

The forest in the gorge is a mixture of cedar, totara, and rata, with kamahi and the usual underscrub. The cedars and totaras are in many cases of immense size, but are too much scattered to be of any market value except for local consumption, such as bridges, crib-work, snow-sheds, &c., in the event of a track ever being brought down the Copland or Karangarua. Totara of a certain sort is common enough in Westland, but the best kind—all heart and little sap—is much scarcer than people suppose, so the presence of it in the Karangarua and branches is worth noting.

At Boulder and Cave Camps are two other blocks nearly as large as the one I measured. The first is a true ice-borne erratic, and our permanent camp was completely sheltered under it. This place is the furthest limit of the wild cattle, which appear to be dying out, not only on this, but other rivers, shooting down, scarcity of food, and preponderance of bulls being no doubt the causes.

After a weary rough scramble through the gorge the Welcome Flats are reached. They are about two miles long and half a mile wide from the foot of the hills on either side. They are partly open river-bed, with patches of grass-land, and partly scrub flats of ribbon-wood, black-scrub, and akeake. One peculiarity I noticed—viz., the trees have all a lean up the valley, showing that the wind mostly blows in that direction, and we found it so when a storm came on—whether the upper scud was flying north, south, east, or west, the wind on the flats was always up the river. In ancient days these flats have been a glacier-basin, and then perhaps a lake which gradually filled up with gravel. Such basins are very common up West Coast rivers—in fact, every large stream has one or more of them, some well grassed, others covered with mossy, stunted herbage. Those in the valleys running north and south may be of some use when population forces its way into the mountains, but others, like the Welcome, lying east and west, are almost useless (unless in a very wide valley), as for five or six months in the year they are practically sunless, and, if much above the 2,000ft. level, are often snowed-in for months. The presence of aniseed, ranunculi, cotton-grass, and other alpine flowers show the little effect the sun has, even in the summer. However, these openings are a godsend to travellers; the delight of breaking out on one of them after miles of scrambling through dense bush more than repays all the trouble. From such spots the scenery can really be appreciated. Occasional glimpses of peaks and glaciers through spaces in thick foliage may be very pretty and very artistic, but they are very aggravating to ordinary mortals.

The scenery around the Welcome Flats is splendid. To the north Mount Lyttle towers, looking, in its solitary grandeur, far higher than it really is. This peak is a well-formed tent-like ridge, and the slopes of the mountain are covered with a beautiful glacier of the third order. This ice-field is very steep on its lower face, and is continually sending down avalanches. In severe winter weather the snow-slope from Lyttle's Peak comes down to near the flat, as shown by gravel and small rocks lying on the top of boulders in that peculiarly loosely-packed way which only melting snow can give. In winter the scene must be magnificent—a towering peak above, with a glacier beneath, terminating in a long serpent-like slope of snow flanked by dark bush and still darker cliffs.

The Ruera River, which flows from Lyttle's Glacier, obtains a large feeder from another glacier lying on the southern slopes of Mount Copland. This stream joins about 60 chains below Lyttle's Glacier, and is named the Dark-water. I did not see the foot of the glacier, but I got a view of its upper slopes from Point H. The stream did not look a bad one to go up, but little was to be gained by the journey; the days were closing in, and time was pressing. Before leaving the Ruera there is one peculiarity worth a passing notice. The main Copland ran the usual white glacial water, but the former stream was nearly as black as the drainage from a coal-pit. I never saw water so coloured before, and the cause was a puzzle to me for some time; but an examination of the fan of the Ruera, which had been cut by the Copland, disclosed layers of very dark soft schist drift, showing that such rock underlay the Lyttle and Copland Glaciers. The grated rock, being darker than usual, had thus coloured the water. This variety of schist shows in the Waikukakupa River, but I thought it died out there. Such, however, is not the case, but the outcrop must be very small.

Away to the south of Welcome Flats is one of the wonders of the Copland—namely, “The Sierra.” The jagged peaks and broken faces of the Wakatipu “Remarkables,” all that I have read or seen of rugged ridges and mountain scaurs, sink into insignificance before this wonderful sight. A range of broken, shattered cliffs, topped by a serrated ridge, looking as if some giant with little skill and a very bad file had attempted to make a saw out of the mountains. Wherever glimpses could be obtained of the slope to the southward, masses of snow showed the presence of a large *nêve* over the ridge. “The Splinter” is an immense spike of rock pointing along the ridge, its tip standing out from the base for hundreds of feet, the points and slabs looking as if the slightest touch would send them tumbling into space. The whole ridge is an unmistakable evidence that no earthquake of a severe character has shaken this part of the Island for ages, as such a shock would have brought most of the jagged tops down to the foot of the cliffs. The sketch sent with the map gives a very poor idea of this wondrous razorback, but it is doubtless better than no sketch, and will, at least, give some idea of what I have tried to describe. Other countries may show finer glaciers and higher mountains, but I doubt if anything like “The Sierra” exists out of the moon.

Near the top of the flat, Scott's Creek comes over almost the only large waterfall on the river. This stream comes from a small elevated glacier on Scott's Peak, and is only interesting for the cataract, 50ft. high, and the snow-shoot from the glacier, a narrow V-shaped chasm commencing just above the cascade. This shoot has filled the creek-bed, nearly to the flat, with shattered rocks, sharp and angular, as they fell from the cliffs.

We found large numbers of bush-rats (*kiore* of the Natives) swarming on the flats, and all up the river. At one time the whole country was swarming with the Norwegian rats, but, from some cause or other, they are gradually dying out, and the bush-rat is taking their place,