during the Upper Cretaceous period Wales sunk almost entirely beneath the sea.

I omit any detailed mention of the phenomena connected with the depositions of the freshwater and marine Eocene strata because at present this subject is not essential to my argument.

The Miocene period of old Europe was essentially a continental one. Important disturbances of strata brought it to a close, at all events physically, in what is now the centre of Europe; and the formations partly formed in the great fresh-water lakes that lay at the bases of the older Alps were, after consolidation, heaved up to form new mountains along the flanks of the ancient range; and all the length of the Jura, and far beyond to the north-east, was elevated by disturbance of the Jurassic, Cretaceous, and Miocene strata. The broad valley of the lowlands of Switzerland began then to be established, long afterwards to be overspread by the huge glaciers that abutted on the Jura, deepened the valleys, and scooped out all the rock-bound lakes.

One marked effect of this extremely important elevation, after Miocene times, of so much of the centre of Europe was, that the flat, or nearly flat-lying Secondary formations that now form great part of France and England (then united), were so far affected by the renewed upheaval of the Alps and Jura that they were to a great extent tilted, at low angles, to the *north-west*. That circumstance gave *the initial north-westerly direction to the flow of so many of the existing rivers of France*, and led them to excavate the valleys in which they run, including the upper tributaries of the Loire and Seine, the Seine itself, the Marne, the Oise, and many more of smaller size; and