

and consolidated above low-tide level. These formations illustrate one common mode of origin of *oölitic* limestones. They also afford numerous examples of the formation of coarse and fine conglomerates consisting of beach pebbles—these pebbles being either worn corals, or shells, or sometimes of other kinds, if other rocks are at hand.

The uniform slope of the beach sand-rock, and oölite, and the mixed stratification of the drift sand-rock, are identical respectively with those of beach and drift-sand deposits in other regions.

II. BEDS OF LIMESTONE WITH LIVING MARGINS.

The coral reef as it lies at the water's level is in fact a bed of limestone with living margins; and the living part furnishes material for its horizontal extension outward, and also, if a slow subsidence is in progress, for its increase upward. It illustrates an ordinary mode of formation of coral, or of shell, limestone, whatever the age.

III. MAKING OF THICK STRATA OF LIMESTONE.

The coral reef-rock has been shown to have in some cases a thickness of at least 2,000 feet (page 126). The reefs are, therefore, examples of great limestone strata, nearly as remarkable in this respect as the largest of ancient times.

IV. SUBSIDENCE ESSENTIAL TO THE MAKING OF THICK STRATA.

The coral island reef-rock has been shown to depend for its thickness on a slowly progressing subsidence (p. 221). This is the only method by which any thick stratum of limestone could be made out of a single set of species, for all such species have a narrow range in depth; and the only way, from any succession of species, if those species are alike in range of depth.

In the case of existing coral reefs, there is yet no evidence that the species of the lower beds differ from those of the top.