

which might at first sight be mistaken for *Clypeus sinuatu* with its sinus filled up by the stony matter of its matrix.

Of the *Encrinital family*, the Cornbrash, forest marble, and great oolite present some species of Pentacrinites, and the clay over the great oolite, together with the upper beds of that rock, is distinguished by that beautiful and well known species the Pear Encrinite of Bradford, the Apiocrinites of Mr. Miller's Monograph of this class, in which full details of the anatomical structure of these singular beings, and engravings on the most ample scale are given. We refer for particulars to the table of the geological distribution of the Encrinites accompanying that work.\*

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The class of *Madrepores*, or lamelliferous Polyparia of Lamarck, presents several species in a bed near the top of the great oolite. Sufficient attention has scarcely been given to them to distinguish between the species of this series and the coral rag; it appears, however, on the whole, that a turbinated *Caryophyllia*, a large ramose one approaching *Caryophyllia carduus*, and small clustered ramose one approaching *C. flexuosa* or *cespitosa*, are hardly to be distinguished from those in the coral rag: that the same remark will apply to a variety of *Astrea* approaching *A. favosa*, but that there are some other varieties of *Astrea* distinguished by the nodular form of their mass, and the delicacy of their stars, which seem peculiar to the great oolite; and that a branching species of *oculina* covered with stars laterally disposed, is also peculiar to the great oolite, and some of its immediately superjacent beds.

These remarks, however, are offered only in the conviction of their being very imperfect; and with the intention of leading to further examination of this subject. Figures of some of these may be seen in Smith's plate of the fossils of the oolite. The forest marble contains a few species of *astrea*.

The clay above the great oolite contains a species of *cyclolite* (*madrepora porpites*), a *tubipore*, and a small but beautiful variety of branching *millepore*, with the pores most elegantly arranged in spiral lines round the branches. Lamouroux, in his additions to his republication of Ellis's work on corals, has

\* Among the extraneous fossils imbedded in the white clay, the most interesting are the Encrinites, first noticed by the Rev. Benjamin Richardson at Burfield, near the summit of the hill, on the southern hanging of which Bradford stands. They were next discovered south of the river, on the surface of the rock, in the same bed of white clay, but more than 150 feet lower than Burfield, and a little elevated above the level of the river. Finally, they were traced on the summit of the opposite hill, yet always deposited in their proper bed. (T. 268.)