

- (5) Instead of returning the same way a route can be made over the Fox Range into the Fox Glacier, and so to Weheka. This has not yet been done, though the various peaks have been climbed from the Fox. No very serious snow or ice work required.

*Fox Glacier.*—This is now so well known it is not necessary to describe it, but there are one or two interesting features which are more marked on the Fox than on any other glacier in New Zealand. For instance, the veined structure of the ice is very apparent; I have never seen so fine an example anywhere else. There were also exceptionally fine "Moulines," or funnels in the ice—some go down to unknown depths, others descend for a few feet and then ran level for some chains and came again to the surface lower down the glacier. The third point of interest is the very clear evidence of old ice-levels, shown by the very distinct lines of different periods. These lines are marked in all Westland valleys, but in the Fox they are shown probably better than in any other. (See Fig. 9.)

RESERVE 1461 (48,500 acres).

*Topographical.*—The south-eastern boundary is the Fritz Range, an offshoot of Conway Peak thence the Main Divide is followed to the Minarets (10,058 ft.), from which the Baird Range runs north-west and divides the Franz Josef Glacier from the Callery River, thence along the divide to Mount Elie de Beaumont (10,200 ft.), from which three large glaciers flow in a northern direction and give rise to the Callery River, which joins the Waiho just within the Reserve to the west. At Elie de Beaumont the boundary leaves the divide and circles round to the north and north-west to the source of the Atupau River, which it follows to near the main road.

*Historical.*—Dr. Macintosh Bell, in his "Geological Report of the Franz Josef Glacier" (Department of Mines New Zealand Geological Survey, 1910), states: "There is some uncertainty as to who was the actual discoverer of the Franz Josef Glacier, but to Sir Julius von Haast belongs the honour of the first examination, and it is not unlikely that he was the first white man to visit it. This visit took place in 1865 and is, I believe, the first visit by a European." The first white man to see these two glaciers from the beach was my father, Mr. Leonard Harper, who made the first crossing of the Southern Alps in 1857 with the late Mr. Locke and four Kaiapoi Maoris, continued south, alone, with Terepui, the local chief, and ultimately reached a point about half-way between Jackson's Bay and Milford. His journey was not published in detail, as he had promised the Maoris not to say too much about it, but he saw the Franz Josef and Fox from the beach and told me he had named them Victoria and Albert respectively, though he did not attempt to visit them. Of course, Captain Cook and the early whalers must have seen both these glaciers from the sea. Sir Julius von Haast did not go beyond the terminal face; the first exploration of the whole valley was made by Mr. C. E. Douglas and myself in 1893. We made a close examination of the whole locality, reached the top of the ice-fall above the Almer Glacier, and climbed the ranges on both sides of the valley. In September, 1894, I succeeded in ascending the great ice-fall, and turned back at a point just below Mackay Rocks. In March, 1895, Mr. E. A. Fitzgerald, Zurbriggen, and I crossed from the Fox Glacier and traversed the whole snow basin under the divide to Graham's Saddle, as mentioned above. Some years later Dr. Teichelmann (A.C.), the Rev. H. E. Newton (A.C.), with W. Batson as guide, were the first to reach Graham's Saddle by a complete ascent up the Franz Josef Valley but they took a route along the Baird Range and struck the glacier above the ice-fall. In 1909 Dr. Teichelmann, Professor Linden, and Alex Graham (guide) followed Douglas's and my route to the Almer Glacier, took the spur on the left, thus avoiding the ice-fall and discovering the best route to the head. This has been used ever since.

*The Callery*, branch of the Waiho, carries gold as far as the Burton Glacier, and prospectors went in, I believe, as early as 1880, but the first record of this fine river appears in the *New Zealand Alpine Journal*, Vol. I, page 90, from Mr. George Park, then of Hokitika, who claims that his "party were the first to explore the Callery." It was, at any rate, the first to give any useful information, and for that reason may be accredited with the honour.

*Nomenclature.*—For the last thirty years there has been much adverse criticism of the names Bismarck, Roon, Moltke, Kaiser Fritz, and other German celebrities, and Douglas and I have wrongly been held responsible, so the actual facts should be recorded.

When we made the first exploration of the valley we found these names already on the rough map made from the distant low country trig stations. I believe the late Mr. Mueller, who was then Chief Surveyor in Westland, was responsible.

The only prominent peaks named by Douglas and myself were Conway Peak, after Sir Martin Conway, of Himalayan fame, and Mount Anderegg, after that great Swiss guide Melchior Anderegg. We also put Swiss guides' names on to certain glaciers—*i.e.*, Almer, Croz, Baumann, Melchior, Andermatten, and Carrel—"Rope," "No Go," "Arch," and such names are reminiscent of incidents in our work. Many others were placed on the map by the Survey Department.

*Descriptive.*—The Franz Josef (see Fig. 10) and its surroundings are now so well known that it is unnecessary to go into details. It is enough to say that this glacier is one of the most beautiful in the world. The Rt. Hon. L. S. Amery (A.C.), with whom I had the pleasure of ten days' climbing in 1927, told me he had never seen anything to equal it. The Callery River, with its fine canyon-like gorge and the wonderful alpine scenery at its source, would be considered remarkable in any alpine country. Mount Elie de Beaumont (10,200 ft.), with the fine glaciers sweeping down its slopes, as seen from near Mount Spencer, is, I think, quite as striking as Mount Tasman from Craig's Spur. The two views differ materially, but I place them amongst the best in our Alps.

*Glaciology.*—The evidence of the past size of the glaciers and other facts in connection with them have been written plainly on the face of the country within these reserves and are there for any careful observer to read and theorize upon. If my conclusions differ from those of professional scientists I can only apologise for my courage not only in stating them, but in maintaining that they are sound.