

Beautiful Arrangement of Loose Materials.

Nothing in geology strikes the observer, with more interest, than the beautiful arrangement, in strata, of the beds of sand, gravel, clay, loam and pebbles, which may be observed in every country.* A section of a bank of any of these deposits—or better still, an avulsion or fall, which leaves the stratification exposed, without being obscured by the rubbish, produced by digging, or by the sliding of loose sand—never fails to exhibit the effects of sedimentary deposit; sometimes horizontal—sometimes inclined at various angles, great or small—sometimes undulatory, and recording, in a language that cannot be misunderstood, the effects of subsiding water. The beds are not always in the order of the magnitude of the parts. Sometimes coarser gravel, or even pebbles, will form a layer, above fine sand, and then perhaps the order will be reversed, indicating that there were currents; and these, relenting and increasing, alternately, as they were impelled probably by tides or storms, so that coarser or finer materials were transported and deposited, as the waters were more or less agitated; for currents must have existed to the last. Could these sedimentary deposits be now all removed, we should see the naked, scarred and devastated skeleton of the planet, exhibiting the most decisive proof that it had been swept by violence, of which we find evident marks in the scratches and furrows, found in the fixed rocks, that are covered by diluvium.

If a section of the deepest diluvium could be made quite down to the solid rock, there can be little doubt, that, on the whole the magnitude of the parts would correspond with the depth, and the larger fragments of these materials would often be found at the bottom. This does not render it improbable, that boulder stones should be occasionally deposited on the surface, especially when they are found on the firmer materials, or on rocky ledges.

Contrast between Diluvial, and Tranquil Aqueous Agency.

The agency of water, whether fresh or salt, in sustaining, depositing and burying organized bodies, (except the effects of occasional convulsions) was, evidently, tranquil and long continued; giving time for many generations of the same or of different races; and for all the alternations and successions of different strata with different organized bodies.

* For our present purpose it is immaterial whether these depositions be referred to tertiary deposits, or to those that are strictly diluvial.