EXCURSION TO SWANSCOMBE.

SATURDAY, 17TH MAY, 1890.

*Director: F. C. J. SPURRELL, F.G.S.**(Report by THE DIRECTOR.)*

The party alighted at Northfleet Station, from which could be well seen the pretty valley of Ebbsfleet, so renowned among antiquaries as thickly strewn by remains of Roman occupation, and in which, at the hamlet of Springhead, some are pleased to place the station called Vagniacæ.

An excellent view was obtained (in a cutting leading to a chalk-pit on the left bank of a stream, half-a-mile from the station) of the lower brickearths, corresponding to those of Crayford and Grays (just opposite in Essex). The sands yielded a similar fauna, though more limited and without shells. But here many implements have been found, and a chipping place, in which the Director personally found many curious minor implements and hammers of a peculiar type, with an enormous quantity of flakes of a very large size. From this pit progress was made to another on the same side of the stream, by the side of the road, near by. This consisted of masses of brickearth lying on gravel, and having, in the part further from the stream, masses of London Clay visible, which had slid into the stream. The London Clay is at present very far removed from the spot, which is a spur of Swanscombe Hill. Implements have been found in this brickearth, and teeth of *Elephas primigenius*. The brickearths lie upon the stratum of gravel known as Dartford Gravel, which, from here, may be traced round Swanscombe Hill, becoming more marked in its character as it approaches the Thames. This higher level sheet of gravel was seen cut through by the Ebbsfleet on either bank, and on passing through Swanscombe village at Milton Street an extensive cutting for chalk and gravel enabled it to be carefully studied. This pit has produced a great abundance of flint-implements, varying very much in size and workmanship, and again in the amount of wear they have received since fashioning. Bones have been obtained from this upper layer occasionally, and also from the little gully leading down to the Thames, where, in a lower level gravel and brickearth of the Erith age, both bones and implements have been found. The time did not admit of a visit to the gravel which

covers the top of Swanscombe Hill, and the Members of the Association—having visited Swanscombe Church by the way, in which the Director drew attention to the bowl of the old carved font, sculptured from the local Upper Chalk, with flint discernible in its substance, a unique instance of the kind—partook of tea in the village of Greenhithe, and so to London.

REFERENCES.

- Geological Survey Map, Sheet 1 S.W. Drift Edition.
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 SPURRELL, F. C. J.—“On the Discovery of Palæolithic Implements at Crayford,” ‘Quart. Journ. Geol. Soc.’ Vol. xxxvi, 1880.
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 GOODCHILD, J. G.—“Some Superficial Deposits of North Kent,” ‘Proc. Geol. Assoc.’ Vol. ix, 1885.
 SPURRELL, F. C. J.—“History of the Rivers and Denudation of West Kent,” ‘Rep. W. Kent. Nat. Hist. Soc.’ 1886.
 WHITAKER, W.—“Geology of London,” ‘Mem. Geol. Surv.’ 1889, Vol. i, chapters 20, 21, 24, and 25.
 In chapter 21 of the last work will be found an exhaustive review, with extracts, of the previous literature of the Thames Valley Drift.

EXCURSION TO OXFORD.

WHIT-MONDAY AND TUESDAY, 26TH AND 27TH MAY, 1890.

Director : PROF. A. H. GREEN, M.A., F.R.S., ETC.

(*Report by* THE EXCURSION SECRETARY.)

SATURDAY, MAY 25TH.—The party assembled at noon at the station, and proceeded by train to Islip, under the direction of Prof. A. H. Green, F.R.S., etc., Professor of Geology in the University of Oxford. The railway-station at Islip is situated on the northern edge of the most southerly of a series of inliers of Lower Oolites in the Oxford Clay. These inliers lie on an axis of upheaval stretching in a N.E. and S.W. direction from Marsh Gibbon in Buckinghamshire to the district about to be described, the general dip of the beds being N.W. and S.E. on either side of the anticline. The Islip Noke inlier is further interesting from the fact that a line of fault, extending for many miles in a N.W. and S.E. direction (and of which more anon), cuts through it and