EXCURSION TO CHARLTON.

SATURDAY, MARCH 27TH, 1920.

REPORT BY ARTHUR L. LEACH, F.G.S., *Director of the Excursion.*

THE party assembled at Charlton Station at 2.30 p.m., and walked through the great disused excavations, which mark the site of the old sand workings at Charlton, to the pit now in use on the side of Cox's Mount, near Charlton Lane. Here the Director drew attention to the principal features of the excellent section of the Lower London Tertiaries, corresponding in all essential respects with the section (drawn from the disused workings) given in the Memoirs of the Geological Survey. It is unnecessary to give any detailed account of the Charlton section which has been figured and described in many reports and memoirs. The pit is now used chiefly as a source of sand for the factory of the United Glass Bottle Manufacturers' Association. Before the Thanet Sand, the only suitable glass-sand, can be dug out, all the overlying masses of Woolwich Beds and Blackheath Beds have to be removed. The pit is thus conveniently worked in three stages, marked by the top of the Chalk, the top of the Thanet Sand, and the top of the Woolwich Beds. From these three platforms the formations can be examined easily in detail. In the near future a new glass factory will be erected at Charlton and the excavation of sand will proceed much more rapidly than in the past.

The members of the party separated for a time to collect fossils from the chalk-pit and from the Eocene formations (Thanet Sand, Woolwich Beds and Blackheath Beds) and re-assembled on the upper platform to notice a band of large pebbles in the Blackheath Beds. Almost every pebble was seen to be split into fragments, many of them roughly parallel slices, which remained side by side. On digging into this bed to expose fresh pebbles, few of these were found to be split. As the pebbles while still buried within the bed are less subject to frost action than those outstanding on the working face of the pit, and all other conditions are the same, in this case the splitting may, with more probability, be assigned to temperature changes rather than to pressure.* On the high ground above the pit, Mr. F. C. Elliston Erwood kindly gave some account of the Charlton Earthworks and of the exploration of the site carried out by him in 1915. Fragments of the western line of banks and ditches still remain, but these will probably disappear in the near future and in a few years not a trace of the original earthworks will remain. Fortunately an excellent description of the site and of

*See also Report of an Excursion to East Wickham, *Proc. Geol. Assoc.*, vol. xxx. (1919) p. 199.

the associated relics has been published by Mr. Erwood (See References). With the aid of a plan he showed the form and extent of the enclosure and the positions of the dark bands (hearth sites and refuse layers) which had yielded numerous, and varied types of Roman-British pottery, coins, fibulæ, bones loom-weights, and other relics of the native settlement which occupied this site during the Roman control of Britain. No relics of a military nature had been recovered: the remains were those of the peaceful habitations and ordinary domestic occupations of a native settlement.

Mr. Erwood kindly exhibited some specimens of the Samian bowls of fine red ware, the two fibulæ, one of a very beautiful and rare, if not unique type, and numerous photographs of other interesting archæological objects obtained from this pit.

The party now walked round the northern end of the pit where the Eocene formations are splendidly exposed along a vertical face, and here also traces were seen of the soil-filled ditches of the earthworks. This concluded the programme for the excursion. Before the party dispersed, Mr. Erwood and the Director were thanked, on the motion of Mr. J. F. N. Green, for the demonstrations, archæological and geological, given during the afternoon.

REFERENCES.

- Geological Survey Map, London District (Drift Edition), Sheet 4.
 1889. WHITAKER, W.—"Geology of London," vol. 1, *Mem. Geol. Survey*,
 1909. WOODWARD, H. B.—"Geology of the London District," *Mem. Geol. Survey*.
 1916. ERWOOD, F. C. E.—"The Earthworks at Charlton, London, S.E," *Journal British Arch. Assoc.*