

gather in a wild mountain tract, near the source of the Spey. The upper glen is an oval valley, four miles long, by about one broad, bounded on each side by high mountains, which throw off two streams dividing the mica-schist from the gneissic systems; the former predominating on the west side, and the latter on the east. The united streams flow to the south-west for two miles, when the valley contracts to a rocky gorge which separates the upper from the lower glen. Passing from the upper to the lower glen, a line is observed to pass from near the junction of the two streams, on a level with a flat rock at the gorge, and also with the uppermost of the three lines of terraces in the lower glen. This line girdles the sides of the hills right and left, with a seemingly higher sweep, and is followed by two other perfectly parallel and continuous lines till Glenroy expands into Glen Spean, which crosses its mouth and enters the great glen a little south of Loch Lochy. At the point, however, where Glenroy enters Glen Spean, the two upper terraces cease, while the lower of the three appears on the north and south side of Glen Spean, as far as the pass of Glen Muckal, and southward a little way up the Gubban river and round the head of Loch Treig.

In Scotland, and in Northern England and Wales, there is distinct evidence that the Glacial Epoch commenced with an era of continental ice, the land being but slightly lower than at present, and possibly at the same level, during which period the Scottish hills received their rounded outlines, and scratched and smoothed rock-surfaces; and the plains and valleys became filled with the stiff clay, with angular scratched stones, known as the "Till," which deposit is believed by Messrs. Geikie, Jamieson, and Croll to be a *moraine profonde*, the product of a vast ice-sheet.

In Wales, Professor Ramsay has described the whole of the valleys of the Snowdonian range as filled with enormous glaciers, the level of the surface of the ice filling the Pass of Llanberis, rising 500 feet above the present watershed at Gorphwysfa. In the Lake District of Cumberland and Westmorland, Mr. De Rance has shown that a vast series of glaciers, or small ice-sheets, filled all the valleys, radiating out in all directions from the larger mountains, which formed centres of dispersion, the ice actually pushing over many of the lesser watersheds, and scooping out the great rock-basins in which lie the lakes Windermere, Ullswater, Thirlmere, Coniston Water, and Wastwater, the bottoms of which are nearly all below the sea-level. The whole of this district, he has shown, experienced a second glaciation, after the period of great submergence, in which valley-glaciers scooped out the marine drift, and left their *moraines*