latter word smacks of the old "dry fusion" theory, though, as every one knows, Professor Haughton's speculations are anything but *dry*.

FORBES.—CHEMISTRY OF THE PRIMEVAL EARTH.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—Under this heading, page 434 of your October number, are these words, "Hutton, the propounder of the plutonic theory of the world's origin, which assumed the world to have been at one time a sphere of molten matter solidified by refrigeration."

I think that there must be some great mistake here. I do not think that Hutton would attempt to lift the veil of Isis, or to account for the "*world's origin*" at all, or for the "*origin*" of anything whatever, animate or inanimate; not even for the "*origin*" of the smallest particle of matter. His word is "no sign of a *beginning*, no prospect of an end."

I have, indeed, never had access to Hutton's work; but I have by me Playfair's illustrations of it, Edinburgh, 1802, and he totally repudiates the idea of the original fusion of the globe, either igneous or aqueous, partial or entire. The igneous theory he imputes (while he controverts it) to Buffon. Page 136, section 132, and note XXV. Playfair accounts for the orange shape of the globe by a most beautiful theory of his own, entirely dependent on Hutton's doctrines, and therefore entirely dependent on rain and rivers.

The principles which poise the *universe* are as simple as they are sublime; and it is not only, as Professor Jukes remarks in your last number (p. 144), that "the form of the ground" depends on rain and rivers, but, as Playfair says, the statical figure of the globe itself,—the spheroid of equilibrium depends on rain and rivers, on causes now in operation. Those who have not access to Playfair's work may see his beautiful theory as to this clumsily explained by me in the eleventh chapter of "Rain and Rivers."

I have the honour to be, Sir, your most obedient and most obliged servant,

GEORGE GREENWOOD, Colonel.

BROOKWOOD PARK, ALRESFORD,
4th October, 1867.

THE CHEMISTRY OF THE PRIMEVAL EARTH.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—I hope the space at your disposal will admit of the insertion of a few remarks in reply to Dr. Sterry Hunt's letter, on page 478, and in defence of my report of his lecture "On the Chemistry of the Primeval Earth:" (GEOL. MAG., p. 357).

Dr. Sterry Hunt's communication must not be allowed to mislead you or your readers into the belief that I am responsible for the twenty *errata* which have been tabulated in the two published lists, (pages 432 and 478), for, in fact, *only four* of these mistakes have originated with me. Of these four I am perfectly willing to bear the blame. The first occurs in the passage (page 361) relating

to the fusing point of certain bodies being augmented by pressure. In taking down this sentence from the lecturer's lips, I was in some doubt as to the words used, and I recorded those which I understood him to utter. You, however, have set the passage right by means of a very simple alteration. My second error was the substitution of the word *decomposed* for *recomposed*. This obviously arose from similarity of sounds. On page 367, the letter "p" is inserted in Professor Thomson's name, but I find that Dr. Sterry Hunt has himself committed the same mistake in the report of his lecture in the *Chemical News*. My fourth error is the substitution of the word *ault* for *coal*. This occurred in transcribing my notes.

Of the other *errata*, three are what are familiarly termed "printers' blunders." They consist of the substitution of the words *seven* for *several*, *orchid* for *orchard*, and *mutation* for *nutation*. These might have been avoided if I had seen a proof before the Magazine went to press.

The remaining thirteen corrections are, in reality, emendations of the lecturer's own words, and departures from the actual language of the lecture. These errors are, for the most part, only such as are common to unwritten discourses; but they cannot, as Dr. Sterry Hunt would imply, be with any fairness classed under his description of "mistakes into which the reporter has fallen;" and I must beg leave to protest against being held responsible for the lecturer's own inaccuracies of expression.

If Dr. Hunt prefers the version of his lecture given in the *Chemical News*, it cannot be because it approaches more nearly to what he actually said than the version which you have published. If the *Chemical News* report was founded upon shorthand notes at all, the author has performed the work of revision so vigorously that the original transcript has disappeared.

I am, Sir, obediently yours,

THE SHORTHAND WRITER.

LONDON, *October 17th*, 1867.

SHELLS ON THE GREAT ORMESHEAD.

To the Editor of the GEOLOGICAL MAGAZINE.

DEAR SIR,—Owing to my absence from Cambridge, I have only lately seen Mr. Maw's letter, in the August number of the Magazine. The shells which I found at Gwydfyd were by no means in such numbers, or in such a condition, as to suggest to me the idea that I was on a kitchen-midden. If that be the case, they are very different to those in the kitchen-middens on the N.W. side, and, though I cannot speak positively, I am disposed still to adhere to my original opinion. Yours very truly,

T. G. BONNEY.

ST. JOHN'S COLLEGE, CAMBRIDGE.
