

oolite formation. The shells and bones in the oolite limestone, have the yellowish ochrey colour of the stone in which they are imbedded; which may serve, at once, to distinguish them from the lias fossils, that invariably, partake of the colour of the beds in which they occur. English geologists make three divisions of the oolite formation, —the *upper*, the *middle*, and the *lower*: they are separated by thick beds of clay, and some variety may be observed in the fossils of each division, but the general characters are nearly the same. In an elementary treatise, a too minute description would only perplex the student, particularly as some of the beds appear to be of limited extent.

The *lower division of oolite*, comprises; 1st, an imperfect dark brown limestone, much intermixed with sand and the oxide of iron; 2dly, beds of sterile clay and fuller's-earth; and, 3dly, the great oolite, sometimes called the Bath oolite, which is of considerable thickness, and yields freestone for architecture: it is composed of minute globules and broken shells, united by a yellowish earthy calcareous cement. With the lower division of oolites may also be classed, 4thly, the forest marble and Stonesfield slate; the latter is a sandy calcareous stone, dividing into thin strata, accompanied with shale and carbonaceous matter. The beds of forest marble are not numerous, and are chiefly composed of large fragments of shells; small entire turbinated shells abound in some of the strata. It deserves attention, that the univalve shells are most frequent in the thin beds, and the bivalves in the thicker beds, of this stone; 5thly, cornbrash. This is the upper part of the lower division of oolites; it does not compose beds of any considerable thickness, nor does it frequently occur in regular strata of any great extent, but generally in detached masses, cemented by clay: the external part of the stone is brown, but the inner part has often a grey or bluish colour. The cornbrash is so thin a bed, as scarcely to be entitled to a place in the division, but it is remarkable for the abundance of its fossils. The above arrangement of the lower oolites was formed from their occurrence in Somersetshire and the vicinity, where they were first studied, but it by no means represents the general succession of the beds in other countries. In the eastern moorlands of Yorkshire, the oolitic series are well displayed on the coast, and have recently been described by Mr. J. Phillips. Two vast depositions of sandstone, shale, and coal, occur below the cornbrash in the following order, ascending from the lias:—

	Feet.
1. Ferruginous beds above lias, thickness, - -	60
2. Lower sandstone, shale, and coal, - - -	500
3. Impure limestone, supposed to represent the Bath oolite, 60	60
4. Upper sandstone, shale, and coal, - - -	200
5. Cornbrash, - - - - -	5