

floor of Thor's Cave, at about nine hundred and fifty feet above the sea-level.

I do not understand Mr. Green's hesitation to admit that the sea covered the Derbyshire Limestone Hills at the Glacial epoch, for I read in the valuable Ordnance Memoir of the country round Stockport, Macclesfield, Congleton, and Leek, by Messrs. Hall and Green, and with the paragraph itself bearing the initials A. H. G., that "In an outlying patch of sand and gravel about three miles from Macclesfield, on the Buxton road, at a height of about twelve hundred feet above the sea, Mr. Prestwich found shells; and Mr. Sainter tells me that he has collected there *Turritella*, *Cardium edule*, and others." Now the point on the Axe Edge range here indicated is only about sixteen miles from Weaver, and the highest tops of the Weaver range are not more than about twelve hundred and twenty feet above the sea; the Weaver Clays and the Boulder Drift, the subjects of the present communication, lying at from one thousand to one thousand and fifty feet.

We have not yet found shells in the drifts of the neighbourhood; but we have every other proof that can be desired of their marine origin.

The chief geological interest that attaches to the "Weaver Clay" deposit is, that it proves a submersion of this part of the country at some period between the Triassic and the Boulder-clay epochs, at which latter period our hills were undoubtedly again sunk beneath the sea.

I am, Sir, Yours faithfully,

EDWIN BROWN.

BURTON-UPON-TRENT.

12th July, 1867.

#### THE LOB-WORM EPOCH.

*To the Editor of the GEOLOGICAL MAGAZINE.*

SIR,—Mr. Baily (Figures of Characteristic British Fossils, p. 12) tells us that the only remains of animals in the Cambrian rocks (the oldest fossiliferous British strata) are those of worms; and (p. 3) that these worms were "allied to the recent lob-worm." It is true that he remarks (p. 12) that "it has been argued, and with reason, that this apparent paucity of organic remains may have arisen from the nature of the deposit . . . and that there may have been a more varied assemblage of life during *this epoch* . . . as this, however, is necessarily conjectural, much importance cannot be attached to it." Now is the negative argument not also "conjectural?" and is it not a most absurd conjecture that because in certain marine strata, in a certain *place* in England, signs of no life are found save that of worms, that in the "epoch" or *time* when those strata were formed no animals existed on the terraqueous globe save worms? Is this not "conjectural?" and most absurdly conjectural? Continents from the denudation of which the Cambrian strata were formed must have existed for countless millions of years. And were these continents, and the land, and the water, of the whole terraqueous globe uninhabited, except by marine lob-worms? This is a curious

*conjecture*. And it is founded on the most ridiculous confusion between *space* and *time*, between *place* and *period*, as I have argued throughout "Rain and Rivers."

Mr. Baily will not, I am sure, think that I intend to attack him. I attack the received doctrine which Mr. Baily supports; and I must confess that I am the twelfth jurymen who complained of his eleven obstinate compeers.—I have the honor to be, Sir,

Your most obedient, and most obliged,

GEORGE GREENWOOD, Colonel.

BROOKWOOD PARK, ALRESFORD,  
19th July, 1867.

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### OBITUARY.

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WILLIAM JOHN HAMILTON, F.R.S., G.S., ETC.—It is with sincere regret that we have to record the loss which the science of geology, very many personal friends, its cultivators, and, above all, the Geological Society of London, has sustained by the premature decease of Mr. William Hamilton, a loss which can be but very imperfectly replaced, owing to his long official connexion with that Society, and his accurate knowledge of its affairs. Mr. Hamilton became a member of the Geological Society in 1831, and in the following year was elected one of its honorary secretaries, which office, or else that of Foreign Secretary, he continued to occupy almost uninterruptedly till 1854, when he was elected its President. Mr. Hamilton's first contribution to geology dates back to 1835, from observations made in the previous year, and relates to the proofs of recent elevation of the land, which he had observed on the coast of Fifeshire. About this time, and, as is generally understood, at the suggestion of the present Sir R. Murchison, Mr. Hamilton formed the plan of an extended foreign tour for the purpose of studying the phenomena of physical geography and geology; through him also he became acquainted with the late Mr. Hugh Strickland, which resulted in their becoming fellow travellers; the partnership was a judicious combination, and Mr. Hamilton constantly acknowledges the value of Mr. Strickland's great knowledge in various branches of natural history.

The limits of such a notice as the present preclude even a summary of Mr. Hamilton's travels. They were commenced in the summer of 1835. Beginning with the extinct volcanic districts and old lacustrine areas of the Mont Dor and the Vivarais, as preparatory to visiting those of Asia Minor, they thence passed by the North of Italy, Trieste, Corfu, Patras, Corinth, Athens. They reached Smyrna by the end of October, having visited much that was of interest on their way. Mr. Strickland was called back to England in the early part of 1836, after which Mr. Hamilton continued his travels alone, but some papers, the results of their joint observations, were communicated to the Geological Society.

The summer of 1836 was spent in the country to the south of the Black Sea, returning to Smyrna by November. He then accepted