at the base of all the ordinary strata. From the peculiarity of the minute contortions in the gneissic rocks, a theory now known to be erroneous was developed, which was this:

It is frequently found that granite and granitic rocks are intimately associated with gneiss. Thus we often find masses and veins of granite, with gneiss upon their flanks bent in a number of small wavy folds or contortions. Granite is a crystalline rock, composed of felspar, quartz, and mica, and the old theory (so far true) was that the world at one time was in a state of perfect igneous fusion; but by and by, when it began to cool, the materials arranged themselves as distinct minerals, according to their different chemical affinities, and consolidated as granite. The great globe was thus composed entirely of granite at the surface; and by and by, as cooling still progressed, and water, by condensation, attempted to settle on the surface which still remained intensely heated, the water could not lie upon it, for it was constantly being evaporated into the atmosphere; but when the cooling became more decided, and consolidation had fairly been established, then water was able to settle on the surface of the heated granite. But as yet it could not settle quietly like the present sea: for by reason of strong radiating heat, all the sea was supposed to be kept in a boiling state, playing upon the granite hills that rose above its surface. The detritus thus worn from the granite by the waves of this primitive sea was spread over its bottom; and because the sea was boiling, the sediment did not settle down in the form of regular layers, but became twisted and contorted in the manner common in gneiss. All gneiss, therefore, was conceived to be the original primitive stratified rock of the world.