

operation being afterwards repeated at lower levels, there will be several successive cliffs and terraces.

*Parallel roads.*—The parallel shelves, or roads, as they have been called, of Lochaber or Glen Roy and other contiguous valleys in Scotland, are distinct both in character and origin from the terraces above described; for they have no slope towards the sea like the channel of a river, nor are they the effect of denudation. Glen Roy is situated in the western Highlands, about ten miles north of Fort William, near the western end of the great glen of Scotland, or Caledonian Canal, and near the foot of the highest of the Grampians, Ben Nevis. Throughout its whole length, a distance of more than ten miles, two, and in its lower part three, parallel roads or shelves are traced along the steep sides of the mountains, as represented in the annexed figure (fig. 102), each maintaining a perfect horizontality, and continuing at exactly the same level on the opposite sides of the glen. Seen at a distance, they appear like ledges or roads, cut artificially out of the sides of the hills; but when we are upon them we can scarcely recognize their existence, so uneven is their surface, and so covered with boulders. They are from 10 to 60 feet broad, and merely differ from the side of the mountain by being somewhat less steep.

On closer inspection, we find that these terraces are stratified in the ordinary manner of alluvial or littoral deposits, as may be seen at those points where ravines have been excavated by torrents. The parallel shelves, therefore, have not been caused by denudation, but by the deposition of detritus, precisely similar to that which is dispersed in smaller quantities over the declivities of the hills above. These hills consist of clay-slate, mica-schist, and granite, which rocks have been worn away and laid bare at a few points only, in a line just above the parallel roads. The highest of these roads is about 1250 feet above the level of the sea, the next about 200 feet lower than the uppermost, and the third still lower by about 50 feet. It is only this last, or the lowest of the three, which is continued throughout Glen Spean, a large valley with which Glen Roy unites. As the shelves are always at the same height above the sea, they become continually more elevated above the river in proportion as we descend each valley; and they at length terminate very abruptly, without any obvious cause, or any change either in the shape of the ground, or in the composition or hardness of the rocks. I should exceed the limits of this work, were I to attempt to give a full description of all the geographical circumstances attending these singular terraces, or to discuss the ingenious theories which have been severally proposed to account for them by Dr. MacCulloch, Sir T. D. Lauder, and Messrs. Darwin, Agassiz, Milne, and Chambers. There is one point, however, on which all are agreed, namely, that these shelves are ancient beaches, or littoral formations accumulated round the edges of one or more sheets of water which once stood at the level, first of the highest shelf, and successively at the height of the two others. It is well known, that wherever a lake or marine fiord exists surrounded by steep moun-