

is copied with fidelity, and easy slopes on which sea forces may spend themselves are universally substituted for the mere dead weight of upright walls, against which the momentum of waves may be absorbed by shattering blows.

The phenomenon of vast accumulations of shingle heaped to abnormal heights above high water by periodic gales requires some comment. In this connection a study of the geological antecedents of the coast-line under consideration is important. On the east coast what are termed "swashways" occur opposite lines of cliff. These consist of ridges of shingle and sand running parallel to the coast-line, distant some few hundred yards from it, with a waterway between such shingle bank and the shore. The cause of this, which is a fleeting effect, is the beating of ground-swell broadside on the coast-line. When such ground-swell ceases a swashway disappears. By direct impingement the breakers drag down the shingle and form a temporary ridge seawards. Formations such as the Chesil Bank fall under a completely different category. They are the result of geological upheaval and subsidence, being the remnants of ancient raised beaches. Starting from Start Point, and skirting the present coast-line, there is strong evidence of the existence of an ancient raised beach which once fringed the coast-line almost continuously.¹ Opposite the hamlet of Hallsands a remnant of this raised beach formerly existed until the unfortunate official permission for artificial denudation was given, as will be detailed later. On the west side of the River Dart a second raised beach exists, and remnants of others in the vicinity of Bury Head, Brixham. At Hope's Nose, Torquay, another raised beach exists, and at the point of Portland Bill a raised beach is again in evidence.

The conformation of the Chesil Bank is in many respects unique.² It is a vast breakwater of stones assembled from many sources. In the Dorchester Museum there is a collection

¹ "On the Origin of the Chesil Bank" (Joseph Prestwich), *Proc. Inst. C. E.*, Vol. XL, pp. 61-114.

² "Description of the Chesil Bank, with Remarks upon its Origin, the Causes which have contributed to its Formation and to the Movement of Shingle generally" (Sir John Coode), *Proc. Inst. C. E.*, Vol. XII, pp. 520-57.