

obtained from a boring now in progress at Hunt's Cross, Wootton, much nearer Liverpool than St. Helen's Junction, for the particulars of which I am indebted to Mr. A. Timmins, C.E., who is conducting the operation. The spot is near a doubtful boundary-line between the Pebble-beds and the Upper Mottled Sandstone, on the Geological Survey Map. After passing through 137 feet of drift a bed of marl was found, which has been penetrated to the thickness of 200 feet—337 feet from the surface—without reaching the bottom of it. It would be absurd to call this marl Lower Mottled Sandstone, and most likely it is Permian, just below the Pebble-beds, which is the usual succession in the country to the east of the boring. Before the age of this marl is finally decided, it is very desirable that fossils should be obtained, if any occur in it, but the stuff comes up the bore-hole in the condition of powdered dust, so that there is little chance of finding any at present. Now that attention has been directed to the importance of finding fossils, it is to be hoped that they will soon be found in some of the localities where the marl occurs. Meantime it seems probable that the marl occurs between the Pebble-beds and the Lower Mottled Sandstone, and that all the strata below the former belong to the Permian in the country around Liverpool, as I understand to be the case about Manchester.

G. H. MORTON.

P.S.—From the great thickness of the marl at Hunt's Cross, it is just possible that the boring may be in the Keuper Marl, but even that would be very extraordinary.

THE PERMIAN QUESTION.

SIR,—May I be permitted to point out an ambiguity which has crept into the discussion of the Permian-Trias question in this MAGAZINE? The term "Upper Permian" has been used by me consistently to indicate beds (marls and sandstones) which occur *above* the Magnesian Limestone series, which Murchison designated "Bunter Schiefer." Such a use of the term implies that the Magnesian Limestone series would, in a threefold classification, fall into the place of Middle Permian, as in the "Student's Elements." The sense in which I have used the term "Upper Permian" is that in which it was formerly and recently used by Prof. Hull, and by Mr. De Rance in the table of the Lancashire Permian Strata which appeared in my paper of last month. The latter gentleman, in last month's Number, uses "Upper Permian" for what (in the classification I originally ventured to criticize) would be called Middle Permian. Of course, if the threefold division be given up, these become the upper member of a dual series, the existence of which I have not called in question. All therefore that Mr. De Rance has recently urged, as well as the evidence put forward quite recently by Prof. Hull, is beside the point at issue.

WELLINGTON COLLEGE,
Dec. 9th, 1882.

A. IRVING.

WE regret to record the death of one of our contributors to this MAGAZINE, Mr. Edward B. Tawney, M.A., F.G.S., Conservator of the Woodwardian Museum, Cambridge. We shall give a full notice of his work next month.