

SESSIONAL PAPER No. 13

to Quiet lake. In the meantime, accompanied by one man, I went on with the exploration. Four miles above the head of the rapids mentioned a second tributary, McConnell river, enters the Nisutlin from the north. Up to this point the general trend of the valley is to the north-east; but it now turns in a south-eastern direction for a distance of eighteen miles.

From the top of a mountain, north of the river, which overlooks extensive plains spreading towards the east, there appears to be a low country dotted with lakes of all sizes and intersected by numerous connecting streams which ultimately find their way towards the Nisutlin. From the same point of vantage the eye rests on the mighty mass of a well defined range of mountains which extends to the north. This range is separated from my station by a narrow pass lying at its base. A fine lake at the highest point of the pass is the source of a stream which meanders along the foot of this mountain, which I had chosen for an observation point, and after receiving another large creek (the outlet of a good sized lake) enters the plains and finally empties into Nisutlin river.

The distance from the confluence of Rose river with the main river to the point where the Nisutlin issues from the lake is eighteen miles. The average width of the river throughout this section of the country is rather less than in the previous section. The islands are not so numerous, and occur singly, not in groups as is the case in its lower reach. The current is very swift, there being an average fall of twenty-seven feet to the mile. Land slides have occurred wherever the current sweeps by the hills. Both sides of the valley are timbered from the water's edge to an altitude of two thousand feet on the slopes of the mountains.

Having located the eastern sources of the Nisutlin river and completed my photographic survey of the adjacent country, I now turned my attention to the exploration of some of its chief tributaries from the north.

On September 7, I returned to the mouth of McConnell river, which I ascended for several miles. The next day I occupied a prominent peak to the east of the river. Its altitude is 3,270 feet above the valley. It is one of the points in the chain of triangles covering this section of country. The scenery of this region is very striking. Looking back over the river, it is seen that it may be divided into two principal divisions. The lower reach is one hundred miles long and with its sinuosities occupies a very wide valley. Forests of spruce cover the greater part of the bottom lands and terraces, and the slopes of the mountains are also clad with trees to an altitude of two thousand feet above the valley. The strips of low lands between the river and the foot of the mountains are often several miles wide. Along their foot we noticed lakes or ponds which act as reservoirs for the surplus water which rushes down these mountains in the early part of the summer. There are numerous gravel bars in the river, some extend from the banks of the stream, while at other places, where its width is great, they have been deposited in the centre of the stream.

The second division of the river, or its upper reach, embraces not only its main eastern branch but includes as well all its tributaries. These streams run in close proximity to each other through nearly parallel valleys and, by their numerous ramifications reach to the heart of the mountains which separate the basin of the Nisutlin from that of the Pelly.

The appearance of the country to the north is remarkably grand and imposing. We are here confronted by bold and serrated high ranges of mountains which stretch to the extreme limit of our horizon. These are cleft at intervals by defiles which converge towards the principal valleys leading to that of the Nisutlin. The general trend of these valleys is nearly in a north-east direction. As may be expected, the streams which drain this district are nothing more than torrents, and in high water their ascent is attended with the greatest exertion and risk. After the freshets have subsided they are too shallow for the use of boats.

On September 11, I descended the Nisutlin river, as far as the mouth of the Rose river. The next morning I began the ascent of that stream, which is one and a half chains wide at the mouth, with a depth of two feet of water, and for one and a half miles from its mouth is nearly straight. This swift stream follows the foot of wooded hills which separate its valley from the depression occupied by Quiet lake. The hills, however, recede towards the west, while the river continues its tortuous course in a north-