closely to modern lavas in structure and composition, that they may be regarded as probably also of volcanic origin. But, as was discussed in Chapter VIII. (p. 259), he did not suppose that they had actually been erupted at the surface, like streams of lava. He found them to occur sometimes in vertical veins, known in Scotland as *dykes*, a term now universal in English geological literature, and sometimes as irregular bosses, or interposed as sheets between the strata. He believed these rocks to be masses of subterranean or unerupted lava, but as we have seen, the grounds on which he reached this conclusion were not always such as the subsequent progress of inquiry has justified. The deduction was itself in many cases correct, but the reasoning that led up to it, was partly fallacious. Hutton argued, for instance, that the carbonate of lime, so commonly observable in his "Whinstones" indicated that the rock had been fused deep within the earth, under such pressure as to keep that mineral in a molten state, without the loss of its carbonic acid. Like other mineralogists of his day, he was not aware that the calcite of the amygdales has been subsequently introduced in aqueous solution into the steam-cavities, and that the diffused lime-carbonate in the body of the rocks generally results from their partial decomposition by infiltrating water. Much more accurate were his observations that whinstone has greatly indurated the strata into which it has been injected, even involving and fusing fragments of them, and reducing carbonaceous substances, such as coal, to the condition of coke or charcoal; that it has sometimes been intruded among the strata with such violence as to