

## RELIGIOUS COMMUNICATIONS.

THE following calculations have evidently cost the writer so much care and labour, and they are directed also to so important an end—the elucidation of Scripture chronology,—that we will not withhold them from our readers, though we do not vouch for their correctness; and do not think it possible to make retrospective calculations of several thousand years so minutely as to include small fractional particles of time; not only hours, but even minutes. The intricacies of critical Scripture chronology are allowedly so great, that we feel much inclined on this subject to imitate the example of Mr. Hartwell Horne, in his new edition of his elaborate work, who has given the scheme of Usher and Calmet on one side of the page, and that of Dr. Hales on the other, leaving his reader to judge for themselves between them. We have thought it right to offer these preliminary cautions, not to check any well-meant effort to arrange these intricate computations, but to prevent the recoil which might take place in the mind of any reader not versed in such subjects, when he discovers the discrepancies between different chronologists, as if the foundations of Divine revelation were in any manner affected. It should be distinctly understood, that there is no such discrepancy of calculation as renders doubtful any one point of faith or practice involved in the truth of the Divine record.

CHRIST. OBSERV. No. 319.

*To the Editor of the Christian Observer.*

CHRONOLOGY OF THE JEWISH  
PASSOVER AND SABBATH.

My intercourse with members of the Jewish nation has led me to examine with much interest, and, I trust, with some degree of accuracy, the questions concerning the Jewish Passover and Sabbath-day; and the results which have presented themselves to my mind, after much thought and many toilsome calculations, appear to me not unworthy of the general attention of Christians.

It is known to most readers, that, in order to avoid the forcible and almost irresistible conclusions arising from the prophecy of Daniel's seventy weeks, as it respects the cutting off of the Messiah, the Talmudical writers of former times have not only shortened the reigns of the Persian dynasties, giving only the times of four, instead of fourteen kings, and differing from Christians in their chronological calculations by a period of two hundred and forty years; but to prevent further research, they have forbidden any inquiry into truth by the anathema, "*Let him burst asunder who counts the times of the Messiah.*" This spell still binds the conscience of the inquiring Jew; and, except in some few instances, where the authority of the Rabbies is superseded or suspended by the intelligence of supe-

It is but just to observe, that the inventors of the divisions in question are not responsible for the consequences of this abuse. They intended to confer the benefit of convenient reference to every portion of the word of God; and, for having accomplished this, they have a strong claim on our gratitude. It is probable, that they did not entertain the remotest expectation that the sacred text would ever be split and cut up to adapt itself to their references; but that they would have been most strenuous in opposing such a perversion.

The new Oxford edition of the Bible retains all the advantages of the customary divisions, by having the numbers of the chapters and verses placed in the margin; while the text is presented in its natural and original form. The comfort and benefit of reading an entire portion of Scripture without having the attention distracted by artificial interruptions, can be duly estimated by those only who have made the experiment for themselves. Several persons who have already made the

trial, have declared that the increased perspicuity of the sacred writings, and the deeper insight into their spirit and meaning, which they have thereby acquired, have surpassed their utmost anticipations.

In this edition, the poetic parts of Scripture are distinguished from the rest, by retaining the usual division of verses. It may perhaps be doubted, whether this distinction is necessary; since it is not customary to print in this manner any prosaic translation of other poets: and the antithetical form of Hebrew verse sufficiently informs the ear of the metrical arrangement. Difference of opinion may also occasionally occur, concerning the arrangement of some of the paragraphs in the historical, argumentative, and didactic parts. But the great point is, to have the principle established; and it may reasonably be hoped, that if the public appear to set a due value on the present edition, others will hereafter be published, with such improvements as experience may suggest.

N. L.

## MISCELLANEOUS.

To the Editor of the *Christian Observer*.

### SCRIPTURAL GEOLOGY.

"OXONIENSIS ALTER" accuses my "Scriptural Geology" of giving occasion for the "triumph" of "infidels,"—as assuming the "very points in discussion,"—as being improperly styled Scriptural Geology, it being in fact not accordant with the "declarations of Scripture,"—and as being utterly incompetent to its design. He says,—“The facts of the case cannot possibly be accounted for upon Mr. Bugg’s view of fossil chronology. I have read his work in vain to ascertain in what way, within the limits of the time he assigns to the phenomena, he

thinks it possible that those phenomena could have happened.”

To this I might answer, by way of preliminary remark,—That it is but a *secondary* matter with me to attempt to ascertain any probable mode, at all, in which the fossil strata were deposited. My first and chief design was, to overthrow the modern system of Geology; and to point out not only its entire incompetence to account for the phenomena, which it pretends to do, but to exhibit the physical impossibility that such operations as it implies could take place. I might further add, that we have no data by which to judge with any minuteness, in what way “those phenomena could have taken place,” in the sense of

geologists; because, according to their own express statements we have no analogous known facts with which to compare them; and any thing in the way of modern geological theories is wild and extravagant. To assume, as geologists now do assume, that the mode of fossil formations can be known by their appearance, is neither philosophical nor wise; unless it was certainly ascertained before hand, that there is but *one* mode of formation which could exhibit those appearances.

Most certainly the appearance of fossil shells and fossil bones in the solid rocks, does not necessarily indicate that those rocks were deposited by slow degrees, upon those bones, at the bottom of the sea. We have seen that this opinion involves impossibilities, or else miracles, in every quarter. We may, however, perhaps assert with Mr. Konig, and with great safety, that, agreeably to every natural operation, those rocks must have been in a fluid, or semi-fluid state, when the fossils were being imbedded in them; because every physical operation with which we are acquainted forbids our admitting that bones could get into rocks, and become a component part of them, without those rocks being soft enough at the time for them to enter. Any thing much beyond this must be mere theory, or fancy, unless analogy or history will guide us further. Analogy, it is confessed, affords us no corresponding cases. The question then remaining is, Does authentic history throw any light upon this dark abyss? I think it does. This is the point we must investigate.

We want, agreeably to Sir Isaac Newton's axioms, a *true* cause, and a *sufficient* cause of the fossil strata.

I am of opinion that the SCRIPTURES, and the Scriptures alone, give us a true and an adequate cause for these phenomena.

#### I. A true cause.

"In the six hundredth year of Noah's life, in the second month, the seventeenth day of the month,

the same day were all the fountains of the great deep broken up, and the windows of heaven were opened."

"The fountains also of the deep, and the windows of heaven were stopped, and the rain from heaven was restrained." (Gen. vii. 11; viii. 2.)

1. I would observe on the above passages of Scripture, that it is plain that they are intended to inform us whence the waters which drowned the earth at Noah's flood were derived. They came from the "windows of heaven," and from the "fountains of the great deep."

2. These "fountains of the great deep" mean waters in the earth, both under land and sea. This, I think, cannot fairly be denied; for it must mean waters which supplied the deluge; and the sea could neither supply waters enough for the purpose, nor answer to the description given of these "fountains," in the Bible, nor to the operation of the waters in the process of the deluge.

3. When it is said, "all the fountains of the great deep were broken up," I consider that the issuing waters disrupted, broke up, and overturned the surface of the earth, which covered those waters.

This I consider the true cause of the fossil strata.—I consider it also, II. A sufficient cause.

If this can be made out consistently with true philosophy, and with the Scriptures, we must not ask the opinion of geologists whether we ought to believe it to be the true one.

1. It is a philosophical cause. The out-breaking waters of the deluge, from their very nature, would be eruptive and projectile. As the Scriptures assert, they would break up the fountains; they would tear up the rocks and strata; and, doubtless, in many instances, mingle the productions of sea and land. The effect, according to natural principles, would be, to rend and scatter rocks, throw up mounds or hills; and change and new-model the greatest part of the surface of the ground. In many places, chasms, and perhaps large gulphs, would be

formed, according to the depth from which the waters rose, the violence by which they were ejected, the quantity issued, and the nature of the materials through which they passed.

2. It is of the nature of these operations to produce the phenomena which have happened. The tendency of waters forced violently upwards, would be to form and mould the surface of the earth in the manner we find it. I am not aware of any thing apparent to the eye of the ordinary beholder, or described by travellers or geologists, the formation on which (so far as such wonderful works may be, in the present state of things, reverently speculated upon) the out-breaking and subsequent operations of the diluvial waters would not naturally tend to effect. Possibly, in some places, volcanic action might mingle with the mechanical ejection of the waters; for we are not informed as to the nature of the force which broke up the fountains of the deep. And on such a supposition, even islands of fossil and trap rocks might be cast up and formed in conjunction.

3. It is an adequate cause. No one can limit the action and mechanical effects of waters thus ejected. Nor can any one set bounds to the mixtures of animal and vegetable productions which might naturally result from such operations; nor to what distance either sea or land productions might be carried by such irresistible and turbulent waters. Thus the mountainous heights in which many fossil rocks are found, and the three thousand feet depth in which some fossil remains are buried, is easily accounted for. The gulphs, shelvings, slips, faults, and dips, every where discoverable in the rocky secondary strata, would be naturally caused by the irregular manner in which the waters might tear up, and again deposit, the strata.

4. The immense quantity of mud and debris, which such a catastrophe would produce both in sea and land,

would afford a nidus for every sort of animal remains, and, in conjunction with larger portions of the fractured materials, would supply ample combinations for the formation of all kinds of secondary strata. And the fossil remains deposited in sea and land, both before and during the continuance of the deluge, might afford abundant stores for the phenomena.

III. Oxoniensis Alter says, that "the facts of the case cannot possibly be accounted for upon Mr. Bugg's view of fossil chronology." But he has given no reason why he thinks so. Nor is any reason apparent. And suppose that I could not "account for the facts of the case" at all, that would not prove that those *facts* did not arise from the deluge. I think I may venture to assume, that no philosopher, much less a divine, will undertake to say it is impossible that such operations as the Scripture intimates to have taken place at Noah's flood, could form all the phenomena we wish to account for. On the whole,

1. I cannot but think it obvious to an unbiassed mind, that the breaking up of the surface of our globe, by the issuing waters, and the subsequent effects of these waters during the twelve months in which they occupied the land, may be conceived to have afforded every subject, both animal and physical, which the fossil formations embrace.

2. I conceive it would be both rash and unphilosophical to deny, that the shells and other animal remains occurring in the lapse of the sixteen centuries between the creation and the deluge, would not be sufficient to supply, in conjunction with those formed during the deluge, the fossil contents of the secondary strata.

If these two propositions be admitted, Oxoniensis Alter will perceive that the *Bible* history affords a clue to the whole "phenomena" which he asserts to be, on my view of the case, inexplicable. It must not, however, be forgotten, that the formation of the "fossil strata," as

well as the primitive formation of the earth, ought not to be considered as a natural, but, *in many of its circumstances*, as a supernatural event; and that we ought, therefore, no more to expect to be able to account for those peculiar circumstances from the analogy of nature, than we ought to expect to account for the peculiar circumstances of a miracle. There is no rule laid down in natural events for any judgment in such cases. Natural operations afford no example for judging of what is supernatural. If, as I trust is obvious to every sensible reader, the suggestions of the Bible afford a foundation for an outline of such formations, it is all we can reasonably expect.

It is no objection to the above statement, that the Scriptures do not say that the breaking up of the earth at the deluge was the cause of fossil formations. For, if the Scriptures say what implies it; or, which is the same thing, what is inconsistent with the supposition that the fossil strata existed prior to the deluge, and also inform us of what will virtually enable us to judge of their formation by the operations of the deluge; that is all we need respecting the formation of those strata by the diluvial operations I have just been mentioning. Respecting their non-existence prior to the deluge, the proof is easy.

1. The diluvial waters, had those fossil strata been there at the Flood, would have broken them up and dashed them to pieces, as they would have had to pass quite through the great body of them. For it is admitted by all, and especially asserted by Dr. Buckland, that the fossil rocks are the great conduits or "fountains" of water now, both in England and in Germany; that the four great rivers of Germany, the Danube, the Rhine, the Naab, and the Mayne, have their origin among the rocks, in the heart of which his *fossil caves* are situated; and the district which furnishes the celebrated Kirkdale cave gives rise to "six rivers," some of which are

even engulfed in these rocks, by their peculiar hollowness and porosity. All these must needs have been rent and torn to atoms when "all the fountains of the great deep were broken up" (had they been there) at the deluge.

2. The waters which issued at the deluge could not possibly pass through those cracks in the strata which are now called fissures: on the opposite sides of those fissures, many of them at least have evidently been in contact, which is demonstrated from the exact correspondence of their hollows and projections. But rushing waters always tear out, and make smooth and round, the edges of all openings which they either make for themselves, or pass through when found already made. Those waters did not therefore pass through the existing fissures.

3. The fissures were not in existence at the deluge; for had they been, the waters would have passed through them, as argued above, and the retiring waters would have filled them with diluvial deposits, which they have not done\*. They,

\* I am fully aware that Dr. Buckland and many other geologists consider the diluvial action to have filled many of the "fissures" with "fossil remains." His theory of the caves, as we have seen, entirely rests upon the supposition; and it is further illustrated by the following case:—

"Some workmen employed in digging stone at Boughton-hall, near Maidstone, have discovered bones and teeth of several animals. Dr. Buckland, Mr. Lyvell, and several other scientific gentlemen, have visited the spot. They report, that the bones in question are in a fissure of the rock, which had evidently been filled up by diluvial action. The bones of, at least, two hyænas (of the extinct Kirkdale species) were found, together with the teeth of the horse, the rat, and other animals, in a fissure evidently filled up by diluvial action." (Christian Observer, July 1827, p. 435.)

This error is, perhaps, still retained. That it is an error, the examination of Dr. Buckland's cave theory, in Scriptural Geology, has, I trust, most abundantly proved. But what is most remarkable in the case, and sufficiently demonstrative of the error of the theory which makes these "fissures" to be "filled up by the diluvial action," is the *fact* that nothing

therefore, did not *exist* at the deluge.

4. But if the fissures did not exist at the deluge, the fossil rocks themselves did not; for it is quite certain that the fissures form, in the view of modern geologists, the great foundation for a judgment respecting the rocks themselves. The fissures and caves, which are esteemed only an enlargement of the fissures, form the grand basis for Dr. Buckland's theory. The whole theory, both of the caves especially, and of modern geology generally, makes the fissures and caves to be antediluvian. If, therefore, the fissures are proved not to have existed at the deluge, the whole testimony in favour of their theory seems to fall to the ground.

I admit that the above arguing is conclusive only against modern geology, and not as a general principle; for it is clear, that the fissures might have occurred since the deluge (but not on the geological theory), though the rocks in which those fissures are found might have been there prior to that event. But as it is modern geology alone against which I am now contending, and not about any philosophical point of physical formations, I trust no one will object to my mode of reasoning as inconclusive for one purpose, when it has been adopted exclusively for another.

Without anticipating further objections, I will recapitulate a few matters respecting *modern geology*, and "*scriptural geology*." The reader may then be fairly left to his own reflections respecting this discussion.

### I. Modern Geology.

peculiarly diluvial, is found in the fissures. Ancient "shells," for instance, are not found in the fissures which are discovered even on the borders of the sea; when in all reason we ought, on the modern theory, to find them often choaked up with them. No sea weed, nothing peculiarly marine, is often found inclosed and covered up among the "fossil remains" in these "fissures." And why? Because those fossil remains were not carried into their present situation by "diluvial action," but subsequently to the deluge.

In all fairness, I trust, it cannot be denied that I have proved the utter incompetency of the modern geological theory.

1. As to its evidence: That it is wholly assumed; that even the evidence alleged is derived very frequently from imagination, and not from knowledge or information; that the testimony of facts, adduced by themselves, is positively against them\*.

2. That this theory, supported by no evidence, affects the verity of no small part of Divine Revelation, with which it never has been, and, as it appears to me, never can be reconciled; that the Scripture history of creation, and in no small

\* In addition to the evidence which is adduced in my "*Scriptural Geology*" upon this point, I may be allowed to refer to the testimony of more recent discoveries. In the *Christian Observer* for March last (p. 201), is the following historical anecdote:—"Some impressions have been discovered in a red sand stone quarry in Dumfriesshire, which Dr. Buckland thinks are the footsteps of antediluvian quadrupeds, which had traversed the rock while in a soft state." May I express a wish that Dr. Buckland would explain how he supposes such "footsteps" could have occurred, and especially how such a fact can consist with the modern geological theory? When does Professor Buckland imagine that the "red sand stone" was found in "a soft state?" Immediately upon its original formation, or that it became so at some subsequent period? If at a subsequent period, why might it not occur after, as well as before the deluge? Are there any formations lying above this sand stone in the quarry, which forbid the supposition? Then how will such fact consist with the modern theory? What (in geological language), what red sand stone is this? The "old red sand stone?" Then, according to Baron Cuvier's scale, it is twelve formations, (and, if it be the "new red sand stone," it is, according to the same authority, six formations,) beneath the "Paris formation," in which the "earliest" deposits of "quadrupeds," agreeably to the modern theory, are ever found! But if the "footsteps" be found there, why might not the foot which made those steps have been there? With such facts this geological theory cannot stand. The "human skeleton" of Guadaloupe, imbedded in hard, compact, limestone rock, is a demonstration which never has been, and is never likely to be got, over by modern geologists.

degree even the history of the deluge, is nullified by it.

3. That the physical formation of the strata is, according to this theory, impossible in fact; and involves the most manifest inconsistencies, absurdities, and repeated miracles, as well as numerous new creations.

4. That there is nothing in nature, known or recorded, which bears the least available analogy to the operations and revolutions comprised in the theory of modern geology.

5. That Dr. Buckland's theory of the caves, and of the denudations, is built upon the same foundation as the general theory of Baron Cuvier, and is as demonstrably erroneous.

## II. Scriptural Geology.

1. The Scriptures are positive as to the earth's surface being "broken up" at the deluge.

2. It is obvious that such an eruption must have caused immense masses of debris, and might produce all sorts of mixtures, such as we find in the strata, both of the vegetable and animal creation.

3. That such debris and such mixtures might be subsequently hardened into strata, comprising all the variety of formations which we now contemplate.

4. That the operations of the deluge had a natural tendency to produce the effects in question, and that they were sufficient for all the effects which geology has developed.

5. That it is the province of Revelation to inform us of the "beginning" of nature; and of the ground, the reason, and the mode of such changes therein as are supernatural.

6. That the scriptural history of the deluge affords a moral and rational cause for that catastrophe, while all the revelations of modern geology find NO CAUSE, either moral or physical, for their production.

7. That the deluge of Noah is therefore rationally conceived to be the only true, sufficient, and sole

cause of all the "fossil strata" which so much puzzle and confound our modern geologists.

In concluding the above very brief and imperfect summary of this discussion, I have no hesitation in saying, that the scriptural history, respecting the deluge, and the ideas consequently suggested thereby, relative to the formation of the fossil strata, are rational, philosophical, and adequate; while the whole theory of modern geology implies what is antisciptural, unphilosophical, and absurd.

If modern geologists think my arguments and conclusions to be erroneous, let them come honourably and fairly before the world and prove them to be so. I have fearlessly endeavoured to lay "the axe at the root" of their whole system. Let them pursue the same equitable and necessary mode, if they choose to answer "Scriptural Geology," and the result will shew who is right. Every writer on such a subject, ought to be able to say, in the words of a great man, "I have an instinctive abhorrence" to spend time and argument upon non-essential and trivial points; I love to "grapple with the nucleus" of a subject. It is certainly unworthy the conduct of philosophers and divines to do otherwise.

GEORGE BUGG.

P. S. Should any persons choose to write any thing in answer to the above remarks, I trust they will not be weak enough to say, as a writer in the Oxford Herald has said, and as I have heard it this day (and frequently) repeated—namely, that I have "mistaken the entire subject, for that *Dr. Buckland* no more intends to injure the Divine Record" than I do. I must request such persons to recollect that I have *not* so mistaken the subject; nor is there a single argument urged throughout my book, that supposes any such design in *Dr. Buckland*, or in any other English geologist.