CHAP. VI.

ficial deposits, it is requisite to classify them, not according to a scale of time, which is seldom applicable, but in relation to the predominant agency concerned in their production. Thus we shall have the several principal groups further subdivided as under: —

| 1. Detrital deposits. | a. Erratic block group. b. Ossiferous gravel, pebbly clay, sand, &c. c. Ossiferous gauge and brossie |
|--|--|
| 2. Marine deposits. | $\int a$. Raised from the sea, or, b. Yet in progress. |
| 3. Fluviatile deposits. | $\begin{cases} a. \text{ Terraces on the valley side.} \\ b. \text{ Deposits in the valley.} \end{cases}$ |
| 4. Lacustrine deposits. | $\int a$. Completed in former times. b. Yet in progress. |
| " Detrital Deposits." — " Drift." — " Diluvium." — | |

"Boulder Formation."

Since the date of the 'reliquiæ diluvianæ' and 'ossemens fossiles,' many geologists have been accustomed to refer to a particular era and a violent agency the destruction of many land animals which lived with elephants and mastodons on the surface of Europe: the era was supposed to be the termination of a long post-tertiary period in which these animals lived; - the agency something of the nature of a cataclysm, and very extensive, if not universal. Their opinions were founded principally on the superficiality of situation, confused aggregation, and similarity of organic contents, in the gravel, sands, and clays which constituted the deposits, and in many instances appeared to have been moved enormous distances across valleys and seas or over elevated ranges of ground. These deposits were supposed to have happened on the dried and elevated land, because of the occasional abundance of bones of land animals in them; yet they appeared to be due to the action of large bodies of water: and the notion commonly entertained was, that the sea had been, by some violence of nature, thrown over the land, so as to destroy, at one definite epoch, over large tracts of the globe,

265