

minations of the same kind of rock, which amount to the thickness of one hundred feet, and two hundred, and still more. One of the laminated formations just mentioned may be said to furnish a chronometer for itself. It consists of sixty feet of siliceous and calcareous deposits, each as thin as pasteboard, and bearing upon their separating surfaces the stems and seed-vessels of small water-plants in infinite numbers; and countless multitudes of minute shells, resembling some species of our common snail-shells. These layers have been formed with evident regularity, and to each of them we may reasonably assign the term of one season, that is a year. Now thirty of such layers frequently do not exceed one inch in thickness. Let us average them at twenty-five. The thickness of the stratum is at least sixty feet; and thus we gain, for the whole of this formation alone, eighteen thousand years.

Further: many of these hills in the form of sugar-loaves consist of, or are coated with, pumice-stone and other loose and light substances, which every person knows to be volcanic products. It is self-evident that these could not have withstood the action of a flood: they must have been broken down and washed away with the first rush of water. Either, then, the eruptions which produced them, took place since the deluge; or that deluge did not reach to this part of the earth. Against the former side of this alternative the argument from analogy is very strong. All that we know of the history of volcanoes impresses us with the vast *improbability*, that such an intensity and extent of volcanic action as belonged to the later series only of these eruptions, could begin, run their course, and come to an end by settling in perfect quiescence, within the period from the deluge to our first historical notices of this district, which is about 2300 years. Supposing the eruptions in question to have com-