

clays, and limestones, the waste of the softer strata has been in many places calculated at about two yards a year. Where the strata are harder, as on the west coast in Devon, Cornwall, and Wales, the waste is often so slow as to be generally ignored by ordinary observers. But the form of the coast proves it. Hard rocks resisting waste because of their hardness are apt to form headlands, while softer or more friable strata, wasting more rapidly, often occupy the recesses of coves and bays. The removal of the fallen detritus by the restless waters makes room for further slips of débris from above, and thus it happens that all sea-cliffs are in a state of constant recession, comparatively quick when made of clay or other soft strata, and when the rocks are harder, perhaps very slowly, but still sensibly to the observant eye, so that in time, be they ever so hard, they get worn more and more backwards. The material derived from this waste when sea-cliffs are truly rocky, generally forms, in the first instance, shingle at their bases, as, for example, with the pebbles of flint formed by waste of the chalk which contains them. These, being attacked by the waves, are rolled incessantly backwards and forwards, as everyone who has walked much by the sea must have noticed; for, when a large wave breaks upon the shore, it carries the shingle forward, rolling the fragments one over the other, and in the same way they recede with the retreating wave with a rattling sound. As in the running water of torrents, so this long-continued marine action has the effect of grinding angular fragments into rounded pebbles; and, in the course of time, large quantities of loose gravel have thus been formed. Such material when consolidated becomes a conglomerate.

If, also, we examine with a lens the sand of the sea-