

EXCURSION TO CODICOTE, HERTS.

SATURDAY, MAY 10TH, 1919.

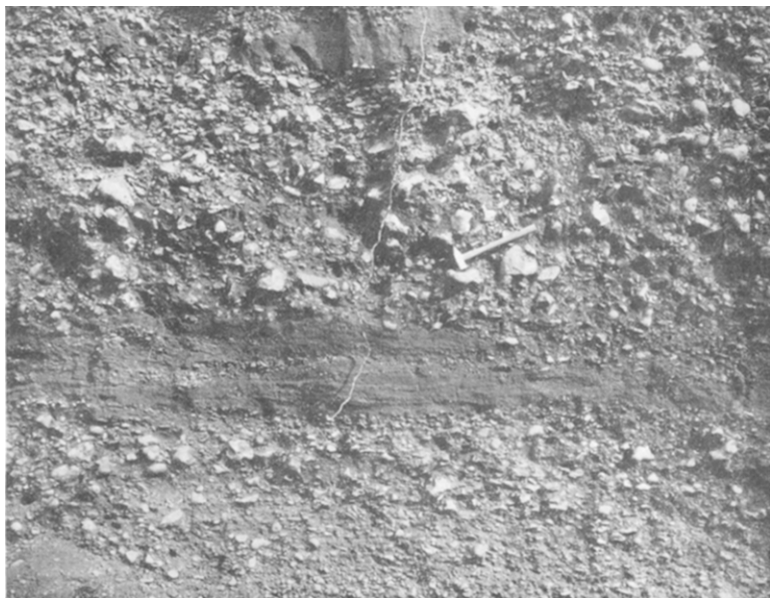
REPORT BY R. L. SHERLOCK, D.Sc., A.R.C.Sc., F.G.S.,
Director of the Excursion.

PLATE 5.

THIS excursion was carried out in ideal weather. The party of about 15 members met at Knebworth Station at 2.34 p.m., and walked westwards up the hill to Deards End, and over the plateau to Knebworth Park, whence a field-path was followed southwards to the head of the shallow chalk-valley which passes Nup's End. The plateau is covered with Clay-with-flints, but has a thin layer, little more than soil, containing stones, such as Bunter pebbles, derived from distant areas. The highest point of the plateau, in the part traversed, is 417 feet above Ordnance Datum and is at about the upper limit to which the Chalky Boulder Clay and its accompanying gravels reaches. The later Drift, with Bunter pebbles, has evidently just surmounted the plateau and covered the earlier-formed local Drift (the 'Clay-with-flints').

About 400 yards south-west of Nup's End a small chalk-pit was visited. It shows about 8 feet of chalk, containing a band of tabular flint, and also a pipe filled with clay containing Reading Bed pebbles. The pipe is lined with darker clay containing only chalk-flints and formed by solution of chalk.

The next stopping place was St. Giles' Church, Codicote, situated on the margin of the Chalky Boulder Clay, which comes in without making any obvious feature. The distant site of a well on the Great North Road, half a mile to the north, was pointed out. The well passes through 12 feet of Clay-with-flints and then continues in chalk, ending in the Lower Chalk at a total depth of 400 feet. From the church to the village and across the park of Codicote Lodge, the ground is flat and provides no sections. The junction between boulder-clay and gravel is quite invisible on this plateau. However, on High Heath, immediately west of the Park, are old gravel-pits. The first one visited is against the road bordering High Heath on the north side. A second and much larger pit, about 200 yards south of the first one visited, shows a deeper section (see Plate 5). The gravels consist of flints of varied sizes, but a considerable number are very large and many are distinctly glaciated; showing battered hackly surfaces, as is customary in glaciated flints, instead of the scratches found on other hard rocks. Much of the interstitial sand consists of comminuted flint. A number of large fragments and small boulders of far-travelled rocks, such as Bunter quartzites, blocks of sandstone,



A.—DETAIL OF UPPER SECTION, HIGH HEATH.



B.—THE LOWER SECTION, HIGH HEATH, CODICOTE.

etc., are found, and there are also abundant flint pebbles derived from the Reading Beds and a few small quartz pebbles. In the larger pit there is finer grained gravel with cross-bedded sands below the coarse gravel, but in the smaller pit this order is reversed and it is evidently purely local. The sand and gravel and the boulder-clay of Codicote seem to wedge into one another and neither can be said to be below the other. The small valley between High Heath and Codicote Lodge Park is clearly post-Glacial.

The party turned eastwards to Codicote, where tea was provided at the George and Dragon, in the centre of the village. At this inn a well has been sunk through 33 feet of "stony gray clay with chalk stones and Jurassic fossils," evidently Chalky Boulder Clay of unknown thickness.

After tea the party turned southwards and crossed the R. Mimram (or Maran) at Pulmore Water, and then took a field-path up the opposite slope to Ryefield Farm. Looking back, a good view was obtained, and it was pointed out that, in pre-Glacial times, the river most probably had flowed through High Heath and Codicote to Welwyn. This is now high ground, the valley having been levelled up by Drift, and the Mimram has cut a new channel for itself over bare chalk via Codicote Bottom and Pulmore Water. Then, turning eastwards, it cuts across the Drift ridge, having boulder-clay on the north bank and gravel on the south. The thickness of the Drift cannot be stated exactly, because the slope of the buried Chalk floor is not known, but the Drift may reach a maximum of about 70 feet. From Ryefield Farm the party walked over bare Chalk to Linces Farm, where a chalk-pit was seen, and a pipe containing Reading pebbles was noted. The presence of Reading Bed material in pipes is of interest, as it explains the source of the pebbles which are found in the soil, associated with flints, everywhere in the district. They prove also the former much greater extent of the Reading Beds, for it is evident that these beds once covered the Chalk where now they are represented by pipes only, all the rest of the deposit having been denuded away and incorporated with chalk residue to form Clay-with-flints.

Time prevented any further stops and the party passed through Welwyn and along the new road referred to in the Report of the Excursion taken on the previous 8th of March, and so to Welwyn Station. Mr. A. C. Williams acted as Excursion Secretary.

REFERENCES.

- Geological Survey Map, Old Series, one-inch, sheet 46 S.E.
 Ordnance Map, New Series, one-inch, Sheets 221 and 239.
 1914. GEOLOGICAL SURVEY, Summary of Progress for 1913, pp. 31-6.