

traneous contents of innumerable organized beings, and the elevation of the whole, sometimes hundreds or thousands of feet above the ocean level; all these facts leave not a doubt that the fragmentary rocks, required much time for their formation, consolidation and elevation, and could never have been the work of a short period, or of a transient deluge.

### *Diluvial Deposits.*

As regards the wreck and ruin, with which the surface of our planet is every where covered; their extraordinary position, and, to some extent, their production, are justly and generally attributed to diluvial agency; to mighty floods and rushing torrents of water.

The effects of a deluge are not forming, but destroying; they are chiefly mechanical, and very little if at all chemical. There is not the least reason to believe, that any solid rock was produced by the general deluge, nor that any firmly imbedded and petrified organized remains belong to such a catastrophe; to the action of waters, agitated by a mighty moving force; turbid in the extreme, and filled with moving rocks, stones, gravel, and coarse and fine sediment—and with extirpated and floating vegetables, and drowned animals.

Diluvium is found every where. The almost universal deposits of rolled pebbles, and bowlders of rock, not only on the margin of the oceans, seas, lakes, and rivers; but their existence, often in enormous quantities, in situations quite removed from large waters; inland,—imbedded in high banks, or scattered, occasionally, in profusion, on the face of almost every region, and sometimes on the tops and declivities of mountains, as well as in the valleys between them; their entire difference, in many cases, from the rocks in the country where they lie—rounded masses, and pebbles of primitive rocks, being deposited in secondary and tertiary regions, and vice versa; these, and a multitude of similar facts, are among the most interesting of geological occurrences. Curvilinear stones may, possibly, in given instances, be formed, by decomposition of the angular portions—by various chemical agencies, aiding those of a mechanical nature; but pebbles, present unquestionable evidence of having been brought to their rounded form by friction, and they can scarcely be confounded with those produced in any other way.

The attrition of the common waters of the earth, and even that exerted during the short period, of the prevalence of the deluge described in Genesis, would do very little towards producing so mighty a result; and we must assign this operation to an earlier and much