

from a perusal of some one or two books, lofty, and even haughty in assertion, but ignorant, to a degree almost incredible, of the very grounds on which the inquiry must proceed, so as to have any reasonable prospect of success. Indeed, Geology, as a *science deduced by the severest logic* from phenomena which, when once fairly ascertained, a man can no more doubt of, (I think I speak not too strongly,) than he can doubt that it is day when he sees the sun, can scarcely be said to have come into existence till within the last thirty or forty years; for it is within such a period that Dr. William Smith's discovery of *characteristic* fossils to each stratum and series of strata, laid a foundation, on which many most cautiously *practical* and *reasoning* geologists have built, and from which, by general accord, the epithet has been applied to him, *the father of Geology*. Yet, at this hour, many excellent persons are reposing upon the belief that one theory is about as good as another, that the primary doctrines which prevail among geologists are nothing but ideal hypotheses, not at all advanced beyond plausible conjectures, mostly at variance with each other, and that, as fast as one theory is set up, it is found to be wrong by some succeeding inquirer; so that, upon the whole, we may rest satisfied that the right theory has not yet been discovered, and that the phenomena are not yet justly understood, nor their real bearings discerned. Of such persons there can be no hope, unless they will take pains in more ways than one, and to a degree which they have not yet dreamed of. It is no wonder that Geology has risen so high within but the last fifteen years, and has attracted to it the most gifted minds in this and other countries: for it is based upon the evidence of sense, in the laborious and protracted examination of mines, mountain-regions, and less dangerous places without number; and it demands, in order to its successful cultivation, an acquaintance with at least the principles of chemistry, electricity, mineralogy, zoology, conchology, comparative anatomy, and (as the papers of Mr. Hopkins and Sir J. F. Herschel have recently shown) of the sublimest mathematics. Thus Geology maintains relations with the whole sphere of natural knowledge; and, above all, it bears a most important reference to THEOLOGY and BIBLICAL studies, that we may know truth, and maintain it against both well-meaning believers and ill-meaning unbelievers, and may magnify "the wondrous works of Him that is PERFECT in knowledge."

I had no design of launching out thus: let me return to the occasion first mentioned. But I must put down thoughts as they arise, not having time to arrange them very particularly.

The question is, How can we admit the existence of animal pain and death, before "sin entered into the world, and death by sin?"