

from that quarter; and it is the opinion of the residents in the valley that much water, percolating below the surface of the shingle-beds of the Lower Otira and Upper Teremakau, makes its appearance below the junction of the two. The Otira Valley, from its junction with that of the Teremakau to the foot of the celebrated Otira Gorge, differs but little from the ordinary character of a mountain valley excavated in similar rocks, and having a moist and comparatively mild climate like that of the west coast of the South Island. The low ground, where the river has not recently converted it into a shingle-bed, is bush-clad, as are the mountain sides to an elevation determined by the average temperature of the particular district. Higher than this are the scrubby or grass-covered slopes of the sub-alpine region, above which, according to the nature of the rocks present, we have broad fields of angular debris, or jutting rocky projections, crags, and precipices, to the highest peaks of the mountain range. All this can be seen along the right bank of the Lower Otira. The character of the ranges on the western, or left bank, has already been given when treating of the watershed of the Taipo Valley.

Kelly's Creek, making junction from the west, is the principal tributary of the Otira in the lower part of its course. This is a mountain torrent, better known on account of its dangerous ford when in flood, where it is crossed by the Christchurch-Hokitika Road. Its valley is thickly bush-clad in the lower part, but towards its source it drains the bare or grassy uplands of Kelly's Ridge, and discharges its waters to the lower part through a deep gorge, the walls of which are formed of dark slaty rock, which enhances the gloomy character of the surrounding scenery. At the foot of the Otira Gorge, the Otira is joined by Rolleston Creek, which drains from the northern slopes of Mount Rolleston and the opposite heights lying towards the Taipo watershed. The valley of Rolleston Creek is out of the line of tourist travel, but, on account of its magnificent scenery, it would well repay a halt at the Otira Hotel, in order to explore its upper part. As seen from the coach-road, the whole surroundings of Rolleston Creek form a characteristic view of the mountain scenery of the West Coast. The Otira Gorge, being traversed by the coach-road from Christchurch to the West Coast, has long been celebrated for the grandeur of the scenery in the gorge itself, or amongst the mountains surrounding it and Arthur's Pass, by which the main range of mountains are crossed. With respect to the beauty and grandeur of its scenery, it has no peculiar claim to be the first, most magnificent of the mountain gorges of Westland. It simply chances to be the better known of many that are no mean rivals to it, and of some that yield to it in no respect. The Gorge is divisible into three sections, each having its peculiar characteristics, and some parts of each combine in the general view to be obtained from the valley of the Otira below the gorge. The first section or division extends from the foot of the Gorge to the second bridge, from which part, looking north, many fine views can be obtained, to which Kelly's Ridge, or the more distant Mount Alexander, afford a suitable back-ground. The views which may be had in the opposite direction may be so arranged as to show only the gorge itself, and the steep declivities on either side of the foaming torrent that hurries along its rocky bed; or they may include the lower peaks of the Mount Rolleston Range, or a distant view of the upper gorge, as a back-ground; or the road, a bridge, the stream, and some lower bush-clad spur of the mountain ridges on each side of the gorge combine generally with marked pictorial effect.

The second division includes the deeper part of the gorge, from the second bridge to the roadman's hut on the zigzag descent from the great shingle-fan at its upper end, which may be sketched or photographed subject to the same variety of conditions that have already been indicated for the first part. The upper part of the gorge is sub-alpine. It is distinct and separate from the middle and lower parts. The zigzag overlooks, at its nearest approaches to it, a deep, narrow, rock-walled gorge, unexplored and impassable under ordinary circumstances. At its upper end this opens out so as to form a funnel-shaped basin, one side of which is formed by the great fan of angular detritus, the waste of the mountains to the east, over which, by a steep gradient, the coach-road ascends, to again descend its northern side by the zigzag leading down into the middle of the gorge.

Above the gorge, for a distance of a mile, the stream traverses a mountain valley, and then divides into two branches. That to the east comes from a gorge between two mountain spurs of a high range, retaining considerable areas of snow throughout the great portion of the year. That to the west, the main stream and true course of the Otira, drains the permanent snow-fields of Mount Rolleston, in which direction the scenery is truly alpine. The two main sources of the Otira, draining from the east and west, meet in the middle of the depression leading to Arthur's Pass, which has a north and south direction. From the actual height of land on the coach-road to this junction there is no creek of any consequence, the little drainage there is collecting in a lagoon or mountain tarn, formed by an ancient moraine of a glacier from the west being piled across the valley at this point. The drainage from this tarn is by soakage through the moraine into the Otira.

Arthur's Pass itself is an upland valley, 3,000ft. above sea-level, between two opposing mountain ranges, whose spurs are, on the average, fully half a mile apart. This valley depression leads forward to the descent into the Bealey Gorge, and, in the stricter sense of the word, there is no saddle, and the phrase is correct: "from Canterbury the main range is crossed by Arthur's Pass."

The Upper Teremakau, from the Otira Junction, in fine weather has but a small volume of water, but the wide stony river-bed and numerous dry channels abandoned by the river, or only filled during times of flood, give ample evidence of the state of things during wet weather and sudden storms of unusual severity. This portion of the valley, sixteen miles in length, is bounded on both sides by mountains, which, though not reaching above the line of perpetual snow, are high ranges, retaining much snow during the winter season, which does not disappear until the summer is far advanced. Unlike Mount Alexander, and Taipo Range further down the valley, the main summits of these mountains do not immediately overlook and yield directly the bulk of their waters to the main stream, but they are drained by numerous creeks of lesser volume, which have cut deep gorges or wide valleys amongst the mountains, and these drain frequently from the south-