

persed atolls, according to their nearness to or distance from the coast of the time; and (2) the detritic limestones, consisting either of an aggregation of crinoid stems or of coral-débris, and often stretching in extensive sheets like sandstone or shale.¹⁷⁷ The limestones of both types assume a compact homogeneous character, with black, gray, white, or mottled colors, and are occasionally largely quarried as marble. Local developments of oolitic structure occur among them. They also assume in some places a yellowish, dull, finely granular aspect and more or less dolomitic composition. They occur in beds, sometimes as in central England, Ireland, and Belgium, piled over each other for a depth of hundreds of feet, and in Utah for several thousand feet, with little or no intercalation of other material than limestone. The limestones frequently contain irregular nodules of a white, gray, or black flinty chert (phtanite), which, presenting a close resemblance to the flints of the chalk, occur in certain beds or layers of rock, sometimes in numbers sufficient to form of themselves tolerably distinct strata.¹⁷⁸ These concretions are associated with the organisms of the rock, some of which, completely silicified and beautifully preserved, may be found imbedded in the chert. Dolomite, usually of a dull yellowish color, granular texture, and rough feel, occurs both in beds regularly interstratified with the limestones and also in broad wall-like masses running through the limestones. In the latter cases, it is evident that the limestone has been changed into dolomite along lines of joint; in the former, the dolomite may be due to contemporaneous alteration of the original calcareous deposit

¹⁷⁷ Bull. Acad. Roy. Belg. (3) v. 1883, No. 2.

¹⁷⁸ Renard, op. cit. (2) xlv. p. 9.