

with Nechako river, Prince George, is 1,848 feet above tide. About 100 miles downstream, at the mouth of Quesnel river, it is 1,563 feet, an average drop of about 3 feet to the mile, which is the average gradient for the 150 miles or so of navigable waters from Prince George down to Soda Creek. The rate of fall, however, varies somewhat and is much higher in certain short stretches such as Fort George and Cottonwood canyons. At the railway bridge near Lillooet, 200 miles or so below Quesnel, the elevation of the river is given as 619 feet above tide. From Soda Creek, the southern limit of navigation, down to Lillooet, the average rate of fall is over 5 feet to the mile. For 30 or 40 miles north of Lillooet the Fraser occupies a particularly wild and impressive canyon and for miles at a stretch the water surges along its narrow bed in a succession of eddies, whirlpools, and rolls. Boat crossings are few and many of the Indians lose their lives while fishing off the rocks for salmon.

CLIMATE AND AGRICULTURE.

The summer is dry and cool in the country near the Fraser from Williams lake south, but northward to Prince George the rainfall progressively increases and this increase is accompanied by a change in the character of the vegetation. Thus the immediate trough of the Fraser from Williams lake southward, is covered with sagebrush, with little or no timber, but back from the river douglas fir and jackpine (*Pinus contorta*) are the prevailing forest trees in the well-drained portions. Where the drainage is poor or lacking jackpine and aspen poplar prevail. There is much open grass-covered country and alkaline lakes are of frequent occurrence. Northward from Williams lake the forest becomes denser. White and black spruce as well as white cedar, with douglas fir and jackpine are found from Quesnel northward and where the forest is burned the bottoms are covered with thickets of white birch, aspen poplar, and willows.¹ An increase in the amount of rainfall, accompanied by the same increase in the density of forest growth, holds eastward toward Cariboo mountains. The winter climate is said to be very severe in parts of the plateaux.

The terraces on the Fraser banks are the sites of ranches irrigated by ditches bringing water from the side streams. Fine crops of grain, hay, and vegetables are raised in certain places up the river as far as Quesnel. Nearer Lillooet, where the elevation is lower, beans and potatoes are produced in large quantities, and at Lillooet itself a great variety of fruit is grown. The Interior Plateau on both sides of the Fraser is a cattle range, some of the ranchers owning several thousand head. Horses are also raised and small bands of wild horses are found in the mountains and are sometimes hunted down and corralled in the winter.

CHAPTER II.

GEOLOGY.

The formations observed in the district lie between, and include, the Cache Creek series of the Carboniferous (possibly in part Devonian age), and unconsolidated Recent deposits. Certain schists of unknown age

¹The vegetation and flora along the Cariboo road from Cache Creek to Quesnel and northwest from there are described in a very interesting manner by John Macoun, in Rept. of Prog., Geol. Surv., Can., 1875-76, pp. 124-130.