

waste, and replacing it by the smooth, polished, and striated surface so characteristic of glacier-friction. A large amount of detritus was also produced, which was spread over the low grounds and slopes of the hills as boulder-clay. Huge blocks of rock were likewise borne far away from their native mountains, and dropped upon the hill-tops and plains of the lowlands.

Since the ice melted away, the sea, rains, streams, springs, and frosts have renewed their old work of demolition. The smoothed and flowing outline which the ice left behind it is now undergoing a slow destruction, and the rocks are quietly resuming the rugged outlines which they had of old. The sea-coasts are receding before the onward march of the waves. Former ravines have been deepened and widened by the rivers, and new ones have been formed. Man, too, has come upon the scene, and has set his mark upon well-nigh every rood of the land from mountain-top to seashore. He has helped to demolish the ancient forests; he has drained innumerable fens and mosses, and turned them into fertile fields; he has extirpated the wild beasts of the old woods, thus changing both the aspect of the country and the distribution of its plants and animals. He has engraved the land with thousands of roads and railways, strewn it with villages and hamlets, and dotted it with cities and towns. And thus more has been done by him, in altering the aspect of the island, than has been achieved, during the brief period of his sojourn, by all the geological agencies put together.

Such in outline is the explanation which I have proposed for the origin of the present scenery of Scotland. It is based upon observation of the geological structure of the ground, combined with an examination of the amount and results of denudation. It puts aside, as mere figments, the