

(i) *Inclination.* Through Buckinghamshire, Oxfordshire, Berkshire, and North Wilts, these beds are nearly horizontal, dipping in an almost inappreciable angle south-south-east. In the denudation of the vale of Nadder, as has been observed, they are elevated sometimes to an angle of 45° ; at Upway and Portland they decline in opposite directions, forming a portion of what may be termed the Weymouth saddle (see p. 192); and in Purbeck they form a part of the system of highly inclined strata constituting that district.

The remarkable contortions of the Purbeck beds have been mentioned in the preceding article: they are accurately represented in the plates of Sir H. Englefield's Isle of Wight.

Although these formations do not, when examined in any particular spot, exhibit any want of conformity with one another, it is evident that they cannot be considered as strictly conformable throughout; since in Buckinghamshire we find the Kimmeridge clay absent, and the Portland beds reposing on the Oxford clay.‡ The superior strata of the sands and chalk exhibit a like want of conformity with regard to these, since they overlie their baset edges completely in the north-eastern counties, and in several instances in the south-western.

Section III.

Middle division of Oolites.

Synonymes.—*The Superior Oolite, Oxford Oolite, or Pisolite of other authors, is subordinate to this formation; as are also the Calcareous grit and sandy strata which form the lowest beds.*

I. CORAL RAG.*

(a) *Chemical and external characters.*† This formation comprises a series of beds occupying a thickness of from one to two hundred feet; in the upper part of which, containing the oolite, the calcareous matter; and in the lower, the siliceous prevails. The coral rag (properly so called), which as character-

‡ Mr. Smith has inaccurately represented the Kimmeridge clay (his *Oak-tree clay*) as here intervening, since the *gryphæa dilatata* and other characteristic shells of the Oxford clay may be traced up to the very junction with the Aylesbury lime at Waddesdon hill, Bucks.

* By the Rev. W. D. Conybeare.

† We have confined ourselves to the characters of this formation in the Midland and South-western counties, entertaining doubts as to the propriety of referring to it the Yorkshire district so allotted in Mr. Greenough's Map.