

THE SETTLE CAVE DEPOSITS.

SIR.—Mr. Tiddeman's description of the older deposits in the Victoria Cave at Settle encourages me to ask him through your pages kindly to consider whether the laminated glacial clay that he has so well made out, as occurring between the upper cave earth and the bone-bed with the older cave mammals, may not be an indication of that last glacial period which I have so often advocated in your pages; but without the success in drawing attention to the subject which I could wish.¹

It is plain from Mr. Tiddeman's paper, "On the Ice-sheet in North Lancashire," that the term which I gave to the moraine profonde of that particular period, viz. "Trail," has reached his ears; but I doubt if he has read my papers: otherwise he would not have applied the term to "a subaerial drag" or "trail" of soft beds to a lower level, under the softening and loosening influences of rain and frost,² and argued for a glacial origin of a phenomenon which I have always maintained *has* that origin.

The particular reason which induces me to suspect that the laminated clay of the Settle Cave belongs to the period of the "Trail" is because it occupies the right position in time, as being subsequent to the Cave Mammals. I have shown that that deposit is none other than the river gravels, which contain the same fauna as the caves. I must confess that I do not quite understand what date Mr. Tiddeman assigns to the ice-sheet which he has described. I have not had time to read his paper in the *Journal* so carefully as I could wish, but I perceive that in that paper, as well as in the *MAGAZINE*, he uses the expression, "*The Glacial Period.*" One is inclined to ask, "Which?" There is a remarkable passage in Mr. Dawkins's paper on the "Classification of Pleistocene Strata," which strongly in my opinion supports my view of this late ice-sheet, and also that the laminated clay of the Settle cave belongs to it. It is that in which he insists on the magnitude of the interval between the late Pleistocene and the Prehistoric ages in Britain, during which nineteen species disappeared, and five at least became extinct.³

HARLTON RECTORY, NEAR CAMBRIDGE.

O. FISHER.

OBITUARY.

By the death of Mr. JOHN BOLTON, of Sedgwick Cottage, Swarthmoor, near Ulverstone, the geology of Furness has sustained a great loss, and palaeontology a most enthusiastic collector. His passion for fossils originated in 1795, when a child of seven years old, from sauntering near an excavation for a well in the Mountain Limestone of Urswick Green, where he observed and obtained the stems and separate joints of Encrinites, the "fairy cheeses" and "queer things" of his playfellows. From this date his interest in Nature never seems to have flagged, notwithstanding that he was two years later sent to a weaving-shed in Ulverstone, and afterwards to Barnsley, where he effected an important improvement

¹ *Geol. Mag.*, Vol. III. p. 483; Vol. IV. p. 194; Vol. VIII. p. 65, etc., etc.

² *Journal of Geol. Soc.* vol. xxviii. pp. 480, 482.

³ *Geol. Journ.* vol. xxviii. p. 414.

in the Jacquard loom, of which he allowed others to reap the benefit. Returning to his native district of Furness, he practised as a land-surveyor, and devoted days and weeks for more than half a century in examining well nigh every square yard of Furness and the adjacent Lake-Mountains, and collecting the fossils from the Skiddaw slates, in some of the wildest and least frequented mountain peaks and secluded ghylls in North Britain. In 1862 a paper of his was communicated to the Geological Society of London, "On a Deposit, with Insects, Leaves, etc., near Ulverstone," in which he described several points connected with the deposition of hæmatite, a subject in which he had obtained much experience. In 1869 he published his work on the Geology of Furness, entitled "Geological Fragments," in which he describes his chief fossil discoveries, and gives an interesting and *naïve* account of his adventures among the mountains with the dalesmen of the North, and of his intercourse with Prof. Sedgwick, and other veteran geologists, who first worked out the geology of the Lake District. In this work John Bolton must always be considered to have had some share, in having collected the fossils of Furness before a single geologist had ever visited that country, and from having, during a long life, probably obtained more fossils from the Lake District than any other person.

PROFESSOR SEDGWICK, BORN 1786, DIED 1873.

It is with much regret that we record the death of another veteran belonging to the heroic age of Geological science. The Rev. Professor Adam Sedgwick, Fellow of Trinity College, Cambridge, who since 1818 has held the Chair of Woodwardian Professor of Geology in that University, died early on the 27th January, in his 88th year.

The labour of his life was the promotion of Geological science; his happiness, to do good to all around him. His portrait, with an account of his scientific career and published works, will be found in the GEOLOGICAL MAGAZINE for 1870, VOL. VII. p. 145.

RELIQUIÆ AQUITANICÆ.—The publication of this serial work, descriptive of the implements, bones, etc., found by MM. Henry Christy and Edouard Lartet in the Caves of the Vezère (Dordogne), France, met with a sad and unexpected interruption from the death of M. Lartet and the troubles of the French war. The lamented M. Lartet had in 1865 cheerfully undertaken the labour of fulfilling all that, from the loss of his friend and fellow-worker, H. Christy, had fallen upon him to do, in carrying out as far as possible the original intentions regarding the "Reliquiæ Aquitanicæ." Conscientiously and with loving care he fulfilled this melancholy but congenial task, though much interrupted by ill health and family affliction; until, seriously invalidated, and deeply affected by the disasters of his country, he retired from Paris in the dismal autumn of 1870, and was struck by apoplexy at his country residence at Seissan (Gers), January 28, 1871. The executors and friends of the late Henry Christy are desirous of speedily and worthily completing the "Reliquiæ Aquitanicæ" in accordance with the intentions of the authors; and with the aid of friends at home, and of M. Louis Lartet, M. Alphonse Milne-Edwards, M. Sauvage, and other fellow-workers in France, they will proceed with the work as expeditiously as possible. Owing to the melancholy events above referred to, there will be fewer Parts published than originally contemplated. Part XI. is in the press, and will soon appear.