

## FOREST TREES, SHRUBS, ETC.

The vegetation on both sides of the glacier is of the usual character in such places; there are ratas, kamahi, akeake, neinei, and a few totara and other pines. If this place possesses any new botanical species, I did not see them. On the climb up to the Victoria Glacier, that dull-coloured, sage-bush-looking shrub, the incense plant, was plentiful, but edelweiss was absent. Mountain lilies and other flowers were very scarce. This last season has been a very hard one for Alpine flowers. The unusually heavy snowfall has given the grass on the hills a withered appearance at a distance, causing it to look as if fire had gone over it. On the lower moraines, near the ice, there were only a few patches of broom, mountain-flax, and a few flowers to be seen. The next higher moraine is clothed with a dense growth of akeake, holly, ribbon-wood, &c. There are very few totaras; generally an undergrowth of ferns, but with very little variety. Higher up, where the drift abuts against the hills, the vegetation becomes larger and more nearly approaching that which grows on spurs and gullies all over the country at the corresponding height, but still, the near vicinity of the ice is apparent in the trees, which, although large, are twisted and stunted in their barrels, like those to be seen on a sea-bluff. If it were not for the ferns, which keep their general appearance wherever they grow, any one travelling through the bush in the vicinity of a low-level glacier would imagine that he was either close to the grass line, or had suddenly got into the vegetation of a dying-out planet, the peculiar-looking neinei heightening the delusion.

There is one plant that is very plentiful on the moraine near point K, that is the aniseed, not the hard-leaved mountain variety, but the soft, sweet-smelling species, which once was so plentiful on the Westland river-flats. I do not know whether this plant is of any culinary or medicinal value; it is good in soup to those who like aromatic seasoning, and the seeds may be substituted for caraways. Perhaps some genius, with an eye to money-making, may concoct a patent medicine out of it. However that may be, it is delightful lying on a sunny day on the moraine among such sweet-smelling herbs as the aniseed, incense-plant, and musk-plant, though the two latter require to be burnt to bring out their virtues.

This Aniseed Flat will before long have a shelter hut; then, perhaps, a hotel built on it, as it is by far the best part of the district to camp in. Some one more-enterprising may yet build a sanatorium at the hot spring, with a summer-house on the top of the cone.

## GEOLOGICAL.

There is little to be said in this report concerning the rocks, reefs, and minerals on the Fox, as they are conspicuous by their absence. Of gold there is no trace. Quartz reefs are non-existent; and the only thing seen to retrieve the Fox from utter barrenness was the trace of an iron lode on the climb up to the Victoria Glacier; this is no doubt the same lode which I found in 1888 on Craig's Range, but I could see no trace of the quartz reefs which are known to exist on the Balfour side of the range.

The two cross-sections on either side of the glacier—A-B from Gillespie's Bluff to Mount Cook and D-E from Cairn T to Mount Haidinger—will explain better than pages of writing the geological features of the country, the nature of the rocks, and their approximate dip and strike. The cone shows hard granite gneiss for its whole length, and the same rock shows on the north side of the glacier, up as far as point N; the strike is north-north-east, with a very slight dip east. Above this, the rock alters to soft schists, with the same strike, but with a more decided dip east. Above them, the Torlesse slate comes in, but their exact line of junction is unknown, so that part of cross-section D-E may be considered as doubtful.

The most interesting discovery made in this district was a large block of pure rock crystal, which came off Craig's Range, and its approximate position is shown on the cross-section A-B; it was about 2ft. long and 6in. in diameter. I suffered considerable abuse for smashing it up instead of bringing it down entire. I could not see what value it would be, unless as a curiosity.

Those crystals, but of smaller size, are very common on Cook's River and other parts of Westland, but they are all white. Certainly, many of the boulders on the Balfour are powdered with minute green and yellow crystals, but they are so small as to be valueless.

C. DOUGLAS.

## EXPLORATION BETWEEN DUSKY SOUND AND LAKE MANAPOURI.

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On the 24th January, 1896, our party left the Bluff in the s.s. "Tarawera" for the purpose of following up a river coming into Supper Cove, Dusky Sound, and exploring in that vicinity. It was my intention to go through to Manapouri, but, as I could obtain no information regarding the supply of a boat on that lake to meet us, I abandoned the idea of doing so. The party comprised Messrs. Clunie Bishop, Kenneth Ross, Andrew McFarlane and myself. The "Tarawera" dropped us at Anchor Island, and from there we rowed to Pigeon Island, six miles away. Here Mr. Richard Henry, curator for the Acclimatisation Society, joined us. We then proceeded to Supper Cove, a distance of twenty miles, and there pitched our head-quarters camp. Here Mr. Henry showed us the supplies which he had left two months previously in case we came overland by Manapouri. The provisions were in excellent condition, but the matches were wet. Bad weather now set in, and as our time was very limited, and as we could not afford to sit idly, nor yet force our way with swags through the underwood, I decided to put in our time cutting a track. Mr. Henry kindly gave us the use of his dingy and the benefit of his assistance. Our course for the first two miles and a quarter was nearly due west. In that distance there are three cataracts on the river. The first is about 600 yards from the mouth, and is 10ft. high. The second is 2,000 yards beyond the first, and is 25ft. high. Thirteen hundred yards beyond this the third cataract occurs; but,