

cession of beds of sand of various colours, 321 feet in thickness; next to which, and in the middle of the bay, is a very numerous succession of beds, which contain a large proportion of pipe clay of various colours, white, yellow, grey and blackish: these alternate with beautifully coloured sands. The clay is sometimes in beds several feet in thickness, without any admixture, and sometimes in laminæ not a quarter of an inch thick, with sand between them: the whole being about 543 feet in thickness. Near the middle of these latter beds are three beds of a sort of wood coal, the vegetable origin of which is distinctly pointed out by the fruits and branches still to be observed on it. It sometimes splits into irregular layers in the direction of the bed, and the cross fracture is dull and earthy. It burns with difficulty and with very little flame, giving out a sulphureous smell. About 150 feet in the north are five other beds of coal similar to the preceding, each a foot thick. On the north of the whole of these beds of sand, clay and coal, of 543 feet in thickness, are several layers of large water-worn black flint pebbles, imbedded in deep yellow sand; to which succeeds a stratum of blackish clay with much green earth and septaria, 250 feet in thickness, and analogous to the London clay. (G. T. vol ii. p. 184.)

These strata extend quite across the isle in a vertical position, keeping parallel to the chalk, and appearing again at White Cliff bay on the east end; where, however, they are much concealed by grassy slopes. The sands, marles, and clays are of every possible variety and shade of colour, giving to the cliff in Alum bay, which is about 200 feet high, when viewed at a little distance, a very beautiful appearance. The number and variety of these vertical layers is endless: they may be compared to the stripes on the leaves of a tulip, and are almost equally bright. On cutting down pieces of the cliff, it is astonishing to see the brightness of the colours, and the delicacy and thinness of the several layers of white and red sand (some of which do not exceed the eighth of an inch), shale and white sand, yellow clay, and white or red sand, and indeed almost every imaginable combination of these materials. The forms of particular parts of this cliff, when viewed near, and from the beach, are often of the most picturesque and even sublime kind, resembling the weather-worn peaks of Alpine heights. The fact is, that the rain and weather has worn away the softer parts, leaving the more solid, sharp and pointed. (W. p. 160.)

Among other fossil shells, too imperfect for the discovery of their genus, were found cythereæ and turritellæ in masses of dark coloured limestone in the thick stratum of blue clay, a