

still speak of granite passing into sandstone, of "fire and water, although such opposite agents, having in some instances, produced effects nearly, if not altogether identical," and of the probability that what is now known to be a typical and admirable series of alternations of basalt-lavas with tuffs and sedimentary fossiliferous strata, was entirely the product of aqueous deposition.¹

But in the third and fourth decades of the nineteenth century a number of independent observers had their attention aroused by the intercalation of rocks which they could only regard as volcanic, among the older stratified formations of Britain. In his singularly suggestive volume entitled *Researches in Theoretical Geology*, published in 1831, Henry Thomas De la Beche (1796-1855) expressed, though cautiously, his opinion that some at least of the "trappean" rocks associated with the lower parts of the "grauwacke series" in different countries of Europe, appear to have been contemporaneous with the strata among which they lie, "precisely as a bed of lava may flow over a sandy

¹ Letters to Professor Jameson, *Edin. Phil. Journ.*, 1820-21. In Conybeare's Introduction to Conybeare and Phillips' *Outlines of the Geology of England and Wales*, published in 1822, regretful reference is made to the "excessive addiction to theoretical speculations" on the part of the zealous rival partizans of the Huttonian and Wernerian systems at Edinburgh. The author refrains from pronouncing any judgment on the controversy as to the origin of the Trap rocks, being desirous "to keep these conjectural speculations entirely distinct from that positive knowledge, acquired from observation, which is as yet the only certain portion of geological science." One can see that, in spite of this laudable caution, Conybeare's sympathies were rather in favour of the igneous views.