

diameter, are visible at low water, in chalk, belonging evidently to that with few flints, but whether it be in situ or not, it is difficult to determine. One of them is distinctly oval.

About a mile and a half east of Dover, and near the place at which this stratum rises from the beach, I found the cast of a nautilus in it.

Iron pyrites is by no means uncommon; it usually occurs in globular masses, coated by crystals having the form of the octohedron, which sometimes are attached to a flint: in one instance it was observed filling up the cracks in one. One mass had been formed around a terebratula, of which the shell, filled by pyrites, remained, but in a friable state. This stratum yielded to my search pectinites, terebratulæ, and the palates and vertebræ of fishes. A nearly perfect specimen of one species of the striated shell or inoceramus (G. T. vol. v. pl. 1. fig. 3.), perhaps the only one hitherto discovered, was found by the workmen employed in squaring the chalk: it was nearly filled with flint, and was partially imbedded in it.

Several excursions along the cliff between Dover and Folkstone, both at its base and on its summit, as well as the occasional opportunity of ascending or descending it, enabled me at length satisfactorily to discern the nature of the connexion of the chalk with few flints, with that on which it reposes, namely, a thick stratum without flints, enclosing numerous thin beds of organic remains, lying nearly close together.

A thin bed of soft marle lies between these strata. It may be readily traced along the cliff, as a crevice, for a considerable distance, but is most conveniently viewed while ascending Shakspeare's cliff from the town. Flints are here and there visible a few feet above this bed of marle, but not one was discoverable below it. Between this and a similar bed of marle nine or ten feet beneath it, are to be seen many of those thin beds of organic remains, which are characteristic of the stratum on which the chalk with few flints reposes. Both these beds of marle are also seen in the most elevated part of the low cliff, between Shakspeare's cliff and the town of Dover.

CHALK WITHOUT FLINTS.

I. *Stratum containing numerous thin beds of Organic Remains.*

This stratum, both internally and after exposure, is yellowish and without flints; for not one appears, either in the cliff, or in the numerous masses lying at its base: in hardness, it exceeds the chalk with interspersed flints.

The low cliff immediately contiguous to Dover on the west,