EXCURSION TO WANBOROUGH, HOG'S BACK, AND COMPTON.

SATURDAY, JUNE 19TH, 1909.

Director: GEORGE W. YOUNG, F.G.S.

Excursion Secretary: T. W. READER, F.G.S.

(*Report by THE DIRECTOR.*)

THE London Members left Waterloo at 12.40, arriving at Wanborough at 2.15. Here they were awaited by a local contingent, which brought up the number to about 40. Beyond Guildford the railway runs along the north side of the Hog's Back at a distance of about a mile. The formation traversed is London Clay.

From Wanborough Station the party walked southward by fieldpaths to Wanborough. The village, consisting of little more than the church and a manor house, nestles at the foot of the Hog's Back, at the junction of the Woolwich Clay and the Chalk. Thanet Sand is not present. Close by is a large pond, fed by a constant spring, from which a small stream flows away northward over the Tertiaries. A small disused pit close to the church (No. 307*) shows white, soft, rubbly chalk, with numerous nodular flints. The dip here, as obscurely indicated by the flints, is gentle. This pit is in the *Marsupites*-zone, which is confined to a strip of low ground at the foot of the Hog's Back, the steeper part of which is formed by the zone of *Micraster coranguinum*. Several plates of *Marsupites* were found by the Members while the Director was speaking, thus proving they were not uncommon.

A move was then made to Wanborough south pit (No. 308). This is on the steeper part of the north flank of the Hog's Back, a quarter mile south of Wanborough Church. The dip here is much greater, probably about 25°. This, like several of the quarries along the Hog's Back, is of deceptive appearance as regards dip. At first sight the beds appear to form a well-marked anticline, transverse to the general strike of the ridge. This is caused by the main face being along the strike of the beds, while the ends of the pit curve round approximately to the line of the dip. Each individual bed is therefore at its highest point in the centre of the pit and curves downward at each end, the true dip being greater than any of the curves shown. On

* The figures in parentheses denote the numbers given to the pits in the Director's paper, "The Chalk Area of Western Surrey." *Proc. Geol. Assoc.*, vol. xx, p. 422.

the south flank of the Hog's Back the reverse appearance is shown, the curves there being pseudo-synclines.

This pit is cut in the zone of *M. cor-anguinum*. Here the chalk is much harder and tougher than in the pit just left, while regular lines of nodular flints occur at frequent intervals. Several typical fossils were found, including the zone-fossil and the large dome-shaped variety of *Echinocorys scutatus*, characteristic of this zone.

On reaching the crest of the Hog's Back the road along the ridge was followed eastward to Monkshatch, a halt being made on the way to admire the view on either hand and to hear a short description of the structure of the country.

Monkshatch (No. 312) is situated on the south flank of the Hog's Back just where the ridge reaches its highest point (505 feet O.D.). The pit has not been worked for many years, and is now picturesquely laid out as the pleasure grounds of a large residence. The owner, Mrs. Hichens, had most thoughtfully provided various liquid refreshments, which the hot afternoon rendered very acceptable. There are three exposures in the pit which afford an interrupted section from the zone of *T. gracilis* up to that of *M. cor-testudinarium*, the larger portion being in that of *H. planus*. Time did not permit of a visit to Mrs. Sturgess's pit, which shows a similar section to the upper part of Monkshatch.

The party next descended the escarpment, and crossing the very narrow outcrop of Upper Greensand and Gault, which makes no feature, made their way to the caves or subterranean galleries near Monks Grove. These are cut in the highest member of the Lower Greensand, the Folkestone Sands. The sand is clean and nearly white, and much resembles that obtained from the similar galleries at Godstone. By the aid of candles, kindly provided by a local visitor, the galleries were explored by several of the Members. There are several entrances, which are connected underground, and strange to say, they are not marked on the 6-inch ordnance map.

Proceeding to the village of Compton, tea was obtained at "The Cocoa House." At Compton is the residence of the late G. F. Watts, R.A., and the institutions established here by him are now attracting visitors from all parts. After tea a hurried visit was made to the Watts Memorial Chapel, in which several of the Members were much interested, although the fading light prevented its beauty being fully appreciated. A little farther on the Watts Picture Gallery and Artistic Pottery are situated in the fork between Down Lane and Sandy Lane. Although after the usual time of closing, by the courtesy of the Curator the party was permitted to make a rapid inspection of the Picture Gallery, and resolves were made to pay a more leisurely visit in the near future. The Galleries are open free on Wednesdays,

Saturdays, Sundays, and Bank Holidays ; on other days, 1s. each is charged. (Closed on Thursdays)

The articles produced at the Pottery are now made from the Gault mixed with a certain proportion of clay imported from Scotland, but when it was first established the owner was not aware that a suitable clay existed in the neighbourhood. The Gault Clay was afterwards discovered in digging the foundation for the manager's residence. Owing to its real thinness and the high dip it forms a band only a few feet wide, at a height of some 40 feet above the base of the escarpment, the lowest part of which is cut in Folkestone Sands.

The party then walked back to Guildford along Sandy Lane, the supposed track of the "Pilgrims' Way," which leads direct to the ferry across the River Wey at St. Catherine's Chapel. This part of the Pilgrims' Way (and for some distance east of Guildford) is on Folkestone Sands, of which several sections were noted in passing.

REFERENCES.

- Geological Survey Map, 1 inch to mile, Sheet 8, 8s. 6d.
 Ordnance Survey Map, 1 inch to mile (New Series), Sheet 285, 1s.
 1904. JUKES-BROWNE, J. B.—"Cretaceous Rocks of Britain." *Mem. Geol. Survey*, vol. iii, p. 176.
 1908. YOUNG, G. W.—"The Chalk Area of Western Surrey." *Proc. Geol. Assoc.*, vol. xx, p. 422.

EXCURSION TO WHEATLEY AND ARNGROVE.

SATURDAY, JUNE 26TH, 1909.

Director: A. MORLEY DAVIES, D.Sc., F.G.S.

Excursion Secretary: MISS JOHNSTON.

A PARTY of twelve, who had travelled from London *via* Oxford, were met by the Director at Wheatley Station shortly before noon, and conducted to one of the quarries in Upper Corallian Limestone. Here a series of beds of stone was seen, some hard and compact, others of loose texture, but all apparently composed of comminuted shell-fragments. The strata showed a decided dip towards the north, although a brickfield in Hartwell Clay (which there was not time to visit) could be seen at the foot of Shotover Hill, a little distance to the south. Between the two exposures runs an important fault, but whether the dip in the stone-beds is due simply to disturbance near the fault, or whether, as suggested by Blake and Hudleston, it represents original deposition at an angle on the edge of the Lower Corallian sand-bank, was left undecided. A hunt for fossils resulted in the finding of many