

THE PETROGRAPHY OF DARTMOOR, PART IV,

BY R. HANSFORD WORTH.

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I AM so far impressed with the importance of the Indian red felsite, which I have called "felsite A", as one of the clues to the geology of Dartmoor that I offer this short paper descriptive of a fresh locality in which the rock has been found.

This new location is the crest of the hill about two hundred yards west of Hole Farm, in the parish of Chagford, and the rock is found along a north and south line, ranging from a little north of Hole to nearly, if not quite, abreast of Collihole. The centre of the patch is situate at approximately lon. $3^{\circ}51'47''$ W, and lat. $50^{\circ}39'30''$ N. The felsite overlies normal granite and is three miles within the nearest granite boundary, which lies to the north-east.

If I am correct, and this felsite is the chilled superficies of the granite, then here we again have evidence that the denudation of the rocks overlying the granite is but just complete; and here was the original granite surface.

The felsite shows all the usual characters of felsite A, and weathered surfaces disclose the original flow structure. The unweathered rock is dense and compact, the only crystals visible are very small quartz grains, the colour is uniform, except where a little tourmaline occurs. But weathered surfaces are banded dark and light red, and some of the bands stand in relief above the general surface. I have reported similar disclosure of flow structure on weathered surfaces from other localities, notably the Lud Brook, near Wrangaton. This last named I illustrated in Part II (*Trans. Devon. Assoc.*, Vol. XXXV, opposite page 764). That illustration was from a drawing, and perhaps more perfectly represents the surface than can a photograph, but a photograph has better evidential value and I now supply a fresh illustration, Plate XLIII, fig. 1, for comparison with a photograph of a weathered surface from Hole, Plate XLIII, fig. 2, in which the striae are much straighter.

I may add that the apparent gap in the occurrence of this felsite, between Collard Tor and Dendles Green, referred to

in Part II on page 759, has since been filled by its discovery above Parklands, under Rook Tor.

This rock probably occurs in many localities yet unknown, but time and opportunity are the essence of successful search, and a chance exposure often gives the clue. Industry alone does not suffice for success, it must have the companion which men call "luck".



R. H. Worth

FIG. 1, Upper. WEATHERED SURFACE FELSITE A; LUDBROOK, UGBOROUGH.

FIG. 2, Lower. DO. DO. HOLE, CHAGFORD.