

more extended course of mechanical agencies, produced by long agitated waters.

We must charge to moving waters the undulating appearance of stratified sand and gravel, often observed in many places, and very conspicuously in the plain of New Haven, and in other regions of Connecticut and New England; exhibiting frequently, a delicacy of flexion, in the layers of gravel and sand, which makes them appear as if they had, but a moment before, received their impulse and position from undulating water, and as if they had copied the very eddies and gyrations of the wave.*

Boulder stones, consisting of fragments of primitive rocks, probably from the regions north of the great lakes, are found abundantly on the secondary regions of Ohio, New York and other states; the fragments of the primitive Alps, on the Jura chain, (the lake of Geneva intervening;) the ruins of the Scandinavian mountains on the secondary and diluvial plains of Prussia and Northern Germany, (the Baltic being between,) and the fragments of the northern counties of England, cover the southern and middle regions.

In many cases, boulders and pebbles can be traced to their native beds, and frequently they are strangers to the regions where they are found.

Deserts of sand, covering tracts more or less extensive, such as those in South Africa, and in the Zahara, stretching in a vast belt, from the Atlantic ocean to the desert of Lybia; the sandy plains of Arabia, Germany, and Russia; the great desert at the foot of the Rocky mountains, and all similar deposits, in situations where no existing causes could leave them, are, with great propriety, referred to diluvial agency.

Diluvial torrents—lakes—valleys.

That diluvial torrents had sufficient power to roll even boulder stones and disjointed columns† to great distances, or to precipitate them into the valleys, is sufficiently evident, from what we know of the energy of torrents in our own time.

Beds of sand, gravel, clay, loam, pebbles, and boulders, are found, as already stated, to compose the loose materials of every country,

* These strata would probably now be arranged with the tertiary.

† Such as the columns of trap, sometimes of enormous size, which are found scattered, up and down, through the great Connecticut valley, often at a great distance from their parent ridges. The most remarkable case in this range, is ten miles west of Hartford, on the Albany turnpike.—See *Tour to Quebec*.