

CHAPTER IV

THE ORIGIN AND MEANDERINGS OF THE COLUMBIA RIVER

Our boat-building activities being at an end, and now having some leisure, it behooves us (I assume that the reader will now, if he has not already, join me in spirit if he cannot in person), to take time to look at our surroundings, size up the country we are in, and prime ourselves with all the information we can about the Columbia River, its early history and discovery, and where it goes on its meandering to the sea.

The Columbia River has an humble origin. No glacial stream, tumbling mountain brook, or great lake gives it birth. Immediately below the walls of a decayed, timber lift-lock, water, in the form of springs bubbling out of the gravel bed of a former canal usher it into existence. Due to what remains of the canal trench it is here about twenty feet wide, but so shallow that an ordinary plank laid on its bottom, just below the lock, serves as a foot bridge to reach Mr. Grainger's ranch house nearby. The elevation above sea-level, according to a bench mark near the railway depot, is 2,619 feet. The ground surface here is flat but high enough above the stream to be dry, and it is heavily covered with spruce, and pine timber, with alders, willows, and cottonwoods near the canal bed. The depot at the railway station is close to the base of the Selkirks, and is 1,100 feet

from the canal lock. The Stanford Range, a spur of the Rocky Mountains, is about a mile and a half to the northeast across the flat. About three-quarters of a mile to the southeast flows the Kootenay River, an almost imperceptible divide separating it from Columbia Lake, a mile and a half to the northwest. This low-lying strip of land is usually called Canal Flats, but why the plural designation I do not know as there is but one flat. The railway station is 79.4 miles due north from the International Boundary between the United States and Canada; and its latitude is $50^{\circ} 09'$ north of the Equator, and longitude $115^{\circ} 50'$ west of Greenwich, England.

The difference in elevation between the Kootenay River and Columbia Lake is from six to nine feet, varying with flood conditions—the Kootenay being the higher. One W. A. Baillie-Grohman conceived the idea of constructing a canal across the flat to relieve flood conditions on the Kootenay below by diverting the water into the Columbia; and also for the purpose of having connected navigation for small steamboats on both streams, there being no railroads then operating as they do now in that section.

Grohman was given a concession by the Province of British Columbia which he afterwards transferred to the Kootenay Syndicate, of London, England. By this agreement the Syndicate was to build a canal no narrower than thirty feet at water level, with a depth of not less than four feet, and to be provided with one or more suitable locks constructed of stone or timber, the canal to connect the

waters of the Upper Kootenay River with Upper Columbia Lake. In consideration of this the Syndicate was to receive free grants of 320 acres of land for each \$2,500 expended for the actual construction of the canal. The total land subsidy was to amount to 30,000 acres; and in addition as a settlement and reclamation undertaking 45,000 additional acres were reserved for the Syndicate, chiefly in what is now the Creston District.

The canal was completed in the summer of 1888, with an excavated length of about a mile, and with two timber locks each having a length of 125 feet, a width of 35 feet, and a depth of water at the gate of about 12 feet. The locks were only once filled and the work was first destroyed in 1889 but was repaired in 1891. In 1893 a dam was thrown across the head of the canal because of apprehension of dangerous overflow into the Columbia. In 1897, the dam was broken open and the steamboat *North Star*, commanded by Captain F. P. Armstrong, was passed through the locks with much difficulty, after which the dam was repaired and now obstructs the channel near its head. The *North Star* is the only steamer that ever navigated the canal. The upper lock has been destroyed, but the decaying log walls of the lower one still remain standing, and below it the canal channel has filled to a shallow stream with a gentle current.

In 1915 the Kootenay Central Railway was completed connecting Golden on the main line of the Canadian Pacific Railway with Colvalli on the Crow's Nest Pass line, a distance of 106.5 miles, and in 1920 a bridge was thrown across the Columbia

River at Brisco. Since then all navigation has been discontinued on the upper Columbia as well as on the Kootenay.

Having established the source of the Columbia River, and noted the character of its surroundings, it will now be well to know just where it goes to reach an outlet.

Leaving the lift-lock at Canal Flat, and following the old canal excavation, it flows in a northwesterly direction three-quarters of a mile to Columbia Lake; thence through Columbia Lake, a connecting channel seven miles long, and Windermere Lake it reaches Athalmer 34 miles from Canal Flat. Debouching from Windermere Lake it continues in a northwesterly direction 161 miles to Kinbasket Lake, through which it passes, and following the northwesterly direction reaches the mouth of Canoe River, 232 miles from Canal Flat. This is the north end of the Selkirk Range and the head of what is known as the Big Bend. At this point the River turns abruptly to the left and flowing in a general direction slightly east of south enters Upper Arrow Lake 127.5 miles from Canoe River. Passing through Upper and Lower Arrow lakes and the Narrows between them for 121 miles 32 miles farther south it crosses the International Boundary Line; having descended about 1,310 feet, and traveled in Canadian territory 512 miles. Thence in United States territory it flows in a southerly direction 111.5 miles to Hawk Creek at the beginning of the "Great Bend"; thence in an extremely tortuous course, slightly north of west, 101 miles to the mouth of Methow River; thence southerly 118.5 miles to the

head of Priest Rapids, where the Yakima Range deflects it northeast for about 20 miles to near Wahluke; thence southerly 96 miles to the mouth of the Walla Walla River, where the Great Bend ends. Here the Umatilla Highlands turn the River in a direction slightly south of west for 193 miles, until it has passed through the Cascade Range; when its course alters to a northwesterly direction for 19 miles and it reaches the city of Vancouver, Washington. From thence it flows almost northerly for 33 miles, and then changes to a course slightly north of west for about 113 miles, reaching the Pacific Ocean in latitude $46^{\circ} 15' 10''$ north of the Equator, and longitude $124^{\circ} 02' 27''$ west of Greenwich, England. The distance it has come from the Canadian line is 752 miles, and from Canal Flat 1,264 miles; and its descent from its source has been 2,619 feet.