

EUROPEAN DELUGES.

THE Tertiary formations, in many parts of Europe, of more or less extent, are covered by an accumulation of heterogeneous deposits, filling up the valleys, and composed of very various materials, consisting mostly of fragments of the neighbouring rocks. The erosions which we remark at the bottoms of the hills, and which have greatly enlarged already existing valleys ; the mounds of gravel accumulated at one point, and which is formed of rolled materials, that is to say, of fragments of rocks worn smooth and round by continual friction during a long period, in which they have been transported from one point to another—all these signs indicate that these denudations of the soil, these displacements and transport of very heavy bodies to great distances, are due to the violent and sudden action of large currents of water. An immense wave has been thrown suddenly on the surface of the earth, making great ravages in its passage, furrowing the earth and driving before it débris of all sorts in its disorderly course. Geologists give the name of *diluvium* to a formation thus removed and scattered, which, from its heterogeneous nature, brings under our eyes, as it were, the rapid passage of an impetuous torrent—a phenomenon which is commonly designated as a *deluge*.

To what cause are we to attribute these sudden and apparently temporary invasions of the earth's surface by rapid currents of water ? In all probability to the upheaval of some vast extent of dry land, to the formation of some mountain or mountain-range in the neighbourhood of the sea, or even in the bed of the sea itself. The land suddenly elevated by an upward movement of the terrestrial crust, or by the formation of ridges and furrows at the surface, has, by its reaction, violently agitated the waters, that is to say, the more mobile portion of the globe. By this new impulse the waters have been thrown with great violence over the earth, inundating the plains and valleys, and for the moment covering the soil with their furious waves, mingled with the earth, sand, and mud, of which the devastated districts have been