EXCURSION TO THE BAGSHOT COUNTRY BETWEEN ALDERSHOT AND BROOKWOOD.

SATURDAY, JUNE 14TH, 1890.

Directors : HORACE W. MONCKTON, F.G.S., and R. S. HERRIES,
M.A., F.G.S.

(*Report by THE DIRECTORS.*)

The object of the excursion was two-fold, partly to visit some sections in the Upper Bagshot Sand, and secondly to study the gravels.

The Bagshot sections visited are marked and numbered in the sketch-map which accompanies a paper on the Upper Eocene, by Messrs. Gardner, Keeping, and Monckton ('*Quart. Journ. Geol. Soc.*,' Vol. xlv, p. 616), and the reference numbers are given in the following description.

The sections visited were :—Section 23—Close to Mitchet Lake, where the gravel is seen resting on Upper Bagshot Sand.

Section 21—The Tunnel Hill section, which is by far the best exposure of the Upper Bagshot Sands to be seen. A considerable collection of casts and impressions of shells was made here by the Directors in 1876-80, and 43 species have been determined, showing satisfactorily that the upper part of these sands are of Lower Barton age. A series of these fossils have been presented by one of the Directors to the Jermyn Street Museum.

Section 20—The gravel-pits near the old windmill, showing gravel resting on Upper Bagshot Sand.

Section 24—The rifle-range sections near North Camp station were seen at a distance.

From Tunnel Hill to the old windmill the party walked along the top of the Fox Hills, which forms a remarkably flat plateau, varying in altitude from 390 feet above O.D., at the southern end, to 376 feet near Tunnel Hill, and 357 feet at the northern end. It is capped by gravel, which was seen in section at the Tunnel Hill railway-cutting east of the tunnel, and also in a shallow pit near the windmill at the northern end. This gravel belongs to the Southern Drift of Professor Prestwich ('*Quart. Journ. Geol. Soc.*,' Vol. xlv, Pl. 7, Fig. 2). Along the sides of the plateau,

terraces, and even sheets of gravel of a similar character were seen, and a series of pits were examined at the northern end of the Fox Hills, near the old windmill, at various levels, from the top to about 270 feet above O.D. The upper pits showed irregularly stratified gravel with beds of coarse dark-red or orange Sand, often hardened into "pan," resting on the Upper Bagshot Sand, and the lowest section showed 15 feet of roughly stratified gravel.

It was explained that similar gravel occurs close to the canal in the gorge which divides the Fox Hills from Chobham Ridges, and sections in a sheet of gravel of the same character, 228 to 280 feet above O.D., were visited near Mitchet Lake and in a new pit close to the North Camp Station. In every case the gravel was composed of subangular Chalk flints, with a small proportion of flint pebbles, and pieces of chert.

The Directors expressed an opinion that these lower gravels were probably old river gravels.

The party returned from North Camp Station to Waterloo.

REFERENCES.

Geological Survey Map, Sheet 8.

Memoir of the Geological Survey, Vol. iv.

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LYONS, H. G.—'Quart. Journ. Geol. Soc.,' Vol. xliii, p. 431; Vol. xlv, p. 633 (1887-9).

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PRESTWICH, J.—'On the Westleton Beds,' 'Quart. Journ. Geol. Soc.,' Vol. xlv, pp. 84, 120, 155.