

old soil, charged with the roots of those plants, the decay of which on the spot formed the thin beds of coal, just in the manner that coal-beds were formed during the Coal-measure epoch, but, in the case of these Oolitic coal-beds, on a much smaller scale.

Above these fresh-water and terrestrial strata, there occur beds of 'grey limestone' and shales. It is often called the Scarborough Limestone, and is full of marine shells, &c., common in the ordinary Inferior Oolite. Finally, on the top of this, there are strata of sandstones and shales, often called the upper series, to distinguish them from the lower sandstones and shales that lie below the grey marine limestone. Like the lower series, they seem to contain no mollusca of any kind, and, indeed, the only fossils that have been found in them are the remains of plants scattered through the rocks, accompanied here and there by streaks of coaly matter. On the whole, such evidence as there is, tends to show that these also are fresh-water or at most estuarine strata.

Overlying these sands, there is a persistent band of impure limestone, generally from 3 to 6 feet thick, which is considered to represent the Cornbrash of more southern areas, where, it will be remembered, it lies directly on strata of the Great Oolite series. It is certain that in its fossils it is intimately related both to the Great and the Inferior Oolite, including the Fuller's Earth. If, therefore, we take the Lower Oolites as a whole, the most philosophical method of regarding them is to consider them as *one*. Owing to minor changes in the physical geography of the sea bottom, and of the neighbouring land, this formation was, during the progress of deposition, locally broken up into a series of subformations, now of limestone, now of clay, now of