CORRESPONDENCE.

Geological Plagiarism.

The following copy of a letter published in the 'Reader,' has been sent to us for insertion :—

"Geological Plagiarism.—To the Editor of the 'Reader.'—Sir,—Under this head I observe a letter in the last impression of the 'Reader,' which is by no means flattering to myself, and I would therefore now beg to make a few remarks by way of explanation. 'F. G. S.' is not incorrect in supposing that he 'had seen the same ideas, and possibly some of the same expressions, not long before in the Memoirs of the Geological Survey.' I acknowledge the similarity of idea in the passages quoted by him, and the sameness of expression of which, in one or two cases, as a student and a beginner, I have been unfortunately guilty, and which, but for an oversight, would have been indicated by inverted commas. But when I show how that has arisen, I hope 'F. G. S.' will understand my excuse; and should this meet the eye of Mr. Geikie, that that gentleman will accept my apology. On reading over, some time ago, the Geological Survey's Memoir on Edinburgh, I was struck with Mr. Geikie's remarks on 'Denudation' in chap. xiii., which, by the way, applied to Midlothian generally, and not to Arthur's Seat in particular. The idea which more especially attracted my attention was that Midlothian had been subjected to a process of denudation at two different and widely-separate periods in geologic time, and as I happened to be studying the geology of Arthur's Seat at the time, I naturally desired to have a clearer idea of the effects of denudation on that particular hill. The result was the paper in question, which, as you can easily imagine, was written in the spirit of Mr. Geikie's remarks, but at the same time with the desire to give greater prominence than he has done to the idea above-mentioned. The *plan* of my paper is quite different from the chapter in the Memoir, and is all I ever intended to 'be regarded as original.' I certainly ought to have mentioned the source from which I had gathered a portion of my information, and herein I confess I have made a mistake; but at the same time 'F. G. S.' and Mr. Geikie will remember that these ideas on the denudation of Midlothian are by no means new, but have been more or less entertained by our local geologists for some time back, and have even been made the subject of papers before the Edinburgh societies, as my own was before its appearance in the pages of the 'Geologist.'—I am, Sir, yours respectfully, James Haswell.

"*Edinburgh, 23rd March*, 1864."

The Eternity of the Universe; in Hebrew Phraseology, of the Heavens and the Earth.

Sir,—After many years' reflection upon the subject, I have come to the conclusion that the true Scriptural doctrine—which at the same time commends itself to reason—is, that the universe (in Hebrew phraseology, the heavens and the earth) is eternal; in other words, that as there always has been and will be a God, so there always has been and will be a universe,—in Hebrew phraseology, an earth and heavens. I have come to the

opinion, that where geology ends, there the Mosaic record begins. This interpretation is exceedingly simple, and removes all difficulties. We have only one question to deal with, and that a very simple one, namely, does the Mosaic record on the one hand, and geology on the other, testify to the same condition of the earth at the only point where they come in contact? This question can be answered in a few words.

Moses says, "In the beginning God created the heavens and the earth. Now the earth it was a wreck and a ruin; and darkness (was) upon the face of the deep; and the spirit of God (was) hovering over the face of the waters."

The meaning of these words will be best seen in the following paraphrase:—

"The following is the true history of the creation of the heavens and the earth:—They were created by God, and they were created in six days. At the time when their creation commenced the earth was in a truly deplorable condition. It was a wreck and a ruin. The ploughshare of ruin had passed over it, leaving it waste and desolate, dark and damp. Murky vapours ascended from the abyss of waters, effectually shutting out the light of day. Being deprived of light, the earth was destitute of heat; consequently animal and vegetable life was extinct. The Spirit of God regarded the earth in this its desolate condition with tender solicitude, even as a mother-bird hovers over her young when in misery and pain."

According to the exposition of the learned commentator Macknight, 2 Pet. iii. 5, 6 is a parallel text, referring to the period of the Drift, or, as it is sometimes called, the period of alluvial and diluvial deposits:—"By the word of God the heavens were of old, and the earth standing out of the water and in the water, whereby (that is, by which heavens) the world that then was, being overflowed with water, perished."

Such is the testimony of Moses and the Apostle Peter.

What says geology? While I am writing, a voice is heard from the mountains on the other side the broad Atlantic, attesting the truth of the Biblical record. I quote the following paragraph from the 'London Journal,' March 19, 1864:—

"*The Earth made Cold by Heat.*—Professor Agassiz lately delivered a course of three lectures in Boston, U.S., and the greater part of the last one was devoted to a description of the phenomena which indicate that the continent of North America had at one time been overlaid by dense and unbroken masses of ice, moving from the north to the south. The traces of such an agency are found in the peculiar drift deposited on the surface of the continent, from the Arctic to the 36th or 40th parallel of latitude, being in its nature and composition such as would be deposited by immense cakes of ice, pushing forward the débris of the soil over which they moved, and bearing on their top the irregular masses of stone which are found in the region designated. That the direction of this moving mass of ice was from north to south is proved by the abrasion of hills having an acclivity facing towards the north, where the southern descent is without such characteristic marks. After stating the grounds on which the 'earthquake theory' was inadequate to explain the phenomena of this drift, Professor Agassiz estimated that the ice which deposited this drift and produced its other attendant phenomena must have been 5000 or 6000 feet thick. But whence came the cold which produced such a thickness of ice? This query was answered by supposing that there had been injected into the sea, from the subterranean fires of the earth below it, a vast mass of melted material, thus producing an immense volume of vapour, which,

escaping for ages into the upper air, was condensed, and fell in the shape of snow and hail. By this mass of snow and hail the temperature of the earth's climate was reduced from the comparative warmth which preceded it, even in Arctic regions, and the world entered on '*the cold period*,' which it was the object of the lecturer to describe and to account for while describing. Professor Agassiz said that *this was the winter which preceded man's advent in the world.*"

Is not my point made out? Is not the *thohu* and *vohu* of Moses identical with *the cold period, the winter of the world*, of Agassiz? Surely there can be only one answer.

It seems almost superfluous to refer to the boulders which are found in Norway and on the coasts of north-western Europe, which evidently belong to the period of the Drift, and which have been borne to the spots where they are now found on moving ice.

I think, Sir, your readers must allow that my point is clearly made out, namely, that Moses and the geologists are of one mind as to the deplorable condition of the earth at the time when the Mosaic record and geology come in contact. I have the honour to remain, Sir,

Your obedient servant,

FREDERICK FYSH.

Walgrave, April 7, 1864.

P.S. I take the meaning of the fourth day's creation to be, that the sun, moon, and stars, which had been previously obscured, then became visible. Henceforth the earth was to receive light from those luminaries, and not to be supplied with miraculous light, as on the first day.

The Scottish Pteraspis.

Dear Sir,—If not occupying too much space, I would feel obliged by your inserting in an early number the following remarks on the communications in your numbers for March and April from the Rev. H. Mitchell and Mr. E. R. Lankester; these I have the less hesitation in offering, as, while fully appreciating the value of the criticisms of one who has done so much towards adding to our knowledge of this genus as Mr. Lankester, I can at same time fully corroborate the correctness of Mr. Mitchell's restoration, in his interesting letter, in almost every particular.

In a former letter (Geol. Feb. 1863) I had occasion to remark that Mr. Lankester, in a notice (Dec. 1862) of a former and much less correct restoration of our Scottish Pteraspis by Mr. Mitchell (Nov. 1862), had not made sufficient allowance for probable specific difference of form. I must here state my belief that the same mistake has again occasioned some of Mr. Lankester's remarks in his last letter. I had recently an opportunity of inspecting Mr. Mitchell's series of specimens of this fish, and of comparing them with my own. They all undoubtedly belong to the same species, and are in my opinion distinct from *Pteraspis rostratus* and other English species.

The only points in Mr. Mitchell's latter restoration which appear to me scarcely correct are, that the breadth seems rather exaggerated, and that the posterior margin is represented as formed of straight lines, while it consists of a double curve, concave posteriorly. The lateral posterior angles are produced, forming well-marked but very short cusps, pointing backward and slightly outwards. From this and also from the well-marked