

the universal deluge, namely, that which maintains that it is proved by an appeal to the phenomena of the mineral kingdom; the other, which affirms that that great event has left no traces of its existence on the surface or in the interior of the earth. M. Cuvier's *Essay*, and Professor Buckland's *Reliquiæ*, are the best authorities for the first opinion; while numerous writers have advocated the second.

NOTE, p. 244.

ON THE ACTION OF RUNNING WATERS.

A very great degree of power has been attributed to the waters which move at the surface of the earth, or in its interior. Many geologists have advanced the opinion, that they have scooped out the channels and even the valleys in which they flow, and formed the cliffs whose feet they wash; and many philosophers, naturalists and even geologists, still support this opinion, not only in some of its applications, but even in its whole extent.

In order to appreciate it, it is sufficient to observe with care the different modes of action of water set in motion by different causes, and the changes which it has operated upon the rocks and deposits upon which it has acted, from the most remote times to which history may reach.

We must, in the first place, successively examine the different sorts of action of the principal masses of water which are in motion at the surface of the earth, that is to say, the action of torrents, of rivers, of currents of the sea, or of great lakes, and that of waves.

We shall afterwards see what consequences are to be deduced from these observations.