heaval would be productive of dislocations is more than likely, and I venture to think that one of these has been found at Datchet. That very important dislocations have taken place in the Thames Valley, the Members of the Geologists' Association well know, from their repeated visits to the neighbourhoods of Woolwich and Erith. In this part of the valley the Chalk is thrown down below the marshes to a very considerable depth by a fault running east and west for miles. It has not, however, been traced further west than the vicinity of Sydenham.

As a matter of general interest, I may add that the Datchet boring obtained water at 3 feet from the surface, and when I last saw it water was flowing from the top with the boring rods down. Mr. Secker informs me that at the Slough well and boring the water rose to within 7 feet from the surface, and when pumped down the well yielded 40,000 gallons an hour, the water rising to 60 feet from the surface. These facts are of great public importance, since they show the immense storage of water that exists at a moderate depth below the surface of the Thames Valley.

EXCURSION TO HAYWARD'S HEATH AND DITCHLING BEACON.*

(SOUTHERN VALLEY OF THE WEALD.)

SATURDAY, JUNE 10TH, 1882.

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

(*Report by* THE DIRECTOR.)

The third of the Weald series of Excursions along the line of section between London and Brighton was devoted to the district between Hayward's Heath and Ditchling Beacon (the summit of the eastern section of the South Downs) comprising the southern Weald Clay vale.

The ground crossed is similar, therefore, geologically with that traversed between Redhill and Three Bridges on the 6th of May, but with the difference that the succession of Beds is reversed. One of the minor Wealden anticlinals occurs at Hayward's Heath, where brickyard sections show Cuckfield Clay at the surface, the ground is then formed of Tunbridge Wells Sands nearly to Wivels-

* Third of the Weald Series.

field, where a depression on Weald Clay is met with. This is, however, very narrow, and Wivelsfield itself stands on what may perhaps be called an outlier of Hastings Beds, but which joins on to the main mass a little to the east. This is soon crossed, and then the Weald Clay vale is reached. Ditchling Common is a very extensive tract, entirely on the Clay, which here forms ground more or less undulating, the highest part of the common having a considerable elevation. A divergence from the line of section was here made to enable the party to visit the very extensive brickyards near Keymer Junction. The proprietor, Mr. Johnson, very courteously conducted the party to the kilns, to the excavations and to the terra cotta show-rooms, giving full explanations to his visitors. The section of the Weald Clay here seen is one of the best in the entire Wealden area, exposing the Clay as it does to the depth of some fifty feet. The Clay at this place is used solely for brick making, the terra cotta being made at Ditchling Pottery, about a mile distant, from a finer clay close to the surface of the highest part of the Weald Clay ground. To this pottery the party then proceeded, and the beautiful and interesting process of terra cotta manufacture was explained to them by the manager of the works. After an inspection had been made of the Clay, *in situ*, the southern part of the common, was traversed, and as the village of Ditchling was approached the changed character of the ground indicated the presence of the Greensand, and at the village itself a section of the Folkestone Beds was found behind the hotel. The ancient church stands on a small hill of these Beds. The party dined together at the Bull Hotel, when Mr. Hawkins Johnson expressed the thanks of the Members to the Director in some clever extempore verses, and then the geologists continued their journey southwards and soon reached the foot of the Downs. There does not appear to be any representative of the Atherfield Clay in this neighbourhood, but the Hythe Beds, the Sandgate Beds, and the Folkestone Beds are present, though forming features comparatively insignificant when compared with the Lower Greensand elevations which fringe the North Downs. The outcrop of the Gault, too, is narrow. It is indicated by the dark colour of the ploughed land above it, locally called "Blackland." The Upper Greensand also is soon crossed at the base of the hills, and the Grey Chalk is shown by fine sections at a little elevation. Continuing the ascent the higher beds of the Chalk are successively passed over until the summit of the Downs is reached,

consisting of a bed of the Upper Chalk with flints. Ditchling Beacon is 814 feet above sea level, and as it is the highest point in the Sussex Downs, it affords a magnificent view on all sides. The Southern Valley of the Weald crossed during the day was looked over to the north, while to the south the view extended across the Downs and far out to sea. A route due west along the summit of the Downs was now taken, and a descent made near Coombe Down, when a visit was paid to the new waterworks, where a deep well has been sunk through the Lower Chalk. Passing through Keymer village, at which a section of the Folkestone Beds was seen, the party hastened to Hassock's Station for the return journey to London.

EXCURSION TO RICKMANSWORTH.

SATURDAY, JUNE 17TH, 1882.

Directors: WILLIAM WHITAKER, Esq., B.A., F.G.S., and JOHN HOPKINSON, Esq., F.L.S., F.G.S.

(*Report by THE DIRECTORS.*)

The Harefield Chalkpits, close to the river Colne below Rickmansworth, expose as fine sections of the Upper Chalk as any to be met with on the northern side of the London Basin, and nowhere can better examples of "pipes" in the Chalk be seen than in one of these pits, while the absence of any vestige of a pipe in the other affords an instructive lesson in physical geology. But scant notice, however, of these sections has hitherto been taken.

To examine these pits, and also sections of the Tertiary beds at Woodcock Hill, the members of the Association assembled at three o'clock at Rickmansworth station, where they were met by members of the Hertfordshire Natural History Society, the united party numbering between forty and fifty.

After leaving the station the first place visited was an old chalk-pit on Stocker's Farm, of such little interest that it merely elicited from Mr. Whitaker the observation, "Ladies and gentlemen, this is a chalkpit."

Proceeding down the valley of the Colne, a short walk along the towing-path of the canal brought the party to the first of the large chalkpits to be visited, on the left bank of the river. The Upper Chalk here is bare, and of a pure white, the clayey beds which