

mingling in other Drift deposits of the same area. If Mr. Kendall were to try to explain the distribution of the rocks in the Drifts of the Trent Valley on the glacier theory alone he would be in even greater difficulties than he is at present.

Mr. Kendall is not quite accurate in implying that Dr. Carvill-Lewis was the originator of the idea that the valley of the Trent formed a large lake at one time. This was clearly stated in a paper read by me before the Geological Society in 1886. In that paper I make the Middle Pleistocene Epoch open with a "land locked and probably ice-locked" "Melton-sand sea." Indeed the idea is used to explain the absence of mollusca in the deposits of this epoch. Dr. Carvill Lewis, I think, held that the water level in this sea or lake was above that of the Atlantic; but the facts rather supported the view that it was connected with the outside sea, the watershed of Central England being submerged several hundred feet.

It appears to be quite time that the advocates of glacier theories and submergence theories joined hands for the purpose of ascertaining if a more careful study of the "Glacial Succession" will not reconcile their present conflicting views.

R. M. DEELEY.

10, CHARNWOOD ST., DERBY, Nov. 15th, 1892.

THE MAMMOTH AND THE GLACIAL DRIFT.

SIR,—In the September Number of the *GEOLOGICAL MAGAZINE* (p. 405) Sir Henry Howorth writes: "I claim to have shown that, as tested by these islands, the Mammoth beds are in every instance overlain by the Drift, and are never underlain by it;" this claim being limited to cases where it is possible to apply the test of superposition. In my letter of October, I took two of his cases and showed that in both the beds enclosing Mammalian remains were underlain by Glacial Drift, *i.e.*, that the main mass of the local Boulder-clay passed beneath them; thereby disproving the verbal accuracy of his statement.

Again, on p. 400, he discusses the gravels in the valley of the Ouse, near Bedford, a case by the way in which the test of superposition does not apply. In this connection he quotes the discovery of flint-implements "at Thetford on the Ouse," and a few lines lower down he "turns to another site *in the same valley*," being one not far from Bedford (*italics* are mine). Replying to my obvious comments on this he says he has nothing to correct and nothing to alter in what he wrote, except the spelling of a word, and that the point is "only a test of my knowledge of the English language!" I feel sure your readers will by this time have seen that it was really a test of Sir H. Howorth's knowledge of English geography, and, as I said, of his practical acquaintance with the subject. I did not expect that I should be called upon to point out that the valley of the Little Ouse, between Norfolk and Suffolk, is entirely different and distinct from the valley of the Great Ouse, near Bedford! Not even Sir H. Howorth's approved ingenuity in the use of the English language can make them parts of one and the same valley. There

is a Thetford on the Great Ouse, but that is not the place in question.

I do not deny the desirability of his making himself acquainted with the literature of the subject, and a précis of it would be a useful introduction to any detailed memoir on the Pleistocene Deposits; but I do deny that quotations from published papers, however numerous, form a reasonable ground on which to base a claim of having upset the generally accepted views of geologists on any given point.

Neither is it sufficient to deal only with the cases where the test of superposition can be applied; he practically admits this, by referring to the valley of the Great Ouse, but gravels containing Mammoth remains occur in many other valleys which are generally considered to have been eroded out of a wide-spread mantle of Glacial Drift, and this conclusion is not shaken by anything which Sir H. Howorth has written.

Sir Henry may have visited many places and have looked at many sections, but it does not follow that he is qualified to draw sound geological inferences from the phenomena before him. I should be loth to find fault with any one who is seeking to ascertain the truth, but it is the assumption that he has already found the truth by merely sifting the literature of the subject that I venture to protest against.

I feel perfectly sure that if I pointed out a clear case of gravels with Mammoth bones resting on Boulder-clay, Sir H. Howorth would not accept it as final; he would say there might have been another Boulder-clay originally over the gravel, as is supposed by some to be the case at Hoxne.

The question, together with others relating to the glacial deposits, will some day be settled beyond dispute by a man who has acquired an insight into the subject by long experience and by approved practical work in the field, and I am content to await his appearance.

EXETER, Nov. 10, 1892.

A. J. JUKES-BROWNE.

OBITUARY.

WE regret to announce the death of Mr. Henry John Marten, M.Inst.C.E., F.G.S., etc. Mr. Marten was a well-known hydraulic engineer. He had been engineering adviser to the Board of Agriculture, engineer to the Severn Commissioners and to the Staffordshire and Worcestershire Canal Co. So recently as October 7, he gave evidence before the Royal Commission on Water Supply, on the practicability of constructing storage reservoirs in the Upper Thames Valley. In 1890 he read before the Geological Society a paper "On some Water-worn and Pebble-worn Stones taken from the Apron of the Holt-Fleet Weir on the River Severn" (*Quart. Journ.* vol. xlvii. p. 63). Mr. Marten died November 3rd, in his 66th year.