

of the existence, in the northern hemisphere, of a higher temperature than at present, during the iguanodon epoch; on the contrary, the tropical plants and trees of Portland appear still to occupy the area in which they grew, and the nautili and polyparia of the chalk are not inhabitants of northern seas; but I will defer the further consideration of this problem, till other phenomena have been submitted to our examination.

4. MEDIAL SECONDARY FORMATIONS.—In accordance with the order of chronological arrangement (p. 194, Pl. VII.), I proceed to the description of the succeeding groups of the secondary formations, and shall comprise in the present discourse the consideration of, 1st, the *Oolitic*, 2d, the *Liassic*, and 3dly, the *Saliferous*, or *New Red Sandstone Systems*. The entire series consists of alternating beds of clay, limestone, sand, sandstone, marls, and conglomerates, which abound in marine exuviae; the whole having manifestly been deposited in the basin of an ocean. The organic remains comprise a prodigious number of zoophytes, crinoidea, shells, cephalopoda, crustacea, fishes, and marine reptiles. Trees, plants, coal, lignite, and other vegetable remains, also occur, with wings of insects, bones of reptiles, and of two or more genera of terrestrial mammalia. Evidence is thus afforded of the existence of countries clothed with vegetation and tenanted by animals.

5. THE OOLITE, OR JURA LIMESTONE.—Lime-