

## **CLAY over the UPPER OOLITE.**

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As the bottom part only of this Clay contains organized fossils, and most of these being Zoophites, attached to the rock by their roots, and apparently extended up into the Clay by their growth, they need not be considered as the products of a separate Stratum, but rather as the appendages to the top of the upper Oolite rock, which is thus covered with Clay. The organized fossils being all filled with stone, further confirms their relationship to the rock. Lying in Clay they are all loose, and easily collected and cleaned. The stony matter contained in the shells, which are entire, has few or no marks of ova; nor is there much of this general characteristic of the rock in the first four or five feet beneath the Clay. Many of these fossils can only be found in excavations which expose the top of the rock. Corals, tubipora, fig. 4, and fragments of millepora, fig. 5, may be collected from some of the ploughed fields south of Bath, which are on the plane of the upper Oolite rock. The tenacious and adhesive nature of this soil readily distinguishes it from that of the Stratum beneath, and accurately defines the boundary of the stony land.

## **UPPER OOLITE, or Calcareous Freestone.**

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**SOIL.**—*Colour*, yellowish brown.

*Consistence*, loose, crumbly, stony, with a large proportion of small stony fragments; over the Freestone some loose ova; over other parts of the rock some large flat stones, commonly called Stonebrash.

*State of moisture*, absorbent; where sufficiently free from small stones may be kneaded.

**SUBSOIL**, small stone with a little soil, and fragments of the rubble stone which lies over the rock.

**EXCAVATIONS**, always dry.

**STRATUM**, masses of rock in beds, divided by large open vertical joints.

*Colour*. The Freestone part yellowish white; other beds, some gray, and some almost blue in the middle. Freestone, calcareous, soft, oviform; cuts easily with a toothed saw or any edge tool; used in the repair of Westminster Abbey; alternates in the rock with other harder calcareous beds, but little interspersed with ova.

*Disintegration*. See remark on the Portland rock, page 15, applicable to this.

**WATER**, hard, transparent: springs copious and numerous, in roads, ditches, and brooks; white from hasty rains.

This is the thickest of the calcareous rocks which form the great pile of Strata called the Stonebrash Hills. Where it occurs it forms the greatest breadth of their dry surface, and occasions many deep excavations for water. In these perforations, and in numerous deep quarries for the fine soft Freestone, which is imbedded between very thick beds of different sorts of stone, the nature and properties of the whole rock are ascertained. This most valuable part of it varies much even in quarries of the same neighbourhood, south of Bath. The other sorts of stone are rarely used but in rough walls around the fields, and in the stone