Robert originates in an extensive snow-field under Shafto Peak, and smaller tributaries flow from the steep and furrowed faces of Mount Kensington (7,010 ft.), Mount Ballance (7,008 ft.),

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and Mount Stout (6,962 ft.), all on the dividing-range.

From the Mungo junction the Hokitika pursues a westerly course for a distance of eight miles and a half and is then joined by its largest tributary, the Whitcombe, entering from the south. The course of the river between the Mungo and Whitcombe junctions lies through a succession of gorges with high and almost perpendicular walls. Some of these gorges are of great grandeur, especially so are those which have been called Kakariki and Omatane.

Along this portion of the Hokitika many creeks join the main stream. By far the greater number join on the north side and flow from the weatherworn slopes of the Diedrich and Knobby ranges. The principal creeks are the Darby (in which there is a striking waterfall, 370 ft. high),

the Serpentine, Whitehorn, and Moose.

The source of the Whitcombe River is on the pass of that name at an altitude of 4,025 ft. This river aptly perpetuates the name of one of our earliest surveyors, who in 1865 crossed the Alps from the head of the Rakaia River by way of the pass which bears his name, and after a most adventurous trip reached the sea-coast where the Town of Hokitika now stands, and a few days afterwards was drowned while attempting to cross the Teremakau River. Even now, with a fairly good track along the worst portion of the route and a carriage-road for nearly thirty miles of it, one can well appreciate the hardships poor Whitcombe and his solitary companion, Louper, must have endured in the course of their weary journey for nearly fifty miles through the damp, dismal, and trackless forests of Westland, constantly wading the large streams that they were compelled to cross, without food during most of the time, and uncertain of the difficulties still ahead of them.

The Whitcombe has a fairly straight course throughout, flowing in a direction slightly to the The length of the main river from the pass to its junction with the Hokitika is approximately eighteen miles. It has many large tributaries, the principal of these on the right bank are Bond, Chairman, Cataract, and Vincent creeks, which flow from the main divide on the east, and Frew Creek rising at Frew Saddle on the Meta Range. The main tributaries on the west

are the Wilkinson, the Price, and the Cropp rivers.

The Wilkinson joins the Whitcombe about four miles from the pass. It has its sources in the striking and majestic glacier of the same name, and in the McKenzie Glacier, which lies a short distance further to the westward.

The Price drains a large extent of mountainous country lying to the east of the rugged Lange Near the head of the main stream are the Price Falls of over 400 ft., the summit of which is at an altitude of 3,269 ft. above sea-level. At the confluence of the Price and the Whitcombe is the remarkably picturesque Barron Canon. Four miles further down the main river is the junction of the Cropp, a large stream draining the country between Mount Bowen (6,516 ft.) on the north and Mount Beaumont (7,035 ft.) on the south. Other tributaries on the west worthy of note are Brow and Rapid creeks: the former joins about four miles above the Hokitika junction, and the latter about one mile below the junction.

The altitude of the area of country covered by the surveys ranges from 270 ft. at the startingpoint in the Hokitika River to over 8,500 ft. Up to an average height of 3,500 ft. the whole area is covered with dense forest. The valleys of the Hokitika (above the Whitcombe junction) and of the Mungo were, prior to the present survey, an unexplored region, and, probably owing to the almost continuous series of gorges, no attempt had previously been made to open up a track through them. For the purpose of our survey a good foot-track was essential, and one was constructed. The track is on the northern side of the river, and is continued to the upper bush-line, near the head of the Mungo River. The upper portion of the Hokitika River was also approached by utilising an old track which branches off the Whitcombe Valley and crosses Frew Saddle at an altitude of 4,267 ft.

There is a fairly good track up the Whitcombe Valley, which was constructed over ten years ago under the direction of the Lands and Survey Department. The track extends as far as Chairman Creek, to a point about seven miles from Whitcombe Pass. Shortly after the construction of the track, shelter-huts were erected at various points along it for the convenience of tourists and explorers. One of these huts is at the junction of the Hokitika and Whitcombe rivers, on the north side of the river; a second is at Frew Creek, three miles up the river; a third opposite the Cropp River junction; and the last is at Price's Flat, a most picturesque spot, about nine miles from the Hokitika junction. The worst feature of the track is the very indifferently constructed cage for crossing the Hokitika River—the site of which is about half a mile above the junction of the rivers. The span is about 100 ft., and it is most desirable that a foot suspension bridge should be placed at this dangerous crossing for the convenience of those persons who have to visit this most interesting part of the country.

One of the greatest difficulties to be contended with in connection with the survey of the Whitcombe River and its tributaries was the large volume of water in the main river during the summer months. During the season from December to the end of April it was not possible to ford the river anywhere north of the Wilkinson. Recourse was had to flat-bottomed boats, the timber for which was obtained in Hokitika and packed and carried for considerable distances by the men of the party. Owing to the rapidity of the current there was always an element of danger in crossing

the river, but fortunately we got through the season without accident.

## Water-power.

Notwithstanding the very large volumes of water carried down by the Whitcombe and Hokitika rivers during a considerable portion of the year, I know of no place in this particular area where