

pages. Col. Greenwood (whose description of the transportation of flints by the sea is very graphic) has misunderstood me on the subject of residual flints. What I meant was simply that in *many* chalk districts (not arable-fields) the denudation has been as clean, and as irrespective of flints, as if the ground had been shaved down with a gigantic scythe.

D. MACKINTOSH.

POLYTELITE IN CORNWALL.

SIR,—The substance of Mr. Davies's letter in your last number does not, I imagine, require any reply; but in the postscript he mentions that Professor Church had found 7.23% Silver in a crystallized fragment of fahlerz, having the density of 4.85, from which I infer that true polytelite is found at that locality. This percentage of silver in, and the specific gravity of, this specimen, might be accounted for by supposing the silver in other state of combination, as, for example, argentiferous sulphide of silver (Stromeyerite), which in fracture closely resembles some fahlerz; and therefore it would be interesting to know from Professor Church whether the other constituents of polytelite (antimony, for example) were found, which would at once decide the question.

Mr. Davies does good service to British mineralogy by directing attention to any cases of unrecorded mineral localities; and I believe such inquiries will prove that we possess many more mineral species in Great Britain than are at present recorded. Amongst others, I may mention that polytelite from N. Wales, and Gersdorffite from Argyleshire, are described in the second part of my "Researches in British Mineralogy," now in the press.

DAVID FORBES.

THE BOULDER CLAY AT WITHAM STATION, AND THE THAMES VALLEY.

SIR,—My last letter was accidentally printed without my correction, and contains errors, two of which are of some importance.

In the section, the sand with green-coated flints should be "Thanet" instead of "Thames" sand.

My views regarding the age of the "Trail" are singularly misrepresented, where I am made to say it is of "our" age. I wrote "one" age; which I believe to have been upwards of 110,000 years ago, as I have shown in the fourth volume of your Magazine, p. 197.

HARLTON, CAMBRIDGE.

O. FISHER.

THE OUSE VALLEY, THE THAMES VALLEY, ETC., ETC.

SIR,—I find that at pages 53–57 of the memoir for sheet 45, reference is made to the Glacial clay, but so slightly that it escaped me. Moreover the Glacial clay tract north of Buckingham, partly traversed by the section in my last letter, is alluded to (p. 57) as that of the "Oxford or Kimmeridge, as the case may be"; but as neither of those clays are shown in this part of the map, some slip of the pen may have occurred. Therefore, to this extent, I must qualify the remark in my letter and tender Mr. Green my apology for it.

The accuracy and bearing of our respective sections I leave to the judgment of others.

From Mr. Græen's view, that the Glacial and Post-glacial beds cannot be represented on the inch scale without detriment to the delineation of the older geology, I strongly dissent, so far as concerns the secondary and tertiary area, south of Flamborough Head; and I have done my best, in sheets 1 and 2, to show that all beds may be represented together without detriment to any; and I contend that it is beyond human ability to represent, with any approach to accuracy, the geological features of such part of that area as is occupied by the Glacial beds in force, except those beds be mapped in with the older formations. North of Flamborough Head it is otherwise. I have examined railways in course of formation in Northamptonshire and Huntingdonshire, through districts in which the hills and valleys appear from the survey maps to be cut out of the secondaries, and in one instance out of a succession of secondary strata; but the cuttings have disclosed that the hills traversed by them are wholly formed of the Glacial beds, nothing of the map delineation being visible.

Mr. Fisher has correctly represented my views as to the cappings termed Trail; and I quite agree with him that the Clacton and Grays deposits are of similar age, having so expressed myself on page 350 of your third volume. The other points in his letter would take up too much of your space to discuss; but, if the information he obtained from the Witham boring be truly reliable, it seems to point to a great local disturbance and denudation of the four or five miles from Kelvedon to Witham, either between the Middle and Upper Glacial formations, or during the earlier part of the Upper; and I suspect that in such case my sections, No. 9 of page 348 of your third volume, and No. 9 of page 402 of the twenty-third volume of the *Quart. Journ. of the Geol. Soc.*, may prove to contain an error in so far as they show the Middle Glacial dipping with a fold under the Upper, where they cross the Blackwater. There is, I think, evidence, from clear sections, of such an intermediate disturbance and denudation near Ipswich, the effect of which has been to bring the Glacial clay into the bottom of the Gipping valley for three or four miles without any Middle Glacial under it; while the Middle and Upper Glacial beds form the whole country around, the valleys being entirely cut out of them. The Gipping valley, except where this anomalous structure occurs, forms no exception to the general features presented by these valleys, and the case of the Blackwater seems much the same. I am very glad, although I dissent from the gravels over the Hampshire Tertiaries being the equivalent of the Glacial clay, to see Mr. Fisher disposed to regard the Glacial sea as having extended over the South of England prior to the great upheavals and denudation of that part, and to connect the dislocations in the Thames valley with those movements; these being the most important links in the chain of events which I contend have followed the Glacial period.

S. V. WOOD, JUN.