

is concerned. Prof. Hull of the Geological Survey of Ireland has had the boldness to reduce the fluctuations of land and water, as evidenced in the British Islands, to the form of a series of maps intended to show the physical geography of each successive period. The attempt is probably premature, and has been met with much adverse criticism; but there can be no doubt that it has an element of truth. When we attempt to calculate what could have been supplied from the old Eozoic nucleus by decay and aqueous erosion, and when we take into account the greater local thickness of sediments towards the present sea-basins, we can scarcely avoid the conclusion that extensive areas once occupied by high land are now under the sea. But to ascertain the precise areas and position of these perished lands may now be impossible.

In point of fact we are obliged to believe in the contemporaneous existence in all geological periods, except perhaps the very oldest, of three sorts of areas on the surface of the earth: (1) Oceanic areas of deep sea, which must always have occupied the bed of the present ocean, or parts of it; (2) Continental plateaus sometimes existing as low flats, or as higher table-lands, and sometimes submerged; (3) Areas of plication or folding, more especially along the borders of the oceans, forming elevated lands rarely submerged and constantly affording the material of sedimentary accumulations. We shall find, however, that these have changed places in a remarkable manner, though always in such a way that neither the life of the land nor of the waters was wholly extinguished in the process.

Every geologist knows the contention which has been occasioned by the attempts to correlate the earlier Palæozoic deposits of the Atlantic margin of North America with those forming at the same time on the interior plateau, and with those of intervening lines of plication and igneous disturbance. Stratigraphy, lithology and fossils are all more or less at fault in dealing with these questions, and while the general nature