

alluvial soil, in caves, and in the beds of lakes and seas. This exposition is of the most instructive character, as a means of obtaining right conclusions concerning the causes of geological phenomena. Indeed, in many cases, the similarity of past effects with operations now going on, is so complete, that they may be considered as identical; and the discussion of such cases belongs, at the same time, to Geological Dynamics and to Physical Geology; just as the problem of the fall of meteorolites may be considered as belonging alike to mechanics and to physical astronomy. The growth of modern peat-mosses, for example, fully explains the formation of the most ancient: objects are buried in the same manner in the ejections of active and of extinct volcanoes; within the limits of history, many estuaries have been filled up; and in the deposits which have occupied these places, are strata containing shells,<sup>17</sup> as in the older formations.

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<sup>17</sup> Lyell, B. III. c. xvii. p. 286. See also his Address to the Geological Society in 1837, for an account of the Researches of Mr. Stokes and of Professor Göppert, on the lapidification of vegetables.