

cient to clear the dense forest. The latter inconvenience has, however, been in part obviated by bush fires, which have burnt off the whole of the trees for about two miles, exposing a fine section of the mountains on the opposite side of the pass, on which there are three small glaciers on northerly slopes, all very much furrowed and broken. Immediately to the south of this point the mountains rise to great heights, and the largest observed glacier, estimated at about a mile in length, descends from them, giving rise to a stream along the valley of which the descent to the Skagit is effected. The gneiss is continuously exposed nearly down to the river, where it is concealed by the gravels of the valley.

The Skagit, on the boundary-line is a small stream, only fifty yards wide. It rises about fifteen miles east of Fort Hope and flows through a narrow opening between the highest summits. Its course is at first south, then eastward, and it falls into the northern part of Puget Sound.

The ford on the trail is about 1,650 feet above the sea level. The mountains on the west side of the river rise to a height of nearly 9,000 feet. Their sides show seven small glaciers, the lowest being about 6,000 feet above the sea level. The river flat is about two miles in width and is covered by a thick growth of timber, principally cedars of large size, with an undergrowth of willows. After crossing the river-flat, which shows a few low terraces, the trail rises up the side of a steep hill covered with thick small brush and burnt timber for more than 4,000 feet, when it reaches the watershed and follows the tops of the ridges on the north side of a steep-sided ravine in which the Similkameen River rises. On the opposite or southern side are several bold mountains of black slate. In the hollows between them are three small glaciers which are remarkable for the brilliant blue colour of their ice. The lower extremity of one of these glaciers is wasted into a hollow or cavern. Immediately above the crest of the ridge at their head of the pass, are two very remarkable peaks of black slate, which rise precipitately to a height of about 1,500 feet above the watershed. They are called by the Indians "Hozamen" which name has been adopted for the pass and the ridge of which they are the culminating points. The rocks of this district are principally black slates ranging in texture from soft earthy shales to the hardest lydian stone. In the Skagit Valley the exposed sections show north-westward dips at angles varying between  $75^{\circ}$  and  $60^{\circ}$ , the lower angles prevailing as the trail rises above the river. On the watershed they have turned over and incline at an angle of  $60^{\circ}$  towards the north-east, a direction of dip which is persistent for some distance along the pass, after which the beds are bent into smaller and more irregular curves. About the middle of the pass the slates are pierced by dykes of a compact rock, which appear as if interstratified, but their true nature is seen in cross

Mountains east  
of Skagit  
Valley.