

A different series of changes may be traced among different rocks in Borrowdale and Wastdale, where the members of the middle division of slate rocks abut against the granitic mass which forms the base of Scafell, and occupies considerable breadths in Eskdale.

The slaty rocks alluded to are bedded and laminated; but besides the cleavage structure, which has been super-added, and which crosses all the beds of fine, coarse, and laminated grauwacke, we notice (as in the rocks which overhang the Bowder Stone) extreme induration, and the plentiful occurrence of spots and strings of epidote. In other beds the stratification remains, but the mineral composition is complicated by the segregation of spots of green earth, and nodules of green earth, calcareous spar, quartz, or even calcedony, so that the stone would, by most persons, be called amygdaloid. It is, however, a widely stratified rock, and passes by perfect gradation in Borrowdale, near Ulpha Park, on Grasmere, and in Patterdale, to the common bedded and spotted slate. On approaching yet nearer to the granitic mass, other changes appear; the slaty stone becomes very hard and compact, is traversed by abundance of fissures, acquires a peculiar spotting, which finally assumes the character of felspar, till the whole mass becomes what is often called clay porphyry, and at length can in no manner be distinguished from variolites and porphyries with a compact base. (Some of these rocks have been called greenstones.) This series of changes may be traced in a breadth of two miles, by walking over the summit of drainage between Borrowdale and Wastdale, called Sty Head.

What renders these alterations the more interesting, is the abundant occurrence of garnets of a fine red colour and perfect crystallisation (rhombic dodecahedron) in the porphyritic, partially porphyritic, and even brecciated rocks. Such specimens may be gathered on the slopes of the Gable Mountain, or obtained from the rocks near the summit of the pass of Sty Head (observed by the author 1838). How many of the porphyritic