

APPENDIX No. 4.

EXTRACT FROM MR. BRODRICK'S REPORT ON PASSES OVER THE SOUTHERN ALPS.

BETWEEN the point at the head of the Rakai River where Mr. Roberts crossed, and the Haast Pass, the Southern Alps have always been considered to form an impregnable barrier between the east and west coasts of the Middle Island, and I think no one ever succeeded in getting over till lately. It is therefore interesting, and may possibly be of use some day, to know that, taking advantage of the excellent opportunities we had while extending the topography of Canterbury, we have found two places where it is possible to get over the range—one, the Sealey Pass, at the head of the Great Godley Glacier, and the other over a saddle between the Huxley and Landsborough Rivers.

I will now give a short description of the road to each, commencing at the well-known lakes into which the rivers rising at the watersheds we crossed empty themselves.

Sealey Pass.

The Tekapo Lake, 2,321ft. above sea-level, is situated in the midst of a country the bareness of which is not relieved by a single tree, except where a few willows are growing round the different homesteads of the runholders, and these are so far apart that they can hardly be deemed a feature of the scenery. Its waters are of a slaty colour, especially in stormy weather, caused by the immense quantities of fine silt washed into it by the Godley River from the glacier at its head.

From the Tekapo Hotel, at the outlet of the lake, the road follows along its eastern shore till Richmond Station is reached; it then leaves the lake, and, traversing some low downs and flats, finally stops at Lilybank Station, situated between the Godley and Macaulay Rivers, and about twenty-four miles from the hotel. The road is a fairly good one, and wagonettes can be driven over it. It may be as well to remark that the Macaulay River, which has to be crossed, is rarely flooded so much as to be impassable, and is free from dangerous quicksands.

From Lilybank the road winds over the hummocks at the back of the station till the Godley River-bed is arrived at; and from there the river-bed is the only available route to the Great Godley Glacier. It is not, however, very rough, and may be ridden over comfortably enough, and here and there relief from the monotony of picking your way amongst the stones will be found by getting on to the grassy flats. Eight and a half miles from Lilybank is a shepherd's hut, made of iron, and pleasantly situated amongst some trees, chiefly totara and mountain-pines; and the remaining $6\frac{1}{2}$ miles to the glacier must be done on foot or on horseback, because the river-bed gets so rough it is impossible to drive any farther. The terminal face of the Godley Glacier is 3,407ft. above sea-level, and about 39 miles from the Tekapo Hotel. A fairly good camp can be made on the shingle close to the glacier in the shelter of the rocks, and there is plenty of scrub for firewood on the hillsides, but no grass, and all horse-feed has to be packed. It was here we camped while doing our survey.

The terminal face of the Classen Glacier is the best place to camp, as there is plenty of grass and firewood there; but it is not convenient for excursions on the Godley Glacier. It was rather late in the season when we got up to the glacier (11th May, 1888), and the snow which had fallen made all our expeditions more arduous. On the 14th we continued our traverse along the track marked on the plan, and reached the top of Sealey Pass, which is 5,800ft. high, and 7 miles from the terminal face. The last few miles the snow was deeper, and at every step we sank above the knees. From the saddle we could see the bush in the Wataroa Valley, so we pushed on another 30 chains, to find that we were out of the snow, and had passed all the difficulties that lay between the pass and the Wataroa River. As where we were could only be a few miles from a track and wire foot-bridge on the West Coast side, it was with some reluctance that we were obliged to turn back: the weather looked threatening, and a heavy fall of snow would have cut us off from our camp, and delayed our work in a manner I did not think we ought to risk. The route over this pass would be a very interesting one to tourists, as the scenery is unequalled, the labour not great, and the road, except the 30 chains beyond the saddle, quite safe. About 20 chains on the West Coast side of the pass we were obliged to cut our footsteps and use the rope. The ice slopes into a very deep hole, and at times is swept by avalanches from above; and here great care ought to be taken to avoid them, as, of course, to be swept into the hole would be certain death.

The Sealey Pass was named after Mr. E. P. Sealey, a surveyor who visited it in 1871, accompanied by one man; and from that time till our trip no one had ever been there. Since then a party was organized to make the trip to the West Coast, and it succeeded in getting to the saddle, but very prudently turned back on meeting a dense fog. Mr. Sealey informed me that it was so foggy when they arrived on the pass in 1871 that they could see nothing, and only found their way back again by following their old footprints. During the last part of our return-journey the fog enveloped us, and made it very cold, unpleasant, and difficult to find our way. The scenery is very grand, but especially about the junction of the Grey and Godley Glaciers. Here huge blocks of ice have been forced up by the pressure, and the beautiful blue tints on them are surprising. The feeling of novelty is enhanced by the ceaseless thunder of the avalanches falling from numbers of different places all round.

Huxley Pass.

The Lake Ohau Station, situated at the north-east end of the lake of that name, is the last inhabited place on the route to the pass by which we discovered it was possible to cross the Southern Alps to the West Coast.

The Ohau Lake is a very pretty one, of a deep-blue colour, 1,717ft. above sea-level, flanked by steep hills, the dull-brown colour of which is relieved by clumps of elegant "birch" (*Fagus cliffortioides*), particularly along its eastern shore; and past and through these beautiful trees the