

That the movement of this valley glacier was northward—or down the present grade of the stream—is shown by the drift, which could only have been derived from the rocks to the south.

Existing glaciers were seen only on the flanks of the high mountains directly opposite the mouth of Nash creek. That mountain glaciers have existed along other parts of the Wind River valley, however, is proved by the presence of several basin-shaped cirques, particularly on the western side of the valley. Several hanging valleys also occur, in which the streams occupying them plunge quickly from their own valleys into the valley of the Wind river some hundreds of feet below.

Five miles below Nash creek stratified sands and gravels are exposed in the cut banks on both sides of the stream. These are probably a lake deposit formed by the damming of the stream below. Most of this sedimentary deposit has been eroded away by the later action of the stream, but one or two remnants still stand in the centre of the valley, rising to a height of 150 feet. These are composed of a very fine dark-coloured sand, with less gravel and clay. Other smaller rounded knobs of glacial material occupy the valley below.

The section from Nash creek to the edge of the mountains along the Wind river gives the following succession of rocks from the base upwards:—ferruginous slates and argillites; limestones often weathering red from the oxidation of iron; sandstones with some limestones, which alter to quartzites and crystalline limestones; dark reddish conglomerate.

At the mouth of Nash creek the valley is incised in a series of closely folded black slates, with which occur only remnants of the overlying limestones, lying in steeply inclined synclines. These strike east and west almost directly across the valley of the river and are inclined at high angles, or are vertical. Some of the slates cleave readily along the laminae into broad thin plates, others are more massive. Where they stand vertically they form exceedingly steep slopes flanked at the base by much sharp and broken talus, making it difficult to ascend.

Northward, the limestone, by replacing and overlapping the slates, gradually occupies larger areas, and the underlying slates only appear when brought up by an anticline.

Fifteen miles below Nash creek, at our camp of July 8, a coarse-grained, white sandstone first appears capping the limestone and slates. The limestone is here reduced a few feet in thickness and appears to rest unconformably on the slates. The sandstone lies horizontally, or dips at a low angle to the north. It forms some of the higher peaks in this neighbourhood, and shows the characteristic weathering of this kind of rock in being eroded into all sorts of fantas-