

The wide extent of Tertiaries in Europe and the north of Africa sufficiently proves that much dry land has been gained in tertiary and post-tertiary times, and the great mountain-masses of Southern Europe give evidence of great local disturbance. But although the Alps and the Pyrenees are of sufficient magnitude to make a deep impression upon the senses of men, taking them together, these mountains would if spread out only cover the surface of the North Atlantic to the depth of six feet, and it would take at least two thousand times as much to fill up its bed. It would seem by no means improbable, that while the edges of what we call the great Atlantic depression have been gradually raised, the central portion may have acquired an equivalent increase in depth; but it seems most unlikely that while the main features of the contour of the northern hemisphere remain the same, an area of so vast extent should have been depressed by more than the height of Mont Blanc. On these physical grounds alone we are inclined to believe that a considerable portion of this area has been continually under water, and that consequently a deposit has been forming there uninterruptedly, from the period of the chalk to our own.

I will now turn to the palæontological bearings of the question. Long ago Mr. Lonsdale showed that the white chalk was mainly made up of the *débris* of foraminifera, and Dr. Mantell estimates the number of these shells at more than a million to a cubic inch. In 1848 Dr. Mantell, speaking of the chalk, says that it “forms such an assemblage of sedimentary deposits as would probably be presented to observation if a mass of the bed of the Atlantic, 2,000 feet