

Where the change has been most complete a new foliation has completely obliterated the original structure. From this extreme every gradation may be traced back to the first schistose structure, and thence into the original amorphous condition. In many cases this new foliation has been produced nearly or quite along the planes of the old structure. But everywhere examples may be observed where (as in Fig. 333) the alternate bands of lighter and darker material are traversed obliquely by the newer structure, which may be perfect in the dark more basic bands and hardly developed in the gray more quartzose parts.

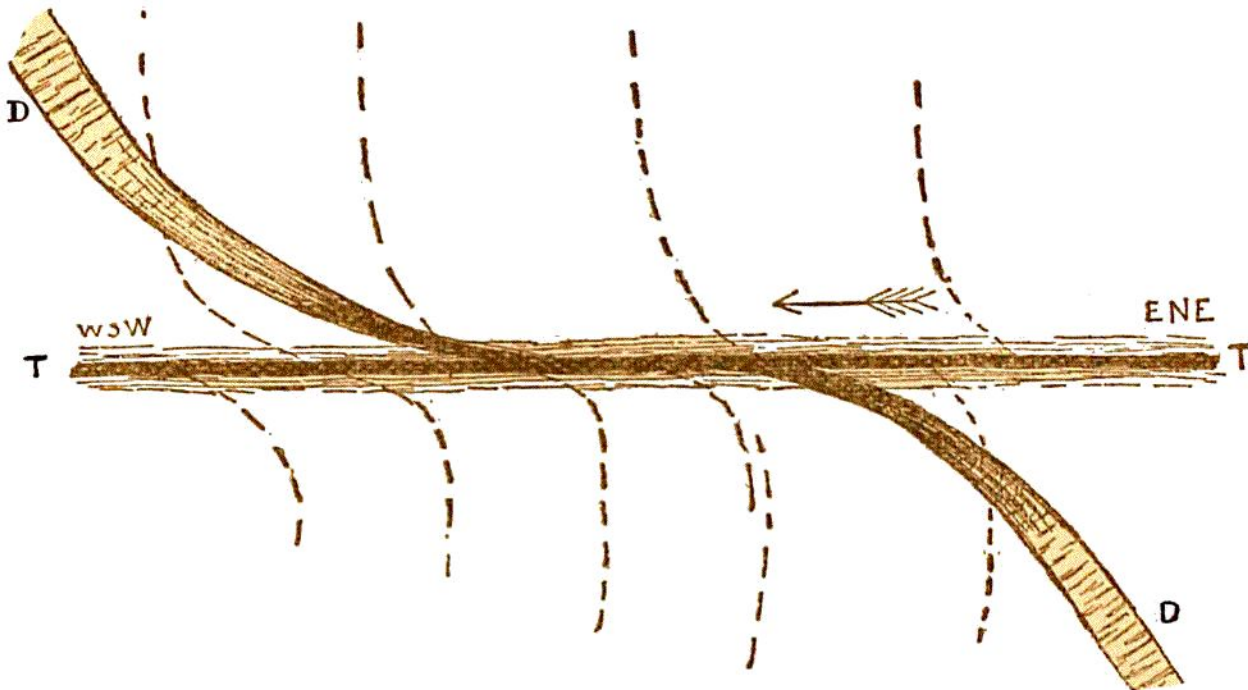


Fig. 331.—Ground-plan showing deflection and disruption of dikes in the Lewisian gneiss of N.W. Scotland.

TT, Thrust-plane, DD, Dike, deflected about one-quarter mile and much compressed. The dotted lines show the strike of the gneiss and its displacement by the thrust-plane; the fine parallel lines in the dike and in the gneiss mark the direction of the newer schistosity developed by the thrust-movement, which was in the direction of the arrow.

It is obvious that the various terrestrial movements indicated by the complex composition and structure of the Lewisian gneiss must represent a protracted period of geological time. But there is demonstrative evidence that the whole of them had been completed, and that the rocks in which they took place at a great depth had been exposed at the surface by vast denudation before the next member of the pre-Cambrian series was formed. The Torridon sandstone lies with the most complete unconformability on the old gneiss, covering alike its dikes, crush-lines and thrust-planes, by not one of which is it in the least degree affected.