

strata that now occupy the north of England, thus, with part of the Old Red Sandstone, covering great part of the Silurian strata of the south of Scotland. This unconformable covering has, however, in the course of repeated denudations, been removed from the greater part of that high area, and now the Carboniferous strata are only found in force in the great central valley through which flow the rivers Forth and Clyde.

This will be easily understood by referring to the section, fig. 55, across the central valley of Scotland, from the Grampian mountains to the Lammermuir hills, in which the following relations of the various formations are shown.

The gneissic rocks of the Grampian mountains (No. 1), with bands of Limestone marked +, pass under the Old Red Sandstone (No. 2), and rise again, highly disturbed, but not much metamorphosed, in the Lammermuir hills (1'). On these the lower conglomerates of the Old Red Sandstone (No. 2) lie unconformably, adjoining and overlying which, there is a series of beds of red sandstones which generally dip SE. for a space about ten miles in breadth, as seen, for example, on either side of Strath Earn and the Tay above Perth. These are succeeded by an upper series of Old Red Sandstone rocks, which run from the neighbourhood of Stirling to the estuary of the Esk, near Montrose, on the east coast, and to Cupar and the mouth of the Firth of Tay, at Ferryport. The lower part of this upper series is often interstratified with volcanic lavas, ashy breccias, and conglomerates of a felspathic nature. These being hard and dipping south-easterly from the Forth to the mouth of the Tay, generally form a high escarpment, the steep-scarped front of which faces to the north-west, in accordance with a law that, on a great scale, rules the