

the waters retire, they leave uncovered vast tracts never seen before, comparatively barren in sea-weed, but rich in stony nulliporite incrustations, minute corallines, and fleshy sponges. Ages elapse, and civilisation grows. The added belt of level land is occupied to its utmost extent by man : he lays it out into gardens and fields, and builds himself a dwelling upon it : but no sooner has he rendered it of some value, than the sea commences with him a course of tedious litigation for the recovery of its property ; and bit by bit has it been wrested out of his hands. Almost all those tracts on our coasts which have been suffering during the last few centuries from the encroachment of the waves, and which have to be protected against their fury wherever land is valuable, as in this neighbourhood, by lines of bulwarks, belong to the flat marginal strip won from them by the last change of level.

Our next great incident in the geologic history of Scotland dates, it would seem, beyond the human period. In passing along the beach between Musselburgh and Portobello, or again between Portobello and Leith, or yet again between Leith and Newhaven, one sees an exceedingly stiff, dark-coloured clay, charged with rounded pebbles and boulders, and which, where washed by the waves, presents a frontage nearly as steep as that of the rock itself. The deposit by which it is represented is known technically to the agriculturist as *Till*, and to the geologist as the *Boulder-Clay*. Though not continuous, it is of very general occurrence, in the Lowlands of Scotland, and presents, though it varies in colour and composition, according to the nature of the rocks which it overlies, certain unique appearances, which seem to connect its origin in the several localities with one set of causes, and which no other deposit presents. Like the raised beaches, it has contributed its distinctive quota to the variously featured scenery of our country. The Scottish word *scaur*, in the restricted signifi-