

by denudation. The reason of this is, that *during frequent oscillations of land, relatively to the level of the sea, the higher ground was much more often above water than the lower part*, and therefore exposed to waste and destruction. To understand this thoroughly, let us suppose that the whole of the formations now forming this area were, in an ancient epoch, underneath the sea, and then let parts of it be raised, more or less above that level, well into the air. Part of the area now known as the Lammermuir Hills, *then covered by Old Red Sandstone and Coal-measures*, rose above the water, and was immediately subjected to the wear and tear of breakers on the shore, and of rain, rivers, frost, and other atmospheric influences; while, on the other hand, that portion that lay deep in the synclinal curve was beneath the level of the sea, and thus escaped denudation, because no wasting action takes place in such situations.

By geological *accidents* such as these, the greater features of Scottish scenery have been produced. The Highlands are mountainous because they are composed of rocks much disturbed, metamorphosed, and mostly crystalline, and intermingled with great and small bosses of hard granite. All of these rocks having been often and long above water, have been extremely denuded: such denudations having commenced so long ago, that they date from before the time of that extremely venerable formation, the Old Red Sandstone, probably indeed ever since what, for want of better words, we term the close of the Lower Silurian epoch, and the waste has been going on, more or less, down to the present day.

Being formed for the most part of materials of great but unequal hardness, and associated with masses