

probably a prolonged process, continued during many geological periods, and no doubt interrupted by many upheavals and subsidences. That it was mainly carried on by sub-ærial waste and completed by the waves of the sea, may be inferred from the reasons for a similar conclusion already assigned in the case of the Highlands.

In what geological period did this widespread denudation begin? Within certain limits it is possible to answer this question. As the rocks are of Lower Silurian age, their denudation must be later than Lower Silurian times. They are overlain in the south-western parts of the uplands with the Lower Old Red conglomerates, sandstones, and volcanic rocks, which are likewise thrown down against their flanks by powerful faults. If we try to restore the relative positions of the various formations before the dislocations took place, we see that the younger deposits must have extended far over the denuded edges of the older, and must have buried them to a depth of hundreds, or even thousands of feet. Again, in the north-eastern part of the uplands, the tracts of Upper Old Red conglomerate and sandstone are only fragments of a once continuous sheet that spread far and wide over that area of the Silurian region. Like those of the lower division of the same system in Ayrshire and Lanarkshire, they are made of the waste of the underlying rocks, and by their contents and position they show that before they were laid down, the contortion and metamorphism of the Silurian rocks had been completed. We are thus taught that the great earth-movements which plicated the Highlands and Southern Uplands were probably simultaneous, and took place chiefly during the long series of ages represented by Upper Silurian deposits. That they were in the main completed before the conglomerates of the Lower Old Red Sandstone were laid