

ness; some thin ones are described as being a *freestone* (being of a more compact grain than usual): its colour varies from white to a yellowish stone colour: it rarely includes dark coloured beds. Small *entrochi*, numerous *anomia* and other shells and organic remains, occur throughout the whole of this stratum: in some mines, a thin bed of clay had been found in it. The lime yielded by this stratum is preferred to that of the strata above it. A bed of toadstone lies on it, but we propose to notice together the three beds of this substance, and therefore proceed to the

*Second stratum of limestone.* This is about 210 feet in thickness, and consists also of many beds; the superior ones are often of a dark colour, and contain nodules of black chert, shells of the genus *anomia*, madrepores, &c.; some of the beds are quite black. It contains layers of clay, and towards the lower part of it, some dark beds of limestone contain white madrepores. Imbedded masses of toadstone occur in it. On this lies another bed of toadstone, to which succeeds a

*Third stratum of limestone.* This, like the two preceding strata, consists of many beds whose average thickness is about 150 feet: and it is worthy of note that several of them are of magnesian limestone. In some places the upper beds partake so greatly of the nature of chert, as to be unfit for the purposes of the lime-burner; these cherty masses are usually called in Derbyshire, *dunstone*, or bastard limestone. Here and there are masses of white chert or china-stone. Some few beds contain *entrochi*; and towards the lower part are beds of a very black limestone, which, as it takes a very brilliant polish, is termed black marble. It contains thin beds of clay. On this stratum lies the third bed of toadstone, on which reposes the

*Upper limestone.* This, like the preceding, is about 150 feet in thickness. In it, as in the three lower strata, some thin beds of clay are found, and it contains imbedded masses of toadstone, though rarely. The upper beds are of that variety of limestone called swine-stone, and are often dark-coloured or black: near the top are found layers of nodules of black chert, similar in their arrangement to the flint nodules in chalk; in the upper beds also the shells called *anomia*, and others, are common. The middle beds contain vast assemblages of *entrochi*, and are occasionally quarried as marbles; and it is remarkable that in some places, where these middle beds basset out on the surface, masses are ploughed up from beneath the alluvial soil, exhibiting the casts of the inside of *entrochi* in chert; these are commonly called *screw-stones*. Blocks of these were heretofore used in the forming of mill-stones, which were employed instead of the French buhr-stone. This stratum