

Oolite on Bredon Hill was also noticed. A magnificent view was obtained from the summit, and the day being showery the far distant Welsh Mountains were readily distinguished. The party next visited the Roman camp and the singular Bambury Stone, supposed to be a Druidical monument, where Mr. Lees read a paper on its history. In the descent, Elmley Castle, of which the trenches now only remain, and the well-restored church were inspected. The united clubs dined together at the Crown Hotel, Evesham, at 5 o'clock. —The Rev. W. Lea, President of the Worcestershire Club, exhibited some charred remains of the lake-dwelling period from Switzerland, and the Rev. G. Faussett, Oolitic fossils of the neighbourhood. Few spots could be better adapted for a scientific meeting, as it abounds in points of great interest to the geologist, botanist, and conchologist.

P. B. B.

CORRESPONDENCE.

THE SO-CALLED LOWER NEW RED SANDSTONE OF PLUMPTON, YORKSHIRE.

To the Editor of the GEOLOGICAL MAGAZINE.

DEAR SIR,—In the “Reader” of this week is a report of Sir R. I. Murchison’s Paper, read at the late meeting of the British Association at Nottingham, “On the vast areas in England and Wales in which no Productive Coal-beds can reasonably be looked for.” The learned author is made to say, “On the banks of the Tees, west of Darlington, wherever the Magnesian Limestone forms the upper stratum, as at Coniscliffe, it is at once underlain by unproductive millstone grit, which, on the west, lies upon Mountain Limestone, the productive Coal-measures between the Millstone-grit and the Permian rocks being entirely wanting, owing, he presumed, to an ancient elevation of the tract during the lower Carboniferous period, so that no valuable vegetable or coal matter had ever had an existence in the tract extending from Barnard Castle, on the Tees, to the south of Harrogate. At the latter place, the Plumpton rocks and conglomerates, underlying the Magnesian Limestone, and forming the base of the Permian system, are seen to repose directly on unproductive Millstone-grit, which, in its turn, rests upon the great Mountain Limestone region of the western dales of Yorkshire.” It is not my intention, at present, to discuss the point as to whether profitable Coal-measures ever covered the Millstone-grits of Yorkshire, but I do demur even to so great an authority as Sir Roderick, founder of the kingdom of *Permian*, as well as *Silurian*, claiming the Plumpton rocks and conglomerates as forming the base of the Permian system, and thus a portion of his first-named realm. These rocks I showed in a paper printed by you in your Magazine a few months since were most probably Upper Millstone-grit, or “rough

rock." Since that time I have been confirmed in my opinion by local geologists, so that I have now no doubt upon the matter. The same reasoning which proves that the Magnesian Limestone, forming the base of the Permian system, reposes directly on unproductive Millstone-grit from Barnard Castle to Harrogate, shows exactly a like sequence of rocks through Knaresborough, Plumpton, and Bramham Park, the only difference being that the coarse millstone at Plumpton is coloured red by peroxide of iron, certainly no sufficient reason in my judgment for claiming it as Permian. I should not have troubled you with this letter had not I deemed it right to lose no time in warning people from searching for coal in the Millstone-grit of Plumpton, which is not a locality where there is any fair probability of finding a profitable seam of coal, but a place where no productive coal-beds can reasonably be looked for.

I remain, yours truly,

E. W. BINNEY.

RAVENSLIFFE, DOUGLAS, ISLE OF MAN,
Sept. 10th, 1866.

RIVER-DENUDATION OF VALLEYS.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—Those who are acquainted with the region of the Lower Carboniferous Rocks on the borders of Lancashire and Yorkshire—forming the great anticlinal ridge between the coal-fields of these two counties—cannot fail to have been struck with the characteristic features of its valleys. They consist for the most part of narrow winding channels—bounded by steep sides, or cliffs of grit or shale—intersecting flat-topped or gently sloping moorlands of Millstone grit. These valleys generally contain rapid brooks and torrents—which are often swollen by heavy rains—and in their course carry away large quantities of material from the bottom and sides of their channels. It is, in fact, one of those districts where it might be supposed the theory of the sub-ærial or river-denuotation of valleys could be most satisfactorily illustrated. This is certainly true in the great majority of instances. When the valleys contain brooks—*having some relationship to the size of these valleys themselves*—the process of scooping the ravines is palpable to every observer; but that the theory is not capable of universal application seems to me equally clear from the fact that some parts of the deepest and most sharply sculptured valleys contain no streams whatever, owing to their crossing watersheds. I shall briefly notice a few examples, illustrated by cross-sections, of which the outlines have been drawn to natural scale for the contour lines on the Ordnance Maps. They are therefore true to nature, and are consequently less striking than when actually seen on the spot and *fore-shortened*. But their real proportions would be more evident did space admit of the lateral extension of their sides.