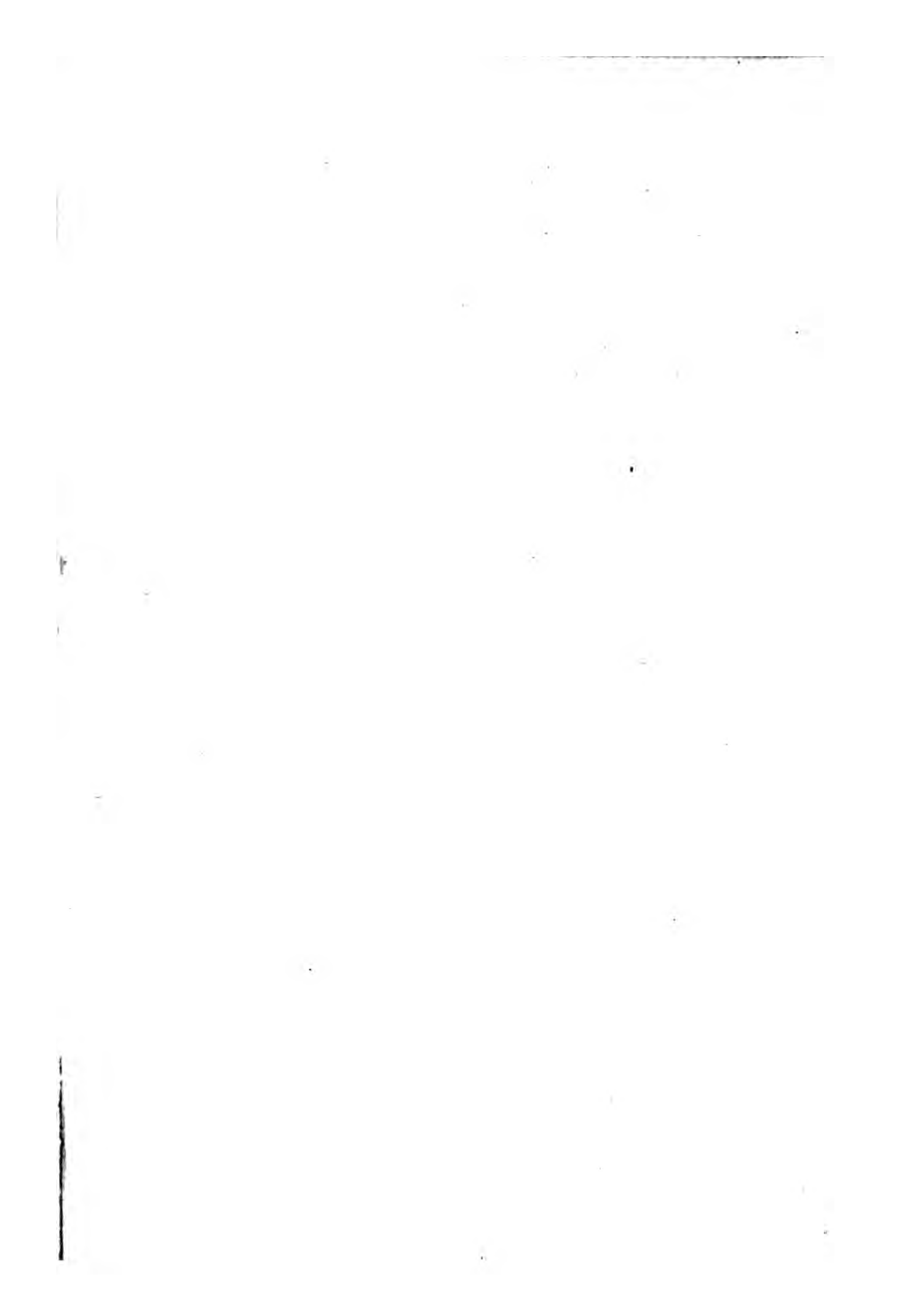


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GEOLOGICAL CONFIRMATIONS
OF THE
TRUTH OF SCRIPTURE.



PREFACE.

THE following Letters, which appeared in the *Cornwall Chronicle* of Jamaica, were written to counteract the effects of a work entitled *Vestiges of the Natural History of Creation*, which had begun to attract considerable attention, and to diffuse its infidel principles among the reading population, which is the most influential class of any community.

It is hoped that the arguments contained in this small publication may lead many to search more deeply into the Sacred Oracles, and that they may find that perfect light and peace of which they form the true and only fountain.

The candid reader will make due allowance for the very disadvantageous circumstances in

which the writer was placed, in being shut out from works of reference, and in being obliged to condense each Letter, so as to render it suitable to an ordinary newspaper.

CONTENTS.

LETTER I.

Nature and Revelation both to be studied	9
--	---

LETTER II.

Folly of disregarding History	15
-------------------------------------	----

LETTER III.

La Place's Theory consistent with Scripture	21
---	----

LETTER IV.

Changes on Earth before Scripture History begins	27
--	----

LETTER V.

Order of Creation same by Geology and Scripture	33
---	----

LETTER VI.

Geological Proofs of the Flood	45
--------------------------------------	----

LETTER VII.

Heat of the Internal Part of the Earth	51
--	----

LETTER VIII.

Serpent changed—Scripture Animals discovered	57
--	----

LETTER IX.

Author's Theory of Creation.....	63
----------------------------------	----

LETTER X.

Absurdity of Author's Hypothesis	69
--	----

LETTER XI.

Scripture Plan of Creation	75
----------------------------------	----

LETTER XII.

Universal Law of God.....	81
---------------------------	----

LETTER XIII.

Principles of Morality.....	87
-----------------------------	----

LETTER XIV.

Origin of Languages	97
---------------------------	----

GEOLOGICAL CONFIRMATIONS
OF THE
TRUTH OF SCRIPTURE

LETTER I.

NATURE AND REVELATION BOTH TO BE
STUDIED.

THERE are two volumes in which God reveals to his intelligent creatures a knowledge of himself—his works, and his Word. If we rightly interpret them, they necessarily harmonize in their testimony, and throw mutual light on each other, for they both originate in the same fountain of infallible truth. Like two faithful and independent witnesses, they may appear at times to give conflicting evidence; but, by close examination, all apparent differences are gradually reconciled, and thus new evidence is furnished of the truthfulness of both. The Bible can neither be well understood nor duly appreciated

by those who are ignorant of the works of creation, for it is thence it brings much of its evidence to prove the majesty, wisdom, omnipotence, and goodness of the great Creator. It is therefore a high and honourable work for any of his intelligent creatures to search deeply into the works of God, and to collect lessons of wisdom from their hidden and exhaustless stores. Such investigations should be zealously prosecuted, notwithstanding of any discrepancies which may at first appear between this first volume of revelation and the Sacred Scriptures. Every intelligent Christian, who has investigated the evidence of the Divine origin of the Bible, knows it to be irrefragable. The more strictly it has been scrutinized, the proofs of its being the Word of God have become the more irresistible. The Sacred Volume has already stood every kind of hostile assault for thousands of years, and not only has it remained strong and uninjured, but its power to subdue the enemies of God, and the corruption of the human mind, has become more apparent to the whole world.

If its testimony be rejected, there is no book which can be credited; for the evidences of its truth infinitely transcend those which can be adduced for

any other. It is therefore unworthy of the Christian to discourage the closest investigation of nature, as if any information could thence be drawn to undermine the foundation of his faith.

To every one who is inclined to dive into the most secret recesses of creation, we would say, Go on, collect facts, search diligently the heavens, the earth, the sea, the air, to discover the mysteries of their constitution ; endeavour to find out the most universal laws to which their changes and revolutions can be reduced ; for all such knowledge tends to disclose some portion of the unfathomable depths of Divine wisdom and goodness.

A person who begins the study of nature may expect to find, that as his knowledge advances, many of the previous impressions of his youth, which he derived from a partial acquaintance with the Scriptures, must be changed or modified. If, in defiance of all the revelations of science, he continue to cling to all his first and crude opinions, he will justly expose himself to the censure or contempt of those who are better informed. The author of the *Vestiges*, and all such writers, may well despise those who shut their eyes to the plainest truths which the works of God make known ; but if so, are not they

guilty of equal folly, if, while professing to search for light in one department of knowledge, they wilfully close their eyes upon another; and, without attempting to disprove the Divine origin of Scripture, endeavour sily to set it aside by indulging in fanciful speculations, which are scarcely less opposed by the works of God, which are confidently brought forward to uphold them, than by his Word. In order to gratify an insatiate and almost insane propensity for theorizing, the author of this book would destroy his own soul, and those of his readers. He appears to be a person of no original research, but has applied himself with great diligence to the examination of all kinds of books, and especially of those written by men of a speculative cast of mind, such as his own. He has thus compiled a mass of information on several departments of science, which, if we could trust to its correctness, is deeply interesting, and has thrown a charm around his book by the classic purity of its composition; but from his total ignorance or disregard of the Volume of Inspiration, he, with an air of perfect confidence, utters sentiments which more resemble the drivellings of an idiot, than the calm and well-digested opinions of one who is earnest in his search after truth.

What can we think of the man who perils his own soul, and those of his readers, to establish the astounding and wondrous truth, that he is lineally descended from a frog, and that his noble ancestry came through the race of monkeys? As he has taken so much pains to find out his own pedigree, and is sure of having discovered his true line of descent, of course it does not become us to contradict him; and although we know with infallible certainty that we have not the same origin, but are sprung from one formed after the image of the Most High, yet if the history he gives of his own family descent is correct, it will account for many facts which otherwise appear inexplicable. Perhaps at the creation of our ancestor Adam, the development of his ancestry had only reached the race of tadpoles, which satisfactorily accounts for his total ignorance of the existence of our progenitor. By the time of the Flood, they may have reached the form of a frog, and saved themselves by swimming, and therefore were alike ignorant of Noah and the ark. By the time the Law was given, the brain of his ancestry was not fully developed, and they were too busy in climbing trees as monkeys, to know of any events which were taking place on the earth, and shaking

its kingdoms. And although, during the last two or three thousand years, the brain has been undergoing rapid transformation, it is manifest that the species to which he belongs are at least 300 years behind our present generation. They have never yet reached the age of Bacon, but, like our own ancestry during the dark ages, or the immortal Des Cartes, are dreaming away their precious lives in idle, useless, and senseless speculations, which may amuse and bewilder, but can never profit.

W. C.

LETTER II.

FOLLY OF DISREGARDING HISTORY.

SIR,—What would be thought of the wisdom of the man who endeavoured to compile a history of Greece, merely by ransacking the works of modern travellers, to find an account of the monuments which the country still retains, and who treated with utter disregard its ancient and most authentic histories, and hesitated not to contradict their plainest records? His researches might be valuable; they might throw much light on obscure events; fix with certainty many important dates; afford more certain evidences of the actual proficiency attained by its ancient inhabitants in arts or science, and correct many erroneous impressions which had previously existed. The remains of temples, theatres, statues, inscriptions, might bring many facts to light, which had formerly been overlooked or unknown, and the historian who disregarded them would be justly chargeable with culpable neglect, for undervaluing one of the most important and

useful auxiliaries he could have found in constructing his work.

But an authentic history of the country, written by one who was intimately acquainted with the events he records, would be much more satisfactory and useful. It would establish facts which no monuments or stone records could ever convey, and, by all intelligent men, its testimony would be deemed sufficient to explain events which could not otherwise be known. The man who refused to consult this ancient history, for the correctness of which the best evidence could be adduced, would expose himself and his work to the contempt of all sensible men. Yet such is the course which the author of the history of the *Vestiges of Creation* has pursued. He has thrown aside the most authentic history which the world contains, hesitates not to contradict what can be proved to be the statements of Jehovah himself, and from the works of men who have been exploring the hidden records of creation, which are treasured up in the bowels of the earth, he has endeavoured to concoct a history of his own, which is full of error and fable. The light of history is as little to be disregarded as the light obtained by scientific research ; and while each assists the other

in revealing truth, each is incomplete in itself. The student of Scripture ought neither to undervalue nor set aside the knowledge which is obtained by investigating the works of nature, and far less should the student of nature overlook the revealed Word of God. Erroneous views of creation necessarily lead to ignorance in part of the character of its Great Author. Disregard of the Scripture may involve the soul in endless misery.

If the author of the *Vestiges* had duly weighed the statements of Scripture, he would have found the strongest corroboration of many of his own opinions, have become much better acquainted with the unchangeable laws by which God governs the world, and would have been guarded from many of the palpable errors into which he has fallen, and which have converted his work, which might have been of no inconsiderable value, into an instrument of inflicting boundless evil both upon himself and the community. 'Because he received not the love of the truth,' it is to be feared that 'God has sent him strong delusion, that he should believe a lie.'

It shall be my object to show, from the testimony of this author, that the revelations of geology do not contradict the statements of the Word of God,

but, as might be expected, strongly corroborate many of them.

The object of Scripture is to reveal to man that knowledge which is essential to salvation, and which could never be discovered by his unassisted reason. God has endowed us with powers for investigating his works, and leaves us to make scientific discovery by the active employment of these intellectual faculties. He does not, however, divert our mind from what is essential to our spiritual and eternal welfare, by engaging us in scientific research. If a Christian converse with a dying man, he does not endeavour to engage him in philosophical discussion, but rather to direct him to such truths as are calculated to prepare him for his approaching change. Now, the object of the Word of God is to turn men's thoughts from the world, and to prepare them for death, judgment, and eternity. To all who desire to become acquainted with nature and its wonders, God has spread out another book, which they are invited every day to read, and from which, by diligent study, they will derive great delight and profit. 'The heavens declare the glory of God, and the firmament showeth his handiwork. Day unto day uttereth speech; night unto night showeth knowledge.' 'Praise

the Lord from the earth, ye dragons and all deeps; fire and hail, snow and vapour, stormy wind fulfilling his word; mountains and all hills; fruitful trees and all cedars; beasts and all cattle; creeping things and flying fowl; kings of the earth and all people; let them praise the name of the Lord, for his name alone is excellent.'

The Scriptures open with the declaration, that 'In the beginning God created the heaven and the earth,' but give no intimation when that beginning was. It may, therefore, have been millions of ages before the subsequent events took place.

It establishes the fact, which geology no less plainly makes known, that the universe did not exist from eternity, but had a beginning; and it thus sweeps away one of those delusions by which philosophers, falsely so called, were wont to bewilder and deceive themselves and their disciples.

'The heaven,' in the above passage, most probably does not mean the region of the atmosphere, which was not created till the second day; nor can it refer to the third heavens, in which the Most High is pleased peculiarly to manifest himself. It therefore probably means the starry heavens, including the sun, moon, and all celestial luminaries. The

Almighty does not reveal how the starry universe was created; and if La Place could prove, that by supposing it at first to have been a fiery vapour diffused through space, and which was gradually formed into solid globes, various phenomena could be explained, there is nothing in Scripture to oppose the theory.

W. C.

LETTER III.

LA PLACE'S THEORY CONSISTENT WITH
SCRIPTURE.

SIR,—It is not a little surprising to find, that what some men of gigantic intellect among modern astronomers, who appear to have laid the cope stone on that mighty pyramid of discovery which has been gradually rising to its summit through a long succession of ages, consider to have been the origin of our solar system, most singularly harmonizes with what, according to Scripture, is destined to be its termination. When infidels of former days read in the epistle of Peter, that ‘the heavens shall pass away with a great noise, and the elements shall melt with fervent heat; the earth also, and the works that are therein, shall be burnt up,’ they would tauntingly exclaim, Where is the fire to come from that could consume the solid earth, with all its immense oceans and continents? Our modern philosophers, even the most infidel, in reply, inform them, not only that the earth is burning within, but

that sun, moon, and stars, were at one time a fiery, gaseous vapour diffused to the limits of the system, which, by the law of gravitation, was at once collected into liquid masses, and, as in the eddies of a mighty current, sent whirling through space, in those sublime and uniform motions which they still retain.

Ages before the wisest men of science could make the most distant approach to such sentiments, the humble fishermen, who followed the Saviour, had announced, in language the most sublime, that 'the heavens, being on fire, shall be dissolved, and the elements shall melt with fervent heat.' Does not this appear like a declaration that the whole system is to return to what La Place, Herschell, and the author of the *Vestiges* consider to have been its original elements? Could any of these or their disciples now say, that such a catastrophe is either impossible or even improbable?

'Nevertheless, we look for new heavens and a new earth, wherein dwelleth righteousness,' and believe, that the same Almighty Architect who first created them, can, even if they returned to their original condition, if necessary, easily re-organize them.

La Place's theory of the origin of starry systems, as given by our author, is extremely plausible, yet not fully satisfactory. In p. 37, he says, 'The outermost of the four satellites of Jupiter revolves round his body at the distance of 1,180,582 miles; hence, according to the hypothesis, the planet was once 3,675,501 miles in circumference' [I presume he means twice that sum, as the distance of the satellite from the planet is only the radius, and not the diameter of the circle, and should therefore have been multiplied by 62,832], 'instead of being as now 89,170 miles in diameter. This large mass would take rather more than 16 days $6\frac{1}{2}$ hours, the present revolutionary period of the outermost satellite, to rotate on its axis.' That is, the planet revolved upon its axis in the same time that the satellite now moves round it, at the time when the substance of the planet was diffused over the whole space, through which a radius from its centre to that of its satellite would now sweep. This motion upon its axis increases, by the theory, according to Kepler's law—that the cubes of the distances are as the squares of the times of revolution.

The first question, then, that presents itself to the inquiring mind is this, Does Jupiter revolve upon its

axis according to this law? Or, if it were now to throw off a satellite, would its revolution be according to the law of Kepler? The manifest answer is, that it would not. For if so, it would revolve in about $2\frac{7}{8}$ hours in place of nearly 10 hours; while the earth would revolve in about $1\frac{1}{2}$ hours in place of 24, and the sun would revolve on its axis in about $2\frac{3}{4}$ hours, in place of upwards of 25 days. Before the theory could be established, it would appear necessary to account for this remarkable apparent change of law. At present, the diurnal motion of the planets appears to have no connection either with their distances from the sun, or with the motions of their satellites.

‘Such is the universe,’ our author observes, p. 8, ‘as developed to the perceptions of the modern philosopher; different, indeed, from that of our forefathers, who did not know the bounds even of this little world, and beheld in the sun, moon, and stars only a set of menial lights, ordained, usefully or not, to attend it.’

This is in part true of ancient philosophers, but those who drank instruction from the Volume of Inspiration, have for thousands of years been wont to contemplate, in the book of Job, the Psalms, and

the Prophets, views more sublime of the character of the great Architect, as revealed in his works ; of the insignificance of man, of the shortness of his abode on earth, than have ever yet entered the mind of the modern philosopher; and, perhaps, as exalted and expansive as the human mind can grasp. Our author expressing, in the strongest language, the revelations of astronomy, speaks of the number of the stars as discovered to be as ‘ the particles of the desert sand cloud.’ Is this stronger than the language used to Abraham, when they are spoken of as the sand upon the sea shore? Could the modern philosopher, with all his discoveries, say more of the insignificance of man, as compared with the Most High, than Isaiah expressed, when he declared that *all nations* were before him as ‘ a drop of a bucket, or as the small dust in the balance ;’ as ‘ nothing, yea, less than nothing, and vanity?’ Or, when he speaks of the whole human family as one little leaf of the forest, withered, quivering in the wind, and about to be carried away by it? (*see* Isa. lxiv.) Will the discovery made by geologists, of untold ages which the world has already existed, enable them to express the shortness of human life by more impressive figures than those used by the sacred

penmen—a shadow, a vapour, a smoke, a wind that passes away, as yesterday when it is past, as the flower blooming and immediately cut down, or withered; yea, a thousand years as one day, and one day as a thousand years? If they would find language and similes to express the ideas which their discoveries enable them to form or conceive, they must still come to the ancient oracles of God, which existed thousands of years before these discoveries were made.

W. C.

LETTER IV.

CHANGES ON EARTH BEFORE SCRIPTURE
HISTORY BEGINS.

SIR,—The first verse of Scripture simply declares that the heavens (including sun, moon, and stars) and the earth were created by God in the beginning, or at some remote and unrevealed period, and were neither self-created nor existed from eternity, as dreamers, in all ages, have been wont to imagine; and this truth geology now as clearly testifies as the Word of God. The second verse describes the condition in which the earth was immediately before the subsequent changes began. It was without form and void, or rather waste and desolate. The same words are used in Isa. xxxiv. to express the utter ruin to which the land of Edom was about to be reduced; and in Jer. iv. 23, the chaotic state into which the land of Israel would be brought by the continued rebellion of its inhabitants. ‘I beheld the earth, and, lo! it was without form and void; and the heavens, and they had no light. I beheld

the mountains, and, lo ! they trembled, and all the hills moved lightly. I beheld, and, lo ! there was no man, and all the birds of the heavens were fledfor thus hath the Lord said, The whole land shall be desolate.' This language appears not only to throw great light on the condition of the earth at the time Scripture history begins, but also most significantly to point out the cause of its having been reduced to that state. It may have been, like the land of Israel, or the land of Idumea, thickly peopled before, adorned with all that was beautiful and attractive, and filled with light. The sun may have shone upon it, and millions of living beings may have breathed its pure and untainted atmosphere ; mountains and continents, covered with the richest vegetation, may have been spread over a great part of its surface. Changes without number may have been taking place during myriads of ages, but now it was desolate. The ocean had overspread it, a thick and impenetrable vapour surrounded it, which effectually shut out the light of heaven. The Almighty himself, in speaking of that time, says to his servant Job, 'Where wast thou.....when I made the cloud the garment thereof, and thick darkness a swaddling band for it ?' The globe was, at

that time, reduced to utter desolation; darkness lay upon the face of the deep, the atmosphere appears to have been destroyed, and though the sun, moon, and stars shone as before, their light could no longer penetrate the thick mantle in which it was now enshrouded.

The prophets appear to have fully understood this language; and frequently, under the guidance of the Divine Spirit, used it, in describing the judgments with which the nations would be visited. Ezekiel, in addressing the Egyptians, says (ch. xxxii.), 'When I shall put thee out, I will cover the heaven, and make the stars thereof dark: I will cover the sun with a cloud, and the moon shall not give her light. All the bright lights of heaven will I make dark over thee, and set darkness upon the land, saith the Lord God.'

If it be asked, how was the earth reduced to the condition in which it is described in the second verse of Genesis? How were all the luxuriant vegetation destroyed, and the teeming population of living creatures, which roamed its plains, peopled its seas, and spread their wings on its winds, and which the rocks with certainty declare it once contained? Where no revelation is given, we must

speaking with caution; but, reasoning from analogy, might we not say, that some similar cause which overwhelmed the earth with the Flood, consumed Sodom and Gomorrah, overthrew Assyria, Babylon, Idumea, emptied the land of Judah, and scattered its inhabitants to the extremities of the earth, and such as is destined yet to consume the earth with fire, may have also laid the earth in ruins at the time when the Spirit of the Lord brooded upon the face of its dark waters? No sooner was the renovated earth occupied by God's own representative—man—than we find the mighty rebel spirit, whose hosts are described in the Word of God as principalities, powers, spiritual wickednesses in high places, who is spoken of as a fallen angel, and therefore greater in power and might than we are; yea, as the god of this world, waiting and watching to seize man as his prey, and to reduce the earth again into a wilderness. May not he, during the long period which preceded the creation of our first parents, have introduced disorder, cruelty, and death into the globe, perverted the instincts of the creatures which then peopled it, and thus brought it to desolation, by a law as certain and unerring as that of gravitation? It is manifest, from the fossil re-

mains of animals which then existed, that land, sea, and air swarmed with destructive creatures, such as the wildest beasts, birds, and fishes which are now found upon earth. The author of the *Vestiges* speaks of them as the military and police, which then checked the overgrown population of other animals; and endeavours, by false reasoning, to show the utility of such animals. It is true that, in a world where cruelty and perversity exist, the sword, the famine, the pestilence, wild beasts, and every kind of disease and natural evil become necessary to restrain the torrent of misery, which would otherwise overwhelm it. But such evils are only to be found where wicked beings have, by some means, obtained influence to mar the fair creation of God. All things are good as they come from his hand; and it is only to shut ourselves up in midnight darkness, and to close our eyes to one of the most important truths which the Omniscient has revealed to us, to imagine that the world is now as it came from his creative hand, and that all evils, physical, mental, and moral, arise necessarily from our being placed under universal laws, as the author of the *Vestiges* most absurdly argues. If we were as God made man at first, or as his people

shall hereafter be, filled with dispositions which are in full accordance with his will, no suffering of any kind would be required, and none would exist ; but happiness, boundless in extent and duration, would fill the earth and all its creatures. The *Vestiges of Creation* make it but too manifest that the spirit of darkness has been employed, during countless ages, in creating disorder and misery in our planet ; and has not once only, but again and again, brought universal destruction upon its inhabitants. God, however, in ways which are inscrutable to us, is bringing order out of confusion, and light out of darkness, is carrying forward his vast designs of love and mercy to our fallen race, and will, ere long, bring the reign of the prince of darkness to a final termination, and establish his own kingdom of righteousness and peace.

W. C.

LETTER V.

ORDER OF CREATION SAME BY GEOLOGY AND
SCRIPTURE.

SIR,—The author of the history of the *Vestiges of Creation*, in p. 114, imagines what would have been the feeling of a supernatural being who had come to visit our earth at some far remote period, before the creation of man. In this he seems unconsciously to follow the example of Scripture; for the history of creation in the 1st chapter of Genesis appears to be written for such a visitant. It describes the various changes which would have appeared to him to take place in their regular order. 1. By the formation, or some change of atmosphere, the light penetrated the dark vapour that encircled the earth; and evening and morning naturally succeeded each other from its diurnal motion. 2. By the perfect formation of the atmosphere the vapours are borne aloft to the sky, and the great expanse between the clouds and the sea comes into being. There is nothing yet to break the canopy of clouds which

overspread the whole heavens ; and man's spirit, if it had then existed, would have been imprisoned, being confined to the narrow bounds of this world, and could never have winged its flight into immensity, nor imagined the existence of the bright and countless worlds above. But, by natural constitution, it was to be fitted for the contemplation of infinity and eternity, and required a far wider field to give exercise to its noble powers. On the third day, the dry land rises from the watery abyss, and is soon overspread with plants, trees, and flowers of perfect beauty and infinite variety. The changing temperature of the dry land now disturbs the atmosphere, and, by creating the winds, disperses the clouds, and opens to the wondering gaze of the new visitant a scene fitted at once to call into exercise the high intellectual powers with which man was to be endowed, and fill his soul with those feelings of admiration, reverence, and love, which perhaps afford the highest enjoyment to those whose hearts are yet in perfect unison with the will of their Creator. The sun by day, and the moon and stars by night, present a scene on which the unfallen spirit of man would dwell with untiring delight.

They were also given 'for signs and for seasons,

for days and for years.' By being rendered visible, they afford signs by which alone the earth and sea can be traversed with safety. Without them, human intercourse would be greatly interrupted, the earth would be little known, the products of its various regions could not be interchanged, and the union of the human race, which is its strength and its glory, could never be fully cemented. The heavenly bodies, by being rendered visible, mark distinctly the various seasons of the year, other seasons set apart for peculiar, and often sacred purposes. They also divide the day into an exact period of time, and which, as it is unchanging, fixes the precise date on which any event takes place. The moon's revolution, though of changing velocity in different parts of its orbit, gives also a precise period. The earth also moves more quickly in one part of its orbit than another, yet always terminates it in the same period of time. It is by the exact dates thus furnished that history can be compiled; without which man could scarcely rise above the condition of the lowest and most uneducated tribes. The fourth day's creation, therefore, which brought to light the glorious orbs of the sky, was as important to man, and as much influenced his destiny, as

that of any of the other days. Of the creation of the succeeding two days we shall afterwards speak.

Observe, that according to the Scripture account, the earth was at first covered with the ocean. This fact, which is repeated in a great variety of forms in the sacred page, is in itself very wonderful. By what power, it might have been asked, could continents, which covered millions of square miles of land, be heaved up from the mighty deep? How could the Himalayan mountains, the gigantic Andes, the mountains of the Moon, and all other mountain ranges, many of which extend thousands of miles, be forced up from the deeps and hollows of the profound abyss? Does not this look like fable? Yet the revelation of God is express and unmistakeable. Its testimony is, that the habitable 'world, with all its fulness, is founded upon the seas, and established upon the floods.' 'Its foundations were covered with the deep as with a garment, and the waters stood above the mountains.' What then does geology say to all this? Let the author of the *Vestiges* speak for himself. 'The matrix of organic life is, speaking generally, the sea. The whole of the lowest animal sub-kingdom is aquatic; so are nearly all the mollusca, and a very large

proportion of the articulata. In the vertebrata, the lowest class is wholly aquatic. The arrangement appears to be this—the basis of each line is a series of marine forms.’ Here then, after a lapse of many ages, when the book of nature begins to be unrolled, it is found to testify as clearly as does the Word of God, that mountains and valleys formed at one time the bed of the ocean, and were heaved up from its unfathomed depths. The next truth that strikes the mind is this, that, according to Scripture, the creation was not all effected at once, but in distinct periods or days. Geology again establishes the same truth, that all kinds of plants and animals did not spring into being at once, but rose in gradual succession. Now let us attend to the order of succession. By the Mosaic account, 1. The sea existed, and we may therefore expect a number of marine productions; which, having no connection with man, are independent of the six days’ creation. 2. The dry land appears, and trees and plants are brought into existence. 3. The waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth. 4. The earth brings forth its living creatures—cattle, and creeping thing, and beast of

the earth; and, lastly, man appears. What says geology to this arrangement? Here again let the author speak for himself. After having described various kinds of obscure shell fish, marine plants, &c., he concludes the first age of organization upon earth (p. 57) with the remark, that '*there was yet no fish, nor any other kind of vertebrated animal, nor any creature which lived upon dry land.*' At the end of the second period, after mentioning a number of voracious fishes which swarmed the sea, and which, having no connection with man, were probably not included in the creation of the fifth day, he says (p. 69), '*We meet with no traces of land plants; remains of terrestrial animals have not even been suspected.*' Forests and thickets with gigantic vegetables, found in the third era, proclaim that dry land then existed, and was prolific in vegetation. '*But neither man nor any other animals were then in existence, to look for such uses or such beauties in this vegetation*' (p. 82). At this time a species of voracious reptile appears, of the lizard kind. At the end of the next period are other voracious reptiles, with frogs and turtles, and a few traces of sea fowl. In the next period, large fish and crocodile-like animals are found. 'But a being of superhuman

intelligence coming to examine our globe, would have seen all this existing only for fishes, and still humbler creatures of the sea; and for reptiles, insects, and perhaps a few birds, and still fewer opossums, upon land. He would have beheld the tyrant sauria pursuing their carnivorous instincts upon the wave, upon the shore, and even in the air; huge turtles creeping along the muddy coasts; still more huge megalosaurs traversing the plain; frog-like animals, of the bulk of modern boars, croaking in the marshes; and with all this, the air filled with multitudes of insects. *But no flocks would have met his eye upon the mountains, no herds quietly rambling in the valleys. He would encounter no tiger, or elephant in the jungle. None of the smaller mammalian quadrupeds, as the dog, the genet, the hedgehog, the hare, the mole, would have presented themselves. And not only were no human beings to be seen, but our supernatural visitant would know that this scene must lie spread out in perfect capability for their reception during whole millenniums, before such beings were to exist*' (p. 114). In the subsequent periods, the remains of cattle and beasts of the field are found in abundance. It will thus be seen, that the order of creation is very nearly the same, if not

identical with that given in the first chapter of Genesis. This having been observed, it was supposed by some, that if each day stood for some long and distinct period, the order of geological deposition would harmonize with the Mosaic account. Now the Scriptures declare that one day is with the Lord as a thousand years, and a thousand years as one day ; it might, therefore, be supposed to be no violation of Scripture principle to interpret each day as some long undefined period. For several reasons, however, I am inclined to think that, in the Mosaic account, each day was literally twenty-four hours. 1. The earth appears to have undergone several almost entire revolutions, at which almost all its plants and animals had been changed; only a fragment, if any, of the organized substances of the ancient world now exist. 2. At the age of man's existence, a new creation of plants and animals appears, from the *Vestiges*, to have taken place, which are, in some degree, different from all that went before. 3. As there were evening and morning each day, they appear to be identified with our present days, and especially this supposition appears best to harmonize with the institution of the Sabbath of rest. It therefore seems more natural to under-

stand the passage to refer to single days. When God was about to renovate the earth, and make it a fit residence for man, and especially for him who is at once the Son of man and the Son of God, may we not suppose that he restored it from the ruin into which it had fallen, by creating all things in the same order in which he had formerly called them into existence? Everything, as it came from his hand, was perfect, both in its kind, and in the order of its being; and although, for some mysterious cause, his fair creation was defaced by the old Serpent, yet as it is to be rescued from his grasp, and yet converted into a glorious residence of pure and holy beings, it was perhaps necessary that it should rise to new existence in the order in which it was originally created.

Striking analogies may be traced in all the works of God. For nearly six thousand years, changes have been taking place on our earth, to fit it for the reign of the glorified Redeemer, and the peaceful abode of his church. The seventh thousand year may probably be the Sabbath of the world; when the perverted instincts of the inferior creation shall be rectified, and when they shall be restored to their allegiance to men. For 'the wolf shall yet dwell

with the lamb, the leopard lie down with the kid, and the calf and the young lion, and the fatling together, and a little child shall lead them ; and the cow and the bear shall feed ; their young ones shall lie down together ; and the lion shall eat straw like the ox ; and the sucking child shall play on the hole of the asp, and the weaned child shall put his hand on the cockatrice' den ; they shall not hurt nor destroy in all my holy mountain.' Analogous changes shall at that time have taken place on the savage tribes of men, who may well be compared to the wild beasts that roam the forest. It is remarkable that advances to this high condition of the renovated earth, have been taking place at regular periods of about a thousand years each. The birth of Noah terminates the first of these long days. The call of Abraham, and the formation of a church, ends the second. Solomon, or the perfection of the outward dispensation, the third. When the moon and starlight of the temple worship had run its course, the fourth day was terminated by the glorious rising of the Sun of righteousness. The fifth thousand years ended with the year 1000 of the Christian era, when England, the nation destined to evangelize a great part of the earth, rose to be a nation. The sixth

day will probably end with the universal spiritual reign of the Messiah, and the ushering in of the millennium of peace.

Nothing can be more certain, than that there is a constant process of development to be observed in all the works of God, and that, too, extended over a long course of ages. If our author had taken the Word of God for his guide, he would have been enabled to bring forward many most striking proofs of the truth of the general idea; while he would have been saved from that most unfounded and whimsical notion, which he has taken so much trouble to establish, that all organization is to be traced to nucleated cells.

It were as wise to trace the origin of his book to the tooth of a wheel. Toothed pinions have been employed in preparing the materials of which its leaves are formed, in transforming them into paper, in making all parts of its cover, in preparing the ink, in constructing the printing press, and, finally, in throwing off the impressions. If it be asked, what connection could the tooth of a wheel have with the long investigations of the author, or with the profound reasoning by which he has been endeavouring to establish its principles? I point to

Babbage's machine, to prove that wheels can reason as deeply as any philosopher. At all events, I will be prepared with a full and satisfactory solution of the difficulty, when he has explained how the nucleated cells enabled him to examine, reason upon, and demonstrate his hypothesis.

W. C.

LETTER VI.

GEOLOGICAL PROOFS OF THE FLOOD.

SIR,—In my last letter I showed, from the history of the *Vestiges*, that the discoveries of geology wonderfully harmonize with the revelations of Scripture. Both commence the history of organic life with a period when the sea covered the earth. Both show that the creation was not effected all at once, but advanced by successive steps. Both prove that, after the overspreading of the sea, the dry land was heaved up from the bed of the ocean, and trees and plants sprung forth in rich luxuriance. Both show that after this, large fish and sea fowl came into being. Both prove that then, and not till then, all land animals, both what are now wild and tame, and such as the Jews ranked among the clean and the unclean, rose into existence, and that all these successive creations had taken place before man appeared. After the creation was thus terminated, and when the sea was confined within its enclosures, and the dry land was fixed and settled

in its place, the Word of God, confirmed by the traditions of all nations, proclaims another mighty event, which could not fail to leave clear traces behind. 'The waters prevailed exceedingly upon the earth, and all the high hills that were under the whole heaven were covered.' 'And the waters prevailed upon the earth an hundred and fifty days.' The infidel has often exultingly asked, Where could water be found to rise to the tops of the mountains? Though all the clouds in the sky would empty themselves upon the earth, they would occasion no such flood. Without supposing any miraculous supply of water, who can tell with what rapidity the waters of the ocean could be drawn up by the ordinary process of evaporation, and poured down upon the devoted earth? But not only were the windows of heaven opened, and did the rain descend forty days and forty nights, but the fountains of the great deep were broken up, which probably means, that the sea burst from its enclosures, and slowly rolled as a mighty wave over the earth; we presume that this effect would be produced, by either accelerating or retarding the earth's motion upon its axis. If we suppose it to have been retarded, and that the line of the equator passed through some of

the northern countries, which the fossils of the tertiary era appear to prove, the north-west current, afterwards mentioned, will be accounted for. But without stopping to inquire by what means the decree of God was executed, we ask, Does geology convey to us any information concerning the fact? Does the surface of the earth bear any marks of having been swept over with an overwhelming torrent of waters? Here again we must allow the author of the *Vestiges* to speak for himself (p. 138): ‘A great valley has been scooped out in the midst of sedimentary strata, leaving the edges of these facing each other from the opposite sides, with perhaps here and there an isolated mass starting up to the height of the two sides, being composed of matter which has resisted the agency by which the adjoining matter was removed. *Here, it is thought, we see incontestable traces of the operation of moving water.*

‘The second fact we are called to notice is, that over the rock formations of all eras, in various parts of our globe, but confined, in general, to situations not very elevated, there is a layer of stiff clay, mostly of a blue clour, mingled with *fragments of rock of all sizes, travel-worn and otherwise, and to which*

geologists give the name of diluvium, as being apparently the produce of some vast flood, or of the sea thrown into unusual agitation. It seems to indicate that, at the time when it was laid down, much of the present dry land was under the ocean—a supposition which we shall see supported by other evidence. ‘Connected with these phenomena are certain rock surfaces in the slopes of hills, and elsewhere, which exhibit groovings and scratchings, such as we might suppose would be produced by a quantity of loose blocks hurried along over them by a flood.’ ‘Finally, I may advert to certain long ridges of clay and gravel, which arrest the attention of travellers on the surface of Sweden and Finland,’ &c. ‘We thus acquire the idea of a powerful current moving from north-west to south-east, carrying, besides mud, masses of rock which furrowed the solid surfaces as they passed along, abrading the north-west faces of many hills, but leaving the slopes in the opposite direction uninjured.’ ‘In the present state of our knowledge, all that can be legitimately inferred from the diluvium is, that many portions of the northern nations of Europe and America were then under the sea, and that a strong current set over them.’

He then speaks of large caverns, which appear to

have been shut up by the diluvial current, and in which the remains of many birds and animals, such as now exist, have been found' (p. 142). 'Our attention is next drawn to the erratic blocks and boulders, which, in many parts of the earth, are thickly strewn over the surface. Some of these blocks are many tons in weight, yet are clearly ascertained to have belonged originally to situations at a great distance. Fragments of the granite of Shap Fell are found in every direction around, to the distance of fifty miles, one piece being placed high on Griffel mountain, on the opposite side of the Solway estuary. Fragments of the Alps are found far up the slopes of Jura. There are even blocks on the east coast of England, supposed to have travelled from Norway.' Whether they were transported thither by floating icebergs, which the mighty flood had cast adrift, or that their specific gravity, being little more than the bottom of the mountain wave that rolled over them, they were hurried from distant regions like pebbles in a rushing brook, it is not necessary to inquire; but after such facts as have been copied from the pages of an infidel book, who shall longer doubt the possibility of such a flood as that of Noah, or can hesitate to believe that such has

actually taken place? It has been said truly that 'an undevout astronomer is mad,' and what else can we say of him, who could compile such a mass of evidence to prove a fact which has stood revealed on the sacred page for the last three thousand years, without being convinced by it? It is strange yet true, that God has often converted the works of both ancient and modern unbelievers, such as Porphyry, Gibbon, Volney, and a host of others, into standing pillars for supporting the truth of his Word; and now the history of the *Vestiges* may well be added to the list; for this work will become a standard book of reference, to prove that the discoveries of geology confirm in the strongest manner the declarations of Scripture, which have stood recorded during thousands of years.

W. C.

LETTER VII.

HEAT OF THE INTERNAL PART OF THE EARTH.

SIR,—Geology clearly proves that our globe has at different periods been exposed to tremendous convulsions. In the history of the *Vestiges of Creation*, very frequent reference is made to the violent tossings of the mountains. In p. 44: ‘Sometimes elevated in naked mountain masses, sometimes found only at great depths below other rocks of a different kind, *granite* appears as the basis rock of the earth’s crust; the form into which the once fluid matter of our planet was primarily resolved, although, in many instances, subjected, under heat, to new movements at times long subsequent.’ In p. 46: ‘It is also to be remarked of all these early rocks, that they have evidently been subjected to an extraordinary degree of heat; insomuch that they have generally acquired a new crystalline texture, are strangely waved and contorted,’ &c. Of the stratified rocks it is said: ‘Generally they are tilted up in high inclinations, with the broken edges directed

towards granitic mountains; indicating that the rise of these mountains from below was the cause of the change of position in the stratified rocks.' 'These new rocks are again, in their turn, broken up and placed in high inclinations by new and similar upbursts of igneous rock' (p. 85). 'Coal beds generally lie in basins, as if following the curve of the bottom of seas. There is no such basin which is not broken up into pieces; some of which have been tossed on edge, others allowed to sink, causing the ends of the strata to be in some instances many yards, and, in a few, several hundred feet, removed from the corresponding ends of neighbouring fragments. These are held to be the results of volcanic movements below, the operation of which is further seen in numerous upbursts and intrusions of fire-born rock' (p. 135). 'One remarkable circumstance connected with the tertiary formation remains to be noticed—the prevalence of volcanic action at that era.' He gives proofs of this in Italy and in England. 'The Pyrenees, too, and Alps have both undergone elevation since the deposition of the tertiaries; and in Sicily there are mountains which have risen 3000 feet since the depositions of some of the most recent of these rocks.' In his explana-

tions (p. 30), we have similar statements again renewed: 'Volcanic agency broke up these strata, and projected chains of mountains; sea and land repeatedly change conditions.' Does not all this information, which is indelibly written in the strata of the earth, give mighty emphasis to the ancient declarations of God's Word:—'Who removeth the mountains and they know not, which overturneth them in his anger, who shaketh the earth out of her place, and the pillars thereof tremble.' 'Then the earth shook and trembled; the foundations also of the hills moved and were shaken, because he was wroth.' 'The hills melted like wax at the presence of the Lord, at the presence of the Lord of the whole earth.' 'All the foundations of the world (*i.e.*, of the habitable earth) are moved.' 'Although the mountains be cast into the midst of the seas.' 'The mountains skipped like rams, and the little hills like lambs.' Such mighty convulsions, though new to those who have laid aside the revelation of God, are familiar to all who study it.

Geology and astronomy have together brought strange confirmations of the Word of God, from regions where they could have been little expected. The internal heat of the earth is, according to the

author of the *Vestiges*, one of the most certain discoveries of modern science, and perhaps the hollowness of the globe is no less certainly known. If it were a solid mass to its centre, it would probably be hundreds of times heavier than it is known to be. In all likelihood, 50 or 100 miles beneath the surface of the earth, in every region, there is a hollow cavern of immense magnitude, capable of containing myriads upon myriads of cubic miles, which is literally bottomless, which is burning with perpetual fire, yet dark and gloomy, being shut out from the light of heaven. This is the revelation of science. Has it nothing to do with the revelation of God's Word, which speaks of a pit, dark, deep, large, bottomless, and burning? Can it have no possible connection with the declaration of Is. xxx. 33: 'For Tophet is ordained of old, yea, for the king it is prepared: he hath made it deep and large, the pile thereof is fire and much wood; the breath of the Lord, like a stream of brimstone, doth kindle it?' It is surely passing strange that the revelations of science and of Scripture should so marvellously agree, if they did not refer to the same region. Many of the Scripture declarations on such subjects are, in great part, figurative, but the figures are

borrowed from truths and circumstances which have a real existence, and which are intended to present vividly to the mind the consequences of continued transgression. Many, however, of the judgments denounced against the nations in former ages, and which were thought to be the language of strong hyperbole, and regarding which the people said of the prophets who uttered them, 'Doth he not speak to us in parables?' have in reality had a literal accomplishment.

When the prophets predicted of the richest, most productive, and thickly-peopled countries in the world, that they would be swept with the besom of destruction, and be converted into perpetual desolations; that the cities would be laid in ruinous heaps, and given, by an everlasting covenant, to the wild beasts of the desert, to owls and ravenous birds, and that the foot of man would not pass through them, the people no doubt thought that it was only the language of strongest exaggeration; and that the partial desolation would only be for a short period; for that the fulfilment of such predictions was impossible; yet let the countries around Nineveh, Babylon, Idumea, and generally of the enemies of ancient Israel, bear witness! Their condition for

many hundreds of years, shows that every word has been literally accomplished. Can it be possible that the flames of hell are now burning beneath our feet?

There is a fact mentioned in p. 70 which requires a word of explanation. 'It is as certain that the Grampian mountains of Scotland are older than the Alps and Apennines, as it is that civilization had visited Italy, and had enabled her to subdue the world, while Scotland was the residence of roving barbarians,' &c. This is startling to those who believe that all the dry land of the world arose from the ocean on the third day of creation. Now what does this prove, but that the region of the Grampians, at some far remote period in the history of the world, 'sent streams and detritus to straits where now the valleys of the Forth and Clyde meet, and when the greater part of Europe was a wide ocean?' This may be true, and yet, with all the rest of the world, they may have been submerged at the time the world was reduced to chaos before the creation of man, and have arisen again when the dry land appeared.

W. C.

LETTER VIII.

SERPENT CHANGED—SCRIPTURE ANIMALS
DISCOVERED.

SIR,—There is a fact mentioned in various parts of the *Vestiges*, which demands attention from all who are interested in the truth of the Bible. ‘No fossil serpent occurred in the secondary formation, where all the other reptilian forms so greatly abounded.’ The serpentine race are traced to an order of reptiles of the crocodile or lizard form which walked on four legs. *The rudiments of the legs*, we are frequently told, *are still to be found under the skin*. ‘The ribs become in the serpent organs of locomotion.’ ‘Vegetable matters, as well as mud and sand, have been found in the stomachs of the ceciliada,’ which are of serpentine form, and were formerly ranked along with them. Mark the surprising harmony that here exists between geological and Scriptural revelation. There is but one animal that we know of from the Word of God whose form was to be changed—‘And the Lord

God said unto the serpent, Because thou hast done this, thou art cursed above all cattle, and above every beast of the field; upon thy belly shalt thou go, and dust shalt thou eat all the days of thy life; and I will put enmity between thee and the woman, and between thy seed and her seed.' In exact accomplishment of this prediction, geology says, that in the olden formations, there were no serpents without legs; that they only appear after the earth was fixed and settled in its present position, that the rudiments of the limbs are still retained, to tell of their origin and of their remarkable transformation; that upon their belly they go, and their ribs are the organs of locomotion, and that certain species of them eat mud and sand; while all men know the enmity that still subsists between the woman's seed and the whole serpentine race; the strongest proof of which is, that wherever a country is well peopled, all serpents are destroyed, and disappear. How wonderfully does the book of nature thus confirm the Word of God!

Again, in the book of Job, probably the oldest in the world, there are descriptions given of two animals, which do not appear to be in all respects applicable to any which are now found in the world, and it is extremely interesting to see the earth open-

ing her long-lost records, and supplying us with the information which we required ; thus giving us also one of the most satisfactory proofs of the antiquity of the book of Job, which contains them, that could be desired. When this book was written, both of these animals, the behemoth and the leviathan, must not only have existed, but have been well known. Now we know for certain, that animals which closely approach to the description given of them have existed in the world, and some of them in its recent formations. In p. 108, we are told of the ‘*pliaesaur*, in which there is a very close approach made to the crocodilian order, but upon a scale of enormous magnitude, the animal having apparently been as large as existing whales.’ In p. 113, the dinosauria ‘were *terrestrial crocodile-like animals*, with some features of organization recalling the *lacertilea*, and also such a massive and stately form of the extremities as to remind us of the large land *pachyderms*. The animal last named, from twenty-five to thirty feet long, with an *enormous muzzle*, furnished *with strong teeth*, must have been by far the *most formidable land creature of its age*.’ All this reminds us of what is said of leviathan. ‘Canst thou put a hook in his nose ? or bore his jaw through with a

thorn?' 'Wilt thou play with him as with a bird? wilt thou bind him for thy maidens?' 'Canst thou fill his skin with barbed irons? or his head with fish spears?' 'Who can open the doors of his face? his teeth are terrible round about.' 'The sword of him that layeth at him cannot hold—the spear, the dart, nor the habergeon.' 'Upon earth there is not his like.' 'He is the king over all the children of pride.'

In the tertiary formation, it is said of the dino-therium (p. 131), 'that it exhibits an affinity to the cetacea in the form of its head, and to the tapir in the character of its teeth. It is most distinguished by its huge size, being not less than eighteen feet long; it had a mole-like form of the shoulder blade, conferring the power of digging for food, and a couple of tusks turning down from the lower jaw, by which it could have attached itself, like the walrus, to a shore or bank, while its body floated in the water.' In p. 133, mention is made of the mammoth, an animal resembling, in some respects, the elephant, with long curved tusks, extending forwards and upwards from the upper jaw. 'The numerous remains of the animal, in the most superficial strata, and the discovery, in 1801, of a speci-

men, with its flesh and hide entire, in a mass of ice in Siberia, show that it must have lived down to comparatively modern times.' It is not improbable that this, or some similar animal, was that which, in the book of Job (ch. xl.) is described as the behemoth.

The only other pretended fact asserted in the history of the *Vestiges*, which appears, as far as I remember, either to confirm or invalidate the declarations of Scripture, is an opinion expressed by Mr. Lyell, that the river St. Lawrence had been pouring its waters over the Falls of Niagara for the last 25,000 years. Now, however trustworthy are the communications of our respectable geologists when they speak of their discoveries, yet as they have never communicated information at all satisfactory, which could enable us to judge universally, or even generally, of the time required for the various changes which the rocks exhibit, we can yet place very little confidence in their opinions on the subject. It is likely, that if in place of 25,000 he had said 5000, he would have made a much closer approximation to the truth.

Your readers will, I trust, now be able to judge, in some degree, for themselves, whether the dis-

coveries of astronomy or geology tend most to weaken or strengthen our faith in the Divine Oracles. To me it appears wonderful, how God is making even the enemies of the revealed Word so strongly to confirm its statements, and causing the earth's deepest recesses and rocks, mountains and plains, as well as beings generated in the depths of the ocean, and long its inhabitants, now, in the end of the world, to open their mouths, and declare, in accents which can neither be misunderstood nor disregarded, that though heaven and earth pass away, one word of His cannot fail. It shall hereafter be our business to exhibit the aërial castle which the author has attempted to build upon the strong and solid foundation which he has laboured to construct; and shall thus see into what absurdities even the most talented men will fall, when, in place of seeking direction from God, they lean to their own understanding.

W. C.

LETTER IX.

AUTHOR'S THEORY OF CREATION.

SIR,—If the author of the *Vestiges* had finished his book at the close of his ‘history of the earth, as told by geology,’ the world would have been indebted to him for having compressed so large an amount of interesting information into so brief a space, and presented it in so pleasing a form. Unfortunately this was not his design. He evidently expected to take the learned world by surprise, by presenting a theory, which, as he thought, was, for simplicity, universality, novelty, and boldness, unsurpassed and unsurpassable. His great object was therefore to bring forward and establish his hypothesis. While his history is contained in 148 pages, the theoretical part, including his explanations, occupy about four times that amount. Of the 570 pages of argument and explanation, I think it may be safely affirmed, that a greater mixture of wisdom and folly, of sense and nonsense, was never before presented to the public eye. It were unnecessary to direct attention

to his wild and most dangerous speculations, if it were not that the book has already attained a wide circulation, and has reached its sixth edition. It therefore becomes necessary to endeavour to counteract its effects upon those who are panting after novelties, and are unable or unwilling to detect its sophistries. Some years ago, it was mentioned in the public prints, that an ingenious individual had expended a considerable part of his life in constructing a parachute of a novel form, and which would enable him to drop from a balloon with safety. To show the confidence he placed in his machine, and to startle the world with the boldness of the undertaking, he allowed himself to be carried up by a balloon, till it had reached the terrific height of nearly one mile from the earth. The signal for descent being given, by some strange miscalculation it came to the earth with the rapidity and violence of a cannon shot, and dashed him to pieces. He had succeeded in attracting attention, and surprising the world, but it was with his own folly and rashness. Such has been the imaginative flight of the author of the *Vestiges*. He too has spent no inconsiderable time in constructing his theory; and has succeeded in arousing the philosophic world from its

apathetic slumbers; but it has only been, or will only be, to amuse them with the monstrous aberrations of a singularly-constructed brain, or to weep over his folly and downfall.

In p. 248, we are told in the *Vestiges*, that 'M. Lamarck, one of the most distinguished of modern naturalists, suggested that the gradation of animals depended upon some general law, which it was important for us to discover.' 'His illustrations were chiefly of the following nature. The bird, which is attracted to the water by necessity of seeking for its food, wishes to move about on the surface of the flood, and for this purpose *strikes out its toes*. Through consequent repeated separations of the toes, the skin uniting them at the roots is extended, and at length becomes webbed. In like manner, the shore bird, which has no desire to swim, but has to approach the water for food, is constantly subject to sink in the mud. The bird, disliking this, exerts all its efforts to lengthen its legs; and the result therefore is, that, by continual habit for many generations, the legs of this order do at length become long and bare, as we see them.' '*This principle, with time, he deemed sufficient to have produced the advance from the monad to the mammal.*'

Our author candidly acknowledges, that 'the germ of his natural view of the history of the world, is presented in the work of Lamarck.' He himself furnishes us with some happy illustrations of his own theory. P. 346: '*He* may not yet be held as a very fanciful naturalist, who would regard the megatherium as eager to climb a tree which he could only shake, and thus producing a progeny fitted to do that which was the object of his wishes; or the rock-nose whale, which loves to rest its head on rocks beside the beach, as wishful of that mode of life which was at length vouchsafed to a more highly-developed descendant.' The principle may be better understood and remembered by putting a good old proverb into the form of a declaration, 'Wishes become horses, and beggars then ride.' This is a maxim which is to account for the structure of plants, trees, reptiles, beasts, birds, and, though last, not least, man himself, with all his moral and intellectual powers. According to the hypothesis, there was but one act of creation; or rather, the creative power is by the Almighty mysteriously lodged in the atoms of which the universe is composed. '*The fundamental form of organic being is a cell, having new cells forming within itself*' (which

cells, it is humbly presumed, have no existence but in the author's brain). These cells, thus mysteriously endowed, set to work, and, with a little assistance from electricity, form themselves into sea plants; these plants, by *wishing and strenuously labouring* to become shell fish, at length succeed; they again, becoming tired of such a form, after long generations of wishing, become reptiles; these reptiles, tiring of a crawling life, wish to become fish, and, by striving to swim, the fins begin to grow, the tail to enlarge, the lungs to be fitted for their new mode of life, and, lo! by wishing and striving for a few centuries, at length become perfect fishes. These again, tiring of a sea life, begin to look with longing eyes to the land, and, by a long and strong effort, they come out in the shape of frogs. The frogs again, greatly dissatisfied with their littleness, begin to blow themselves up into as large a size as possible, and, after ages of hard blowing, at length reach the size of an ox. Still the ox is not satisfied with his bulk, and, by strong wishing, hard effort, and severe blowing, he expands into the form of the megatherium. The megatherium coming at first to scratch his ponderous limbs on the tree, can only shake it, but cannot

mount it, but, by a long effort of wishing himself small and nimble, he succeeds, after a few ages, in climbing the tree, and is transformed into a monkey. The great mental effort which all this change of form and condition required, has now greatly improved the brain and sharpened the intellect, and, by a few more centuries of desire and effort, the monkey is at length converted into a man. Having now got so far, the next step was comparatively easy, that of being an author; and now, a new supply of electricity being sent in upon the brain to quicken its action, that wonder of wonders, that book of books, the history of the *Vestiges*, makes its appearance. The world is now amazed at the simplicity of the process by which the climax is reached, and sit down for an age or two to take breath, and consider 'what next?'

W. C.

LETTER X.

ABSURDITY OF AUTHOR'S HYPOTHESIS.

SIR,—In my last letter, I endeavoured to furnish your readers with a true description of the great law or plan of creation, as laid down by the author of the *Vestiges*. So far from exaggerating, I withheld by far the greater part of the difficulties of the theory. How not only the external shape of all plants and animals were to be changed, but eyes, mouth, nose, ears, stomach, heart, lungs, bones, veins, brain, and every part of the internal structure of each, to fit it for living in the depths of the ocean, swimming its waters, being supported by its produce; or for creeping, walking, leaping on land, living upon its fruits; breathing the atmosphere, or mounting the air with structure fitted for aërial life, and a thousand other changes, which it is unnecessary to mention, should all take place by ages of *wishing*, in creatures, the greater part of which are incapable of forming a wish, appears rather mys-

terious, even although the author represents it to be so simple.

How the immortal spirit entered into man, and those powers he possesses for profound thinking, or sublime contemplation, from electricity, which is the only kind of life to which our author alludes, appears to be rather puzzling to ordinary minds. However, all this is simplicity itself, when compared with what is still required (for it is easy for a man to sit in his study, and cut and carve on creation, as his roving fancy may suggest); the difficulty is to supply the proof. When our author is pressed hard upon this disagreeable subject, and asked to furnish examples of plants or animals undergoing the process of transmutation, he, like the noble race of frogs, to whom he boasts of being so closely allied, has always a muddy pool at hand, in which he can easily hide himself. The long, long, long ages, during which these processes have been advancing, renders it, in his view, extremely unreasonable to expect that, during our short lives, we should be able to observe any of these changes. We shall allow him any latitude he chooses in lengthening out the past history of the earth, for we do not ask to see progress in the transmutations. He may suppose the distance of

the time of creation to be represented by the distance of a star, from which light would take a thousand or a million years to travel, and every inch of which represents a hundred or a thousand years, while human life is but one fleeting hour ; still, during that short hour, we expect to see, if his theory be correct, plants and animals in all stages of transition.

The various nations of the human family, as well as various tribes of animals, such as dogs, have, during a course of ages, been undergoing a variety of changes in different parts of the earth ; but these are all plain and palpable to the senses, although we cannot trace any distinct progress in the change during our short lives. We expect, therefore, to see the aspiring plant, after ages of effort, at least half converted into a shell fish. We expect to see some of the trees, which, for countless ages, have been waving their proud tops toward heaven, with some part of the wing formed, which, in countless ages more, is to convert them into eagles. We expect to see others with the head and beak of the sovereign bird already formed. In others, the transformation almost complete, and the effort going forward to disentangle the root, that it may take its aërial

flight. Others we expect to see fairly on the wing, but having the tree root as its tail, and which it will take ages still to convert into its proper form. We see the earth, the air, the seas, swarming with animals, which, according to the theory, had been, for unnumbered ages, in a state of transition, and we ask to see them in that state still. All the animals have not reached manhood, and therefore all inferior genera should be rising to some higher grade of being. If our author, for some imagined reason, says that we are now past the transition period, let him show, in the fossil remains of former generations, fishes with birds' wings growing out of them, or with a foot or a toe of some reptile already attached. Let him show either on the surface of the earth, or beneath it, a whale with a bullock's legs, or a crocodile with a cow's horns or ears. Let him show birds with a monkey's tail, or monkeys with birds' wings, or at least with the incipient stumps. Let him take us to the marshes, and show us frogs crawling about with men's heads already formed, or walking upright on human limbs. Or show us birds with sheep's legs and tail unchanged, or sheep with the wings or head of a parrot, or chattering with a parrot's tongue. When

he produces a few specimens, dead or alive, of this kind, we shall consider his theory worthy of attention. We are not to be deceived by being shown animals which are perfectly fitted, and have all their parts complete, for living either in water or on land, or for walking, and flying, and diving, nor such as butterflies, which undergo a regular and perfect change. The specimens we demand are plants, and land or sea animals, which are undergoing the supposed transmutation, and which, during their present state, have parts of other creatures advancing in growth, which, in their present state, they cannot use. We might, if necessary, ask how these animals, which are in a state of transition, were nourished, and propagated their kind? How could a creature which was half a fish and half a plant, or half a beast or bird, live and breed? These, and a thousand such questions, I fear it would be difficult, satisfactorily, to answer. The truth is, that if the author's theory of creation was correct, the world, in place of exhibiting that order and beauty which now adorn it, would be a mass of confusion. There would be such a jumbling together of animal and vegetable life, and of all different beasts, reptiles, fowls, fishes, and man

among the rest, that there could be no classification nor investigation of them ; and if we could imagine it possible for any one to pass through the series of plants and animals, which the author supposes it necessary to bring him to manhood, he would find himself in a wilderness where science would be unknown, and all intellectual exercise impossible ; he would then be impelled to return again to his previous state of being, and hide himself with the frogs in the marshes.

W. C.

LETTER XI.

SCRIPTURE PLAN OF CREATION.

SIR,—The universe, which the author of the *Vestiges* would, by his hypothesis, drive into inextricable confusion, comes out in perfect order and beauty when we take the Divine account of its creation.

By the command of Jehovah, all plants and trees sprang into being at once. ‘God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit, *after his kind*, whose seed is in itself upon the earth; and it was so.’ On the fifth day, a similar command from the omnipotent God brings all marine animals, fish and fowl, and the living creature that moveth, into existence *at once, each after its kind*. On the sixth day, all terrestrial animals are, by the resistless word of the Almighty, ushered into life, *each after its kind*. Here there is no confusion, no blending of plants or animals, or of distinct genera, but each under a law to propagate its own species. How passing strange, that one plant or tree, or pair of animals, should, in

some incomprehensible manner, be the root from which creatures without number, of the same kind, were to spring, and individuals or pairs of species should form the germ from which a world was to be peopled, and kept full of animal and vegetable life, throughout countless ages. One would suppose that the law of development was here sufficiently wonderful, without confounding all things by attempting to trace all organic life to one seed. It is true that the whole creation existed in all its completeness in the Divine mind, and that all subsequent evolutions have taken place under an immutable law ; for the perfect foreknowledge by the omniscient God of all events from the beginning, proves their unalterable pre-arrangement. But who can fathom the depths of the Divine mind ? or, by searching, find him out to perfection ? Such knowledge is far too wonderful for us. To declare that by natural law, one order of being passes through another before it be fully developed, is to make an assertion which can never be proved, and which both nature and Scripture show to be false.

That the world is governed by regular and immutable natural laws, which can bend to no individual circumstances, is most certain ; but to devise a law

from our own minds, and flippantly to say that it is unphilosophical to suppose there can be any deviation from this fancied law, is most absurd. The laws of God are to be discovered by diligently investigating his works, his Word, and his providential arrangements, and it is the part of genuine philosophy to abide by these which are thus found, and to reject all others as spurious.

It is a wonderful fact, that the Almighty has put the elements, in part, under the control of his creatures, and that one class of animals is placed partly in subjection to others. If we can ascertain the manner in which the natural law takes effect, and arrange objects or events so as to bring it into operation, the law will proceed in its course, whether the object to be gained be in accordance with the moral law or opposed to it. Fire, air, earth, and water, are, to a certain extent, placed under human control, and we can make them do our work, yoke them to our chariots, convert them into the swiftest messengers, and thus add greatly to our strength and comfort; but by means of them we can also do much mischief, destroy men by thousands, or inflict upon them the severest injury. In some cases, man can assist in bringing other creatures into existence.

By artificial heat eggs may be hatched, and the little birds forced into a kind of unnatural life. The author of the *Vestiges* gives great prominence to an experiment by which animalculæ were brought into being, apparently by means of electricity, from which he would infer that electricity formed the life of the insects, and that all organic life might be brought about by the same means. If there was no deception in the experiment, might not the electricity operate on some invisible substances, produced by animalculæ of the same species in the water, as artificial heat operates upon eggs, and thus quicken them into life?

There is no assertion more frequently to be found in the *Vestiges*, than that all things are under law, although we may at times not be able to discover it. The thunderstorm, tornado, earthquake, pestilence, as well as the wildest flights of fancy, are generally thought to be under unchangeable law, and that the laws which govern each may yet be discovered. This is in great part true, but subject to modification. It is frequently repeated in the *Vestiges*, that 'there is no such thing as great or small in nature.' An ant's nest or a bee-hive are therefore as much under law as a world. If a man, by means of large

bellows, direct the wind against the nest, and demolish it; to its little inhabitants it will appear as if a mighty whirlwind had swept over it. Or if, by means of electricity, he destroy it, it will appear to them as a terrific thunderstorm; or he may shake it to pieces, and this will appear to them as a mighty earthquake, or he may introduce disorder and death among the ants, by placing a few grains of arsenic at the entrance, which would have all the effect of a dreadful pestilence. If the ants possessed reason, how could they account for such disasters? Under what law would they bring them? all would require to be resolved into the will of some foolish or malevolent being. If we ourselves have thus a certain degree of control over other beings, shall we say that it is either impossible or improbable that beings greater than we are, shall be able to turn the elements against us?

In the book of Job, we are told that, when the fence which God had thrown around his servant was withdrawn, Satan, who is styled the prince of the power of the air, destroyed Job's family by a wind from the wilderness, and burnt up his servants and sheep by a fire from heaven, and afterwards smote him with sore boils. We find our Saviour,

who came to destroy the works of the devil, rebuking the winds which had come down in a sudden blast upon the sea, and were like to founder the little bark in which he sailed. He also attributes disease, both mental and bodily, to Satan's influence, whom he declares to have power over death. Shall we say that this is impossible, when we ourselves are, to a limited degree, invested with similar power? Or shall we say that Satan can have no power over our minds, when mankind are often the instruments of corrupting and destroying the minds of their fellows? The author of the *Vestiges*, as well as many of our mental and moral philosophers, commit the most egregious blunders, by shutting their eyes to the strong declarations of Scripture regarding the arch deceiver.

W. C.

LETTER XII.

UNIVERSAL LAW OF GOD.

SIR,—While the author of the *Vestiges* has been devising imaginary laws for the government of the universe, he has overlooked some of the most important which do exist for the regulation of all the intelligent creation. ‘The soul that sinneth it shall die,’ is an immutable decree from the throne of the Eternal; and what sad development has this received since the day it was promulgated! Every member of an immortal race has been brought under its sentence; for all have sinned. Generation after generation it has already swept to the grave, amidst pains, and groans, and tears. The greatest nations have shared the fate of individuals, and are long since dead and buried. Eternal death waits to engulf all in its prison-house, long ago prepared, who continue in their natural state. Here is a law which is operating universally, and with unerring certainty. Whatever is by any means turned aside from the object for which it was created, and has

fallen under the influence of wicked and malevolent beings, goes to perdition; whether it be an individual, a nation, or a world. It is highly probable, that, in addition to all the disasters which have overtaken man since he was formed, the whole earth has, at several remote periods of its history, experienced the execution of this standing law of God. Yet, in the midst of all the confusion which Satan has introduced, the Almighty has been gradually bringing good out of it, and fitting the world for higher and nobler beings, until it be converted into an eternal habitation for his redeemed people. It is probable that the author of the *Vestiges* is right in supposing that, from the first, the Almighty has been gradually advancing the scale of being, and preparing the world for the residence of those more like to himself. Such has been the case, we can certainly affirm, since man was placed upon it. So far, however, has he been from accomplishing this purpose by natural laws, without any interference, that there has been a constant tendency to deterioration and destruction, which have only been arrested by his personal intervention. Wickedness and violence had all but consumed the earth in the days of the Flood. His interference in saving a remnant,

again restored it. By the days of Abraham the fatal disease of idolatry had almost overspread the human frame. Nothing could have preserved it from destruction but the interference of the Almighty to form a church for himself, out of the world, in which his pure worship would be maintained. Again, Satan had nearly prevailed in overspreading the world with darkness, which is the certain forerunner of death, when the people of Israel were in Egypt; but Jehovah, by most signally manifesting himself as the God of that people, rescued it from ruin. Error, ignorance, misery, again, under the power of the prince of darkness, threatened destruction to mankind, when the Son of the Highest appeared to support a sinking world; and hereafter, in the midst of all the downward tendencies of sin, and the untiring efforts of Satan's children, the enemies of God shall, by a new manifestation of the Divine Saviour, be trodden under foot, and the perfect restoration of the world shall be secured.

It is singular to perceive how the enemies of Revelation have now changed their mode of attack. For hundreds of years the whole earth was leagued against the Jews and the Jewish Scriptures, for maintaining the unity of the Godhead, and all the

wise men and philosophers of the world supported the populace in their superstitions. Now, the doctrine of God's Word has so approved itself to the understanding of all intelligent men in Christian countries, that this ancient plague-spot of the earth has, in them, nearly disappeared. The record, so long hidden in the depths of the earth, now sends forth so clear and strong a verdict in favour of the doctrine so long maintained by the light of Scripture against the world, that our author is ready to run to the opposite extreme, and to assert, not only that there is only one God, but that the whole work of creation was only one act. His misfortune is, that he has ventured upon a wide ocean without ballast, and with too great a press of sail; he is thus 'carried about with every wind of doctrine, by the artifice and cunning craftiness of men, whereby they lie in wait to deceive.' The same want of steadiness of judgment led him to push to its extreme, and indeed far beyond it, a principle of high importance, the operation of which may be traced in almost all departments of organic creation. The external forms, and, to some extent, the internal structure of each race of plants and animals, are considerably modified by the circumstances in which

it is placed. The form, size, colour of dogs, horses, and even of men, vary considerably with the difference of climate, food, training, &c. Plants and trees also undergo great changes by soil, climate, and culture; but so far is it from being the law of nature that there should be an intercommunion between different tribes of plants and animals, that the obvious law is, that each should be kept perfectly distinct. Anything approaching promiscuous intercourse among animals would cause their destruction.

We cannot conclude this letter without remarking that, while Christians generally look upon the Jews to have been the centre of the world's light and civilization, and their existence in the midst of the nations as the means employed by the Almighty to prevent darkness and wickedness from overwhelming the world in ruin, they are often surprised that so little is said of them by the philosophers of antiquity. Their perfect law, glorious temple, most imposing religious observances, and the regular congregation of all their males three times a year, were displayed before the civilized world for many hundred years; and yet, historians and men of science make little mention of them. They were silently diffusing Divine knowledge over the world,

maintaining a noble testimony for the unity of the Godhead, and against all idolatry, yet the learned men of the world gave no heed to them. To those who have been perplexed with this apparently strange fact, the difficulty will perhaps be solved by our author. Here is an individual living, if report says true, in one of the most Christian cities in the world, who has heard the bells of churches ringing in his ears from his youth; in a land of Bibles, and encompassed with enlightened and talented Christian ministers, and who, if the light of Scripture truth had not shone in upon the land, would yet have been a roving, and, perhaps, naked barbarian, appears as ignorant of Christianity as if born in the heart of the land of Hottentots. Surely God is far from the thoughts of the wise men of this world.

W. C.

LETTER XIII.

PRINCIPLES OF MORALITY.

SIR,—There is, perhaps, nothing in all the history of the *Vestiges* either more dangerous or more foolish than the author's remarks on man's moral constitution. It is to be feared that he is not singular in his views. To his geological opinions and speculations the scientific world are, by his own admission, almost all opposed; but it is not so with many of his views of morality, and this renders it the more necessary to make some observations on the subject. We shall compress them into the briefest possible space, and, to do so, we shall throw the discussion into the form of a conversation between a Philosopher and the Bible. Let the subject be a piece of land lying in its natural state, and covered with thorns, wild bushes, and weeds.

Philos.—This land is part of the earth which was formed by God, and its produce is all his workmanship.

Bible.—The land was formed by God, but is not

now as it came from his hand, but is lying under a curse.

Philos.—Strange! Examine these plants and bushes, and you will find the impress of the Divine hand upon them. See how beautifully the trunk, branches, leaves, seed, and fruit in all of them are formed.

Bible.—True! They are the workmanship of God, but marred by the hand of an enemy. When created, they were beautiful plants and trees, bringing forth delicious fruit for the use of the human family; now, the ground is sour and barren; its trees have become stunted in growth, their fruit is in great part gone, and most of them are fit only for burning.

Philos.—As they are the workmanship of God, they must be of use; our object should therefore be to discover their use, and cultivate them with care.

Bible.—Cultivate them as much as you please, they will never be better than they are—briers and poisonous plants. If you wish to see your land productive, root them out, and plant fruit trees, grain, or vegetables.

Philos.—Nay; they must be cherished and cul-

tivated. Their produce comes by a universal and unchangeable law, and, although you cannot tell what each bush will produce, yet if you compare the crop with that of all the neighbourhood, you will find that the average produce will be nearly the same.

Bible.—Your reasoning is incomprehensible; but what I tell you plainly is, that your labour will be all in vain; that your ground will yield you no fruit, unless you thoroughly clear it of all these natural products of the soil, and plant other seed. So far from cultivating these wild thorns, bushes, and weeds, your constant care must be to keep your ground entirely clear of them, and to pluck them up whenever they appear.

Philos.—Well, what has this to do with morals?

Bible.—Everything. The mind of man, when it came from the hand of God, was lovely and productive as the garden in which he lived. The fruits of the celestial paradise bloomed in rich luxuriance. Love, joy, peace, holiness, reverence, filled the mind and ravished the heart. Alas! a powerful enemy ruined the soil, and sowed it with poisonous weeds.

Philos.—Are any of the natural feelings of the

human mind to be compared with poisonous weeds? Is it not rebellion against Heaven to speak thus? How could the omnipotent Father of the universe suffer his fair creation to be marred by any enemy?

Bible.—You see that drunken female reeling along the streets, uttering oaths and obscenity as she passes along? She was at one time the joy of her parents, and the ornament of society; but, in an unguarded hour, she was deceived and destroyed by one of the other sex, who professed to love her. From that time her character has been changed. She is ruined for ever, and is shunned by all the good as a pestilence. If one of her own race was thus able to corrupt her immortal spirit, who shall say that a fallen angel could not deprave and destroy the human mind. The fact is certain, that Satan has corrupted the heart of man, and converted it into a moral waste, which brings forth nothing but briars and thorns.

Philos.—All those feelings which you call *bad* are given by God, and each, when kept under due restraint, serves a most important purpose. Pride, envy, jealousy, revenge, wrath, covetousness, &c., has each its own legitimate sphere of operation. The object of true philosophy is to find out both

their uses and abuses;—to cultivate them when right, and restrain them when wrong.

Bible.—They are the lusts of the devil; and, like weeds in the field, are neither to be cherished nor cultivated, but extirpated. They are to be resisted, mortified, crucified, and good seed implanted in their stead. If you do not constantly strive to obliterate them from the mind, they will choke the good seed, and pollute the whole soul with fruits of deadly poison.

Philos.—Is a man, then, to be at constant war with himself, and be always resisting the nature which God has given him?

Bible.—In this world a man is in an enemy's country, and he must either destroy his unseen enemies, or they will destroy him; but God has made good provision for this. What is it that keeps you in safety in this island of Jamaica, and prevents other powers, such as France or America, from seizing the island, and reducing its population again to slavery?

Philos.—They know that we live under the protection of a power which they are afraid to offend. Whoever attacked us would have the fleets and armies of Great Britain to contend with.

Bible.—God, in like manner, is willing to take you under his protection, and deliver you from every enemy, if you are willing to trust in him, acknowledge your dependence upon him, maintain constant intercourse with him, and ask his assistance.

Philos.—How can it be necessary to make our wants known to him? Does he not know them already? and why ask his assistance? Will he interrupt the laws of the universe, that he may interpose in our behalf?

Bible.—So far from deranging the laws of the universe by assisting you, it is his immutable law, that if men ask of him, in faith, his assistance, protection, and blessing, they shall receive it; if they seek they shall find; if with importunity they knock, it shall be opened to them. If they do not pray to him, hold no intercourse with him, but trust in themselves, they shall as certainly perish for ever, as that bodily death shall seize them.

Philos.—But mankind are making rapid advancement in civilization without this constant prayer. Were they not all savages at first, and see now what mighty strides civilization has made?

Bible.—In place of being ‘made criminals’ or savages, man was made after the image of God, in

holiness and happiness ; but now having joined the standard of rebellion, the crown has fallen from his head, and he has become degraded to the lowest and most brutal condition. Mankind, if left to themselves, continue to sink lower in darkness, misery, and crime ; and, if it had not been the Revelation of God and the nation of the Jews, which preserved some degree of light in the world in former times, and the gospel, and those who have embraced it in later ages, the inhabitants of the earth would have long since been extinguished. Compare the sublime views presented of God, of his works, character, and perfections, and the lofty and pure principles of morality as revealed in the oldest book in the world, with the devil-worship of India and Africa at the present time, and the beastly crimes perpetrated at their temples, and it will be seen that man, when left to himself, in place of rising, debases himself to the lowest depths.

The first of human works and contrivances of which anything is known—the construction of the ark, which was the largest vessel that ever floated upon the ocean, the building of the tower and city of Babel, the artificial lakes of Assyria, and the pyramids—show that the human family must have

made great advancement in the arts of civilized life, at the earliest known period of their history. But the wicked and debasing propensities of the human mind have propagated ignorance, death, misery, and crime over the world.

Philos.—‘In infancy, it is acknowledged, the impulses are all of them irregular; a child is cruel, cunning, and false under the slightest temptation.’ ‘So is human society, in its earliest stages, sanguinary, aggressive, and deceitful.’ ‘Does God, it may be asked, make criminals?’ ‘He does not do so; and yet the criminal type of brain comes into existence in accordance with laws which the Deity has established.’ ‘An ill-disposed being is only part of a series of phenomena traceable to a principle good in the main, which admits of evil as an exception;’ ‘exceptions of evil are inseparable from such a system;’ ‘irregularities attending human conduct are simply the penalty paid for his superior endowment.’

Bible.—The laws of the all-wise and all-merciful God are, according to your system, like some of the arrangements of ignorant and sinful men, though productive of good on the whole, necessarily attended with much evil; and although this evil

arises from the operation of the law, yet God, you say, is not the author of it.

All this is delusion. The laws of God, if the world were now as it came from his hand, would not only be productive of universal good, but convey unbounded happiness, at all times, to each of his intelligent offspring. Your explanation 'of the puzzle of the question of evil, by viewing it in the manner of law,' renders it only more perplexing. All moral evil comes not from God, but from God's enemies; all natural evil is its necessary consequence. The propensities of voracious beasts, birds, and fishes, and even the bodily structure adapted for their indulgence, like the wicked propensities of men, or the formation of poisonous plants, proceed in some mysterious manner, not from God, but from Satan; and all shall disappear when Satan's empire is destroyed, sin abolished, and the kingdom of the Messiah universally established. But what would you do to civilize the savage tribes of men?

Philos.—I would tell them to take courage. That all their propensities to rapine, theft, cruelty, murder, are from God, and are good in themselves; and that sickness, pain, misery, death, are only the small penalty they pay for their superior endowments;

and although each individual case is an enigma, yet, taken in the mass, they are as a mathematical problem ; and that, with all the certainty of the science of numbers, one half of them will, in the course of next year, be murdered and eaten, or have their limbs chopped and mutilated, or all their property seized or destroyed.

Bible.—Very consoling ! Who can doubt that you will succeed in this way in civilizing the world ? In sober earnest, while you are keeping Satan out of view, he is blinding your understanding, and warping your judgment. The world can never be reformed or renewed, until men contend against their evil passions as against their worst enemy, have their hearts changed, obtain forgiveness for their past sins in the way which God has ordained, return to him as a parent whom they have deeply offended, and obtain his assistance to keep his holy, just, and merciful commandments.

W. C.

LETTER XIV.

ORIGIN OF LANGUAGES.

SIR,—The author of the *Vestiges*, in p. 399, says, ‘ We have seen that the traces of a common origin of all languages afford a good ground of presumption for the unity, at least of the principal portion of the human race. They establish a still stronger probability, that that portion of mankind had not yet begun to disperse, before they were possessed of a means of communicating their ideas by speech.’ This, we think, is in accordance with the Scripture view of the origin of different languages. As considerable diversity of opinion exists on this subject, I shall endeavour to express, as shortly as possible, what appears to me to be the true interpretation of the first part of the eleventh chapter of Genesis.

The events recorded in the tenth chapter were subsequent to that of the eleventh, for mankind were then dispersed, and speaking different languages. The eleventh chapter returns to explain how these events took place. The tenth chapter

proves two facts which it is necessary to bear in mind. 1. That mankind had, from the Flood, been living in distinct tribes; for each family and tribe afterwards resided by itself, and this separation could never have taken place if all had previously been living in mass. We are therefore to conceive of the human family in the land of Shinar as the different tribes of Israel, living apart, yet united as one people. 2. When they separated, each tribe had its own language, and all the members of that tribe understood each other, and therefore we are not to understand that there was a universal confusion of speech, and a sudden and miraculous creation of new languages, and that no man could understand his neighbour.

Although the sacred narrative is very short, we are not to conclude that the confounding of languages, and the dispersion of mankind, only occupied a very short time. For anything that appears in the narration, it may have been the work of centuries. No sensible person will suppose that the different tribes were miraculously and instantaneously conveyed to the remote regions which many of them afterwards inhabited. Their dispersion was gradual, and arose from causes which are still operating

among the nations to produce the same effect. Let it also be remembered, that the great object of the Almighty was to secure the universal dispersion of mankind over the earth, and induce them, in all future time, to occupy every region of the globe. Difference of language is, in the providence of God, in reality, the great means by which this is effected. It operates more powerfully in keeping nations distinct and separate from each other, than mountains or seas, or any other natural boundaries. What induces such multitudes of the inhabitants of Great Britain and Ireland to cross the wide Atlantic, and take up their residence in America, while few in comparison think of settling in the countries near them, as Holland, Germany, or any of the continental nations? It is chiefly because that, when they land in America, they feel themselves at home, and can freely interchange thoughts and feelings with all around them. If they go to the Continent, though close beside them, they are still strangers, and must continue for a long time almost shut out from society.

While it was the will of God that mankind should occupy every region of the earth, it was their own desire to remain together, and they took the most

effectual means to secure their object, by building a large metropolitan city, and adorning it with a tower of immense magnitude and height. In all likelihood, they knew, from what had been witnessed before the Flood, that such a city has the most powerful tendency to concentrate and consolidate a nation. It becomes the head quarters of government, of religion, of the arts and sciences, of commerce, &c., and a place of rendezvous for all. Observe how strongly the city and temple of Jerusalem tended to bind the Jewish nation into one, and with what ivy-like power they, after ages of dispersion, still entwine themselves around the Jewish heart; and we shall see that the descendants of Noah were taking the most effectual means to counteract the Divine will, and prevent their dispersion.

When the Almighty said to our first parents, with regard to the 'tree of knowledge of good and evil, In the day thou eatest thereof thou shalt surely die,' it might have been supposed that they would instantly have been struck dead. In place of this, they lived many centuries after the curse was denounced. The threatening was accomplished in a far more impressive manner than they could have imagined. From the moment they broke the

Divine command, the seeds of death were planted in their constitution ; which were destined, not only to prostrate them, but all their posterity, through a long succession of ages, in the dust, and bring all under the sentence of death eternal. From the day of man's transgression, he and all his posterity became mortal, and the poisonous seed is yet only in the progress of development. Similar to this, in all likelihood, was the confusion of languages. 'The Lord said, The people is one, and have all one language ; and this they begin to do, and now nothing will be restrained from them which they have imagined to do ! Go to, let us go down and there confound their language, that they may not understand one another's speech.'

The various tribes of mankind assembled around Babel had now commenced their undertaking, and were probably sending in supplies of workmen from each to carry it forward, when the Almighty interposed. How did he interfere ? Was it by a momentary confusion he produced among them, by miraculously forming new tongues ? Is it not much more likely, that, as in the case of the first human pair, the change was permanent, internal, and in disposition ; and that, for the first time, that propensity

to change language and pronunciation which is now universal, and by which all new languages are formed, began to operate upon the human mind? As their language was one when at Babel, after having lived for centuries in distinct tribes, it would appear that the disposition to change language did not then exist. If it be asked, what kind of change in the human constitution would be necessary to produce this effect? I have simply to reply, that as I cannot tell what change took place in Adam and Eve to render their bodies mortal, and their inclinations sinful, while I cannot doubt the fact, so I cannot tell how the disposition to change language was by the Almighty infused. Let us suppose that this change took place; all other effects were produced by natural causes. The separate tribes began to introduce new words and pronunciation, which, as they advanced in their work, more and more distinctly marked out the members of each, rendered their conversation more unintelligible to each other, and their intercourse more difficult. This would soon give rise to rivalry and national feeling, as may be often seen when English, Irish, and Highland labourers are employed at the same work. Misunderstandings among the tribes would thus take

place, which would cause them to break off the undertaking, to separate them to greater distances from each other, and finally, to disperse them over the earth; this satisfactorily explains how all languages may be traced to one origin, and removes almost every difficulty that at present envelopes the subject.

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