

the Rocky Mountains. Between Quesnel and McLeod's Lake, twelve considerable streams and one arm of a lake were crossed, besides numerous brooks, from 5 to 20 feet wide. The country between all the streams was undulating, and the soil light, sandy and gravelly. The highest elevations on the trail varied from three hundred to six hundred feet. The highest point was near Pantage Lake, not far from Blackwater, and the lowest, where the trail crossed the two branches of the Nechacco. Between Swamp River and Carp Lake is the divide between the Arctic and Pacific waters, 2,500 feet above the sea level. The country is flat and soil poor, covered with thick pine and spruce forests, with some balsam fir, and very little grass. The axis of the divide from this point runs south-east to Giscome Portage road, and then describes nearly half a circle, having a radius of 100 miles to the Yellow Head Pass, 3,746 feet above the sea. Fort McLeod was reached on the 28th June, 24 days from Quesnel, including four days' stoppages at places on the route. The distance was 221 miles, but the party were very much delayed by having to cut their way through fallen logs. From McLeod's Lake Mountain, the observer says Prof. Macour, looks down on a land of rivers, and marshes and swamps, with occasional tracts of dry arable land, generally by the river sides, and of rich alluvial soil. Black and white spruce, aspen, black pine and Douglas fir constitute the bulk of the forest for the whole 270 miles from Quesnel to McLeod's Lake. There can be no doubt, that with the clearing of the forest, the soil will become drier and the climate milder. Five days were spent at the fort in making preparations for the further voyage, and on the 3rd July the expedition embarked on the Pack, one of the head waters of the Peace River. The country on the first day's journey was everywhere thickly wooded with spruce, birch, poplar, &c. On the afternoon of the 4th they reached the junction of the Parsnip River, here about 100 yards wide with an even swift current. An attempt was made here to explore the Pine River Pass. The Parsnip river was ascended to the junction of the Pine, 60 or 70 feet wide, with a strong, rapid current, which they were unable to stem. Mr. Selwyn and Mr. Webster landed and endeavoured to find the Indian trail, but this in the open pine forest was too indistinct to follow. The farthest point reached was a plateau 200 feet above the river. The view from this from east to south was limited by level forest country. High rounded peaks were visible to the N. N. E., some 15 or 20 miles distant, while the *main valley seemed to pass behind the level country more to the east*. The country along the Parsnip was generally level and the river banks low, occasionally rising into steep slopes of sand, clay and gravel of 80 or 100 feet, with continuous spruce forests on both banks. On the 7th the party camped at the mouth of the Nation River. The average height of the country around is about 150 feet, rising gradually towards the mountains to the north. The forest has been burned and the aspect very desolate. On the 9th the Finlay forks were reached where the river enters the main chain of the Rocky Mountains, and takes an east-

erly course through nearly 5 degrees of longitude to the confluence of Smoky River. The latitude of Finlay Rapids according to the observations taken was 56° north, that of Smoky River forks 56° 11'. 20". About 4 miles lower down, a turn in the river brought the party quite close to one of the high snowy peaks, in front of which they halted to ascend. The summit was 4,590 feet above the camp and about 6,229 above the sea. North-east and south was a perfect sea of alpine peaks, while to the west was the valley of a small brook up to its source in an alpine lake, and beyond the rocky peaks passed in descending the Parsnip. The summits appeared to be all about the same height; snow lying in patches sometimes of several acres, but no glaciers or permanent snow peaks. At the same elevation, two or three degrees to the south, are extensive glaciers and many of the peaks permanently covered with snow. The thermometer at 2 p. m., on the summit, stood at 82°; at 4 p. m., a few hundred feet below, at 84°. The limit of trees was about 4,000 feet, but spruces about 3 or 4 feet high were observed up to 4,500 feet. Beyond this mountain the climate became almost immediately warmer and drier and vegetation was much more advanced. One and a half miles lower down is the Barnard river, a large mountain torrent coming in from the north, and for ten miles below, the summits on each side, four thousand feet above the river, are only a couple of miles apart, but there is no serious impediment to the construction of a waggon road or railway. Beyond this the valley begins to widen out, and two large streams come in from the south, less than a mile apart, one known as Clear Water River. On the top of a limestone mountain here, 3,000 feet above the river, roses were in bloom, and there was no sign of alpine plants. This was in latitude 56°, 5,000 feet above the sea. Passing the *Rapide qui-ne-parle-pas*, at noon of the 14th, Big Horn, or Otter Tail River—about 70 or 80 feet wide, with a rapid current $1\frac{1}{2}$ to 2 feet deep, coming in from the north side—was reached. Here fell the first rain after leaving McLeod's Lake. The valley widened out, broad flats rising in terraces and extending back to the hills on the south, thickly wooded, and to the north well grassed. Two considerable streams were passed lower down, coming in opposite each other. At noon of the 16th, the portage of the Canyon of the Mountain of Rocks was reached. On the afternoon of the 21st everything was brought down and across the river to Hudson's Hope. The portage was 11⁸/₁₀ miles long, and the fall from the upper to lower end of canyon 270 feet, Hudson's Hope is 1,262 feet above the sea. Vegetables of all kinds grow here splendidly. Potatoes, carrots, parsnips, onions, turnips, French beans, beets and barley were all put in between the 15th and 24th of May, and the potatoes, turnips and onions were fit for use. Wheat had not been tried, but there could be no doubt of its success. Strawberries and serviceberries were abundant, and raspberries beginning to ripen. All around vegetation was very rank. On Buffalo Mountain, 3,000 feet above the sea, the wild peas and vetches were two feet high, covering the summit. At Hudson's Hope