

From what I could note I should say that a landslip had taken place last spring and choked up the old vent, the steam escaping along to Ruapehu, and that the recent eruption was merely an attempt to get rid of this. The surrounding hills for a couple of miles are covered with sand and ash, and the vegetation has been subjected to boiling water. There may be another landslip, and, consequently, another eruption at any time.

The Tongariro crater lake was quite cold, and the Red crater between it and Ngauruhoe was only emitting two small steam-jets, and had one large mound of burning sulphur and a small sulphur lagoon. I have not been quite up to the summit of Ngauruhoe yet, but, from what I can see, the old trig. and the land adjacent have fallen into the crater.

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EXPLORATION OF ROUTE FROM LAKE OHAU TO PARINGA.

The plan I now send is compiled largely from the topographical surveys of Messrs. Mueller and Roberts, of the Westland District. My own work embraces everything on the Canterbury side of the Southern Alps, but beyond the range is confined almost entirely to the immediate vicinity of the route itself. I should have liked very much to have taken observations to fix the heights of some of the peaks south of Mount Stokes, for neither Mr. Roberts nor I have so far been able to observe them very accurately, but they were never clear of fog. Altogether, we were most unfortunate in the weather; it rained incessantly, and that, with the flooded rivers, made the trip very long and unpleasant.

I found that up to the foot of the Huxley Pass a good, almost flat, horse-track can be made for a very small outlay; thence down to where Matheson took his horses (see plan) is all open, and, although steep in places, with a little benching might be made good enough to take loaded horses along with comparative ease. Between that point and the bend of the creek is very steep, and only clever animals, accustomed to hills, would ever be able to go down it; beyond that, as far as the crossing on the Landslip Creek, all is flat, or gentle slopes, and there are no obstacles except the bush. After that the hill becomes steep again, but by cutting the bush it might be made fit for active horses, though they would not be able to carry very heavy loads. Onward from the top of the forest to Paringa the only real difficulty is the steep descent from the terminal face of the Otoko Glacier to the flat near the Roberts; for about 20 or 30 chains this is very steep, and it would cost a large sum to make it passable for horses. Down the Otoko the spurs are easy, and there are long stretches of flat, and very little more than cutting the bush and scrub is required to make it possible to ride a horse right up the Roberts Glacier. The passes are lower than any between Haast's Pass, at the head of the Wanaka, and Whitcombe's Pass, on the Rakaia. They are entirely free from snow in the summer. A very good foot-track could be made by cutting the bush and scrub along the route, and setting up a few marks on Solution Range. The distance from the fork of the Huxley to Paringa Post-office is only about thirty-two miles, and to the Powers' horse-track about eight miles less. Having to cross the Landsborough River is a great drawback; it is a long way to descend (to about 900 ft. above sea-level), only to rise again; and when the river is in flood it is impassable, though if it is low it can easily be forded in many places. I judge from the marks that it sometimes rises 10 ft. or 15 ft. above the fordable level; this would, however, probably be in spring, while the winter's snow is melting. We found that although the West Coast rivers rise rapidly during heavy rains they fall just as quickly when it clears up. On this trip, after the Otoko had risen higher than it appeared to have done for years, it fell sufficiently in twenty-four hours to let us ford it.

We examined several other lines for a better route than the one marked in the plan, and I have no hesitation in saying it is the best and only practicable one in that part of the country. Were the bush and scrub cut, a very moderate walker should be able to go from the Huxley Fork to Paringa in two days. The country we passed through was interesting in many ways, and the scenery fine; the glaciation of some of the mountains presents quite a different appearance to what we are accustomed to in Canterbury, and generally form a complete fringe of ice round them. We have no peaks as low as Mount Déchen, so completely covered with an ice-cap as it is, and, as I remarked in reporting to you in 1890, it is the whitest-looking mountain I have seen. Mount Hooker is a very fine mountain too; it has the fringe of glacier, but the peak is quite bare rock, without any snow on it at all. The Landsborough Valley is wide and open, with many small grassy flats on both sides of the river; it would make an excellent place for deer, which would no doubt find their way down if a track was cut. We saw their spoor in the Huxley River, not far from the Pass. Mark's Flat, on the Clarke, with its springs and ponds; the Kea Cliffs; the flowing of the Clarke River close past the Otoko Glacier, which it looks as if it ought to tap, but is divided from by a narrow lateral moraine; the marked stratification of Mount Matheson and the Solution Range, where the parallel strata of sedimentary rocks, mixed with large veins of quartz, stand most prominently above the ground, and look like walls; the terminal face of the Roberts Glacier, which nearly fills the Otoko Valley, and dams up the water of a small creek sufficiently to make a large pond, which was covered with tiny icebergs when we visited it; and the valley of the Otoko itself—all these are objects of interest or beauty. The upper valley of the latter is only about 40 chains wide, the 40 chains consisting of forest and scrub-covered flats and easy spurs, flanked on both sides by almost perpendicular faces of bare rock rising thousands of feet before forming a ledge, which, on the north side, supports a fringe of glaciers, and above that again tower the rocky peaks. There are only three small patches of open land between the Roberts Glacier and the terminus of the Powers' horse-track; the first is at the upper ford, the second on Jack's Creek, about 20 chains from its junction with the Otoko, and the third (where we camped) about half-way between Jack's Creek and Powers' track. Below that there are several even flats, on which the Powers run their sheep; the largest is just opposite the Paringa River junction.