

what we see, we can approximate to that which we know not how to measure. He who can measure and number the strata from the first to the last, is prepared to solve this question as it relates to the intervals of repose; but of those only: not to those of the revolutions. Let him ascertain the time required to produce a stratum of a given depth; let him seek it in the increase of colonies of shell-fishes, in deposits of peat, and in the earthy deposits of seas and lakes: and he has found a multiplier, not to disclose" [*i. e.* entirely and precisely] "the truth, but to aid his imagination.—*Who indeed can sum this series?*—The data are not in our power; yet we can aid conjectures.

"The great tract of peat, near Stirling, has demanded two thousand years;* for its registry is preserved by the Roman works below it. It is but a single bed of coal:—shall we multiply it by 100?—We shall not exceed,—far from it,—did we allow 200,000 years for the production of the coal-series of Newcastle, with all its rocky strata.† A Scottish lake does not shoal" [*i. e.* deposit mud or marl to remain at the bottom] "at the rate of half a foot in a century; and that country presents a vertical depth of far more than 3000 feet, in the single series of the oldest sandstone. No sound geologist will accuse a computer of exceeding, if he allows 600,000 years for the production of *this series alone*.—And yet, what are the coal deposits, and what the oldest sandstone, compared to the entire mass of the strata?—

"If these views of the powers and the results of geological investigation are alarming to feeble minds, they tend to exalt that science in the estimation of those who neither fear to seek TRUTH, nor dread it when found."‡

I do not take upon me to affirm that these numbers are incontrovertibly correct; but let it not be forgotten that they proceed from one of the most experienced and indefatigable of studious observers and practical labourers in this field, besides that he was an avowed and warm friend of revelation. If my advice should have the effect of inducing any of my young friends to read his Description of the Highlands and Western Isles of Scotland, in four volumes; his Geological Classification of Rocks, (though the classification, in the

* He puts a round number. It is 1760 years since the Romans invaded Scotland. But the difference is inconsiderable in this argument.

† The reader will observe that, the author is speaking of the Newcastle coal strata alone; not including the subsequent formations, up to the present condition of the earth.

‡ Macculloch's System of Geology; vol. I. pp. 506, 507.