a small stream running from the glacier into the Murchison River. This comes from an ice face, and very likely marks the beginning of one of the constant changes to which I previously referred. In 1889 the ice of the Ball Glacier was much lower than it is now. Its advance has broken down the lateral moraine of the Tasman, about 15 chains below the hut; and from the gap a small stream now runs into the hollow between the glacier and the hills, also in several other places. The western lateral moraine has recently made gaps with small streams issuing from them, which seem to indicate a tendency of the current to set more to the west than it has done for a very long time.

The western lateral moraine is very high, and from where I have marked (huge rock), down to the blue lakes, is several chains in width, and its face in many places covered with scrub. The stream which runs into the Tasman near Trig. X and the blue lakes are fed by percolations from the glacier. The hillocks marked old moraine near the hills are very ancient, and were once covered with scrub, which was burnt off by Nicolo Radove, who sowed cocksfoot grass afterwards; the grass has taken uncommonly well, and there is now fine summer feed all over them. Mr. Mannering kindly lent me Dr. Von Lendenfeld's map of the Tasman Glacier, published in 1884; I am, therefore, able to remark the great change which has taken place on the surface of the glacier since that time. In 1884 there were two deep depressions, with surface streams running in them, the deepest being near the middle of the glacier. The surface stream from this discharged itself over the terminal face. The depression is shown to be the clear ice of the main glacier, which reached a point within two and a half miles of the terminal face; the other hollow was more to the west, and was the clear ice of the Ball Glacier, which also extended to within two and a half miles of the terminal face, though the stream found its way under the ice before it reached the moraine. Now, a glacier at sections C, D, E shows that the depressions have disappeared, and with them the surface streams, while the clear ice has receded respectively 4 miles (or 6½ miles from the terminal face), and 1½ miles (or 4 miles from the terminal face).

The speed of the Tasman was determined by rods set in the ice along the lines C, D at the numbered points on the 5th December, 1890, and reset again on the 7th January, 1891. That of the Murchison by rods set in a similar manner along line A. The results are recorded in the appended Table No. 2. Here I had better call your attention to a clerical error which was published in my report on the rate of the Hooker Glacier, in order to have it put right this year. It was corrected at the time, as far as Canterbury was concerned, but I regret to say the reports had been distributed to the other provinces before it was discovered. The rates, instead of being so many feet and inches, should have been inches and decimals. The correct rate will be found in the attached table. The green colour on the plan represents scrub, with a few trees amongst it towards the lower part of the glacier. The highest point at which I have seen vegetation growing is 6,500ft., and I doubt if it ever grows at a higher elevation in this part of the country.

As the Government has spent some money in opening up these glaciers, it may perhaps not be out of place for me to make a few remarks on the tourists' traffic. His Excellency the Governor visited the Tasman in January, and was the first to ride up the new track. As it was then incomplete the horses had to be left two miles below the hut, and the remainder of the journey to the Hochstetter Ice Fall was performed on foot. His Excellency expressed himself as very much pleased with the scenery. Since that time many tourists, both ladies and gentlemen, have taken advantage of the facilities afforded by the track and hut to see the wonders of the Tasman, and from what several told me I am inclined to think the money spent will have the effect of increasing the number of visitors. Should it be the intention of the Government to spend any more money, I should like to recommend that the track up the Hooker be carried about four miles further up the glacier, and a shelter hut erected there. At present many tourists never get to the clear ice, and go away disappointed, and with the impression that our glaciers are entirely covered with moraine, and are not worth seeing. This does the traffic harm. The present tracks have done a good deal for the place, but I think not enough. In the time to come a visit to the Hochstetter Dome will no doubt be numbered among the regular trips. From this point a magnificent view is obtained, not only of the East but of the West Coast. The ascent is an easy one, and with common care there is no danger to be apprehended. It has already been visited by one lady (Madame Lendenfeld) in 1883, who accompanied her husband, Dr. Von Lendenfeld, when he was making his survey of the glacier. Any one trying the ascent will find it necessary to camp for one or two nights on the Malte Brun River below point *r*, where we left a good stout tent pole. From this point it is an easy three hours' walk to the Lendenfeld Saddle, and three and a-half from there to point *z*, with only about two hundred and fifty steps to cut.

TABLE No. 1, showing comparative sizes of the Canterbury Glaciers.

Name.	Area of Glacier.	Area of Country from which Supply of Ice is Drawn.*	Length of Glacier.		Average Width.		Greatest Width.		Narrowest Width.	
	Acres.	Acres.	Miles.	Chs.	Miles.	Chs.	Miles.	Chs.	Miles.	Chs.
Tasman	13,664	25,000	18	0	1	15	2	14	0	60
Murchison	5,800	14,000	10	70	0	$66\frac{7}{10}$	1	5	0	42
Godley	5,312	10,560	8	0	1	3	1	55	0	58
Mueller	3,200	7,740	8	0	0	50	0	61	0	37
Hooker	2,416	4,112	7	25	0	$41\frac{3}{10}$	0	54	0	30
Classen	1,707	3,972	4	70	0	$43\frac{3}{4}$	0	73	0	21

* This is not the whole watershed, but only that portion on which the nivé snow lies.