

Chalk. Ragstone and chert pebbles from the Greensands are common, while white quartz sub-angular pebbles are by no means rare, and others are met with which are doubtless from Silurian rocks. After discussing the possible means by which fragments of such different rocks were brought together and deposited in this district in such great quantity, the party proceeded by Coombe Valley, crossing to the opposite elevation, the Ridgway, which was followed to Wimbledon, where the train was taken for London.

EXCURSION TO CROYDON AND RIDDLESOWN.

SATURDAY, JUNE 19th, 1880.

Director :—J. LOGAN LOBLEY, Esq., F.G.S.

On arriving at East Croydon station the Members of the Association were met by John Flower, Esq., M.A., and a party of Members of the Croydon Microscopical and Natural History Club, of which that gentleman is the President. The well-known extensive gravel-pits in Fairfield were first visited, and the fine sections of Valley gravels here exposed were carefully inspected. The Director and Mr. Flower explained the sections, and drew attention to the presence of the Oldhaven pebbles, so abundant now at Shirley and Croham Hurst, and to the course of the Wandle having changed so considerably as to leave here high and dry about twenty feet thickness of its old deposit. Mr. Flower was not aware of any organic remains having been found here, but at Thornton Heath an elephant's tusk, preserved by a coating of clay, had been obtained.

The underlying Woolwich and Reading Beds are not now exposed as formerly in Chichester Road, but the presence of their clay-beds is indicated by springs and the lake in the beautiful grounds of Park Hill House, the residence of Mrs. J. W. Flower, which the party was courteously invited to visit. From Park Hill to the Water Tower is but a short walk, and, by the kindness of Dr. Strong, of Croydon, the whole of the party were enabled to assemble on the top of this commandingly placed building. The day being fine the physical features of the district were seen to advantage; the hills of Shirley and Croham Hurst, and the Ban-

stead Chalk Downs rising boldly to the south and west, and on the north the great valley of the Thames running from west to east.

At the foot of Water Tower Hill a very interesting section shows the thinning out of the Thanet Sands almost to a feather edge, resting as usual on the Chalk with green-coated flints atop. There is thus seen the extreme southern edge of the London Tertiary Basin.

Croham Hurst, a mile to the south, was next visited. The summit of this hill, 477 feet above the sea level, is an outlier of Tertiary (Oldhaven) Beds, the well-rounded blue-black pebbles of which, by rolling down, cover a considerable part of the steep slopes. So steep indeed is one side that it is called Break-neck Hill, but this the geologists descended safely, and made their way by the Brighton Road, to the chalk-pit opposite to the "Royal Oak," famed for the granite boulder once found in it and attributed to ice action in the Cretaceous Period.

The party subsequently proceeded—by way of Purley—to Riddlesdown, skirting the fine Chalk valley of Kenley, along which, after exceptionally wet seasons, the Bourne river flows. After the sections of the Chalk exposed in the excavations along the hill had been seen, and refreshments obtained at the "Rose and Crown," the train for London was taken at Warlingham station.

EXCURSION TO REDHILL.

SATURDAY, 26th JUNE, 1880.

Director : C. J. A. MEYER, Esq., F.G.S.

(*Report by* THE DIRECTOR.)

The Fuller's-earth beds in the Lower Greensand in the vicinity of Redhill and Nutfield formed the principal point of interest in this excursion. The strata yielding fuller's-earth in workable quantity occupy the northern slope of the sand-ridge between Redhill and Bletchingley. The position in the Cretaceous series of these particular fuller's-earth beds has been long a matter of uncertainty amongst geologists, some observers placing them in the Hythe Beds, others in the Sandgate Beds of the Lower Greensand. It was on this occasion pointed out and explained to the Members present that the fuller's-earth beds of Nutfield really