

that the great corn fields, and the greatest population of the world, are placed on strata of the secondary and tertiary formations; or on their detritus, composing still more compound, and consequently more fertile diluvial, and alluvial deposits.\*

Another advantage in the disposition of stratified rocks consists in the fact that strata of limestone, sand, and sandstone which readily absorb water, alternate with beds of clay, or marl, which are impermeable to this most important fluid. All permeable strata receive rain-water at their surface, whence it descends until it is arrested by an impermeable subjacent bed of clay, causing it to accumulate throughout the lower region of each porous stratum, and to form extensive reservoirs, the overflowings of which on the sides of valleys constitute the ordinary supply of springs and rivers. These reservoirs are not only occasional crevices and caverns, but the entire space of all the small interstices

\* It is no small proof of design in the arrangement of the materials that compose the surface of our earth, that whereas the primitive and granitic rocks are least calculated to afford a fertile soil, they are for the most part made to constitute the mountain districts of the world, which, from their elevation and irregularities, would otherwise be but ill adapted for human habitation; while the lower and more temperate regions are usually composed of derivative, or secondary strata, in which the compound nature of their ingredients qualifies them to be of the greatest utility to mankind, by their subserviency to the purposes of luxuriant vegetation.—Buckland's Inaugural Lecture, Oxford, 1820, p. 17.