and it would coincide very closely with that part of the post-pliocene era in which Man coexisted with the mammoth, and when, according to Mr. Trimmer's hypothesis previously indicated by Mr. Godwin-Austen, the Thames was a tributary of the Rhine.*

These geographical speculations were indulged in ten years after Edward Forbes had published his bold generalisations on the geological changes which accompanied the successive establishment of the Scandinavian, Germanic, and other living floras and faunas in the British Islands, and, like the theories of his predecessor, were the results of much reflection on a vast body of geological facts. It is by repeated efforts of this kind, made by geologists who are prepared for the partial failure of some of their first attempts, that we shall ultimately arrive at a knowledge of the long series of geographical revolutions which have followed each other since the beginning of the post-pliocene period.

The map, fig. 39, p. 276, will give some idea of the great extent of land which would be submerged, were we to infer, as many geologists have done, from the joint evidence of marine shells, erratics, glacial striæ and stratified drift at great heights, that Scotland was, during part of the glacial period, 2,000 feet below its present level, and other parts of the British Isles, 1,300 feet. A subsidence to this amount can be demonstrated in the case of North Wales by marine shells (see above, p. 267). In the lake district of Cumberland and Yorkshire, and in Ireland, we must depend on proofs derived from glacial striæ and the transportation of erratics for so much of the supposed submergence as exceeds 600 feet. As to central England, or the country north of the Thames and Bristol Channel, marine shells of the glacial period sometimes reach as high as 600 and 700 feet, and erratics still higher, as we have seen above (p. 270). But

* Joshua Trimmer, Quarterly Geological Journal, vol. ix. plate xiii. 1853 ; and Godwin-Austen, ibid. map, plate vii. vol. vii. p. 134, 1851.