

(h) *Agricultural character.* The outer slope of the hills of this formation towards their escarpment being occupied by the calcareous grit, affords a light sandy soil. Their surface and back, where the substratum is the coral rag, presents a loose stone-brash well adapted for turnips, barley, &c.

(i) *Water.* From the rifted and porous character of these strata, it is necessary to penetrate to their junction with the subjacent clay, in order to procure any considerable supply of water. The springs which flow over the superior clay, frequently sink into the rifts of this formation; and, after being for a time engulfed and concealed, are again thrown out by the basins of this subjacent clay; examples of such swallow-holes, as they are commonly called, may be seen at Headington near Oxford.

II. OXFORD CLAY.‡

This is the Clunch Clay of Smith, and forms the separation between the middle and inferior assemblage of oolites, including subordinate beds of limestone called the Kelloway Rock.

(a) *Chemical and external characters.* This formation consists of beds of immense thickness of a tenacious and adhesive clay of a dark blue colour, becoming brown on exposure, and containing argillo-calcareous geodes and septaria. These latter are frequently termed, from an obvious analogy, turtle stones. Some of these geodes are employed at Melbury in Dorsetshire as a coarse marble. The argillaceous strata are frequently mixed with calcareous, and sometimes with bituminous matter, affording in the latter case an inflammable shale;* the section appended in the note will give a general idea of the manner in which these beds occur.† The lower part of

‡ Chiefly by the Rev. W. D. Conybeare.

* The appearances of coal in this bed has given rise to numerous trials, encouraged by ignorance or fraud. Among these was one at the expense of Sir Edward Baynton and the Marquis of Lansdowne, on the south-east of Tetherton. T. 127. Search for coal has been made in various parts of this deposit, as near Elston in Bedfordshire: and an unsuccessful trial was made on the south-east of Tetherton in the parish of Goddington at the expense of Sir Edward Baynton and the Marquis of Lansdowne. (Agr. Sur.) Other trials have been made at Bruham in Somerset, at Pyrton in Wiltshire, and Ensham heath in Oxfordshire. (G. Notes.)

† Near the village of Donnington, which is about six miles on the west of Louth in Lincolnshire, and near the termination of the western escarpment of the chalk range, this formation has been bored into to the depth of upwards of 300 feet without passing through it. It affords the following list of alternating beds of clays, stones, and bituminous slate-clays. (G. T. v. iii. p. 396.)