

direction, in fact, of the onward march of the vast glacier that flowed from the Highland mountains down the valley of the Forth, and overflowing the Lammermuir Hills, spread across the border into England. The stones in the Till are scratched, and consist of Carboniferous Limestone (very angular at the base of the Till) and of other materials derived from the northern hills. Some of the boulders are from one to two yards in diameter, and the beach-like sands and gravels that overlie the Till are charged with large blocks of limestone and porphyry at the base, and many broken sea-shells. In places these sands are strangely contorted, as if they had been disturbed and pushed on by moving ice. The large blocks in them are of the Carboniferous Limestone of the country, and the smaller ones consist of what seems to be Silurian Lammermuir grit, granite, probably from the same area, and felspathic and augitic porphyries, &c.

About ten miles further south, near Belford, the glacial striations trend about 15° south of east, and still point towards the upper part of the estuary of the Forth, and much of the low ground round Belford and Lucker is formed of those singular mounds, called Kames in Scotland, and Eskirs in Ireland, beautiful examples of which are known to many persons at Carstairs and Carnwath in Lanarkshire, near Stranraer in Wigtonshire, and in many other areas in Scotland.¹ So identical are the phenomena, that in my note-book I find that I compare the English examples with those of Carstairs and Carnwath, and like the existing lakes and pools in these, the Kames of Belford and Lucker in older times

¹ For details respecting Scottish Kames, see 'Great Ice Age,' J. Geikie, chapter xix.