

Leaving the Welcome Flats, the Copland runs for a short distance over stony beaches and among rocks, but with little rise, until all at once it breaks through a narrow gorge, and rises in cataracts some 200ft. in a few chains. The travelling now becomes difficult; instead of the gneiss boulders of the lower gorge, which at least give good footing, the slippery Torlesse slates come in, making progress up to the Middle Forks rather slow. It is not so much the slippery nature of the boulders as the fact that numbers of them are "rockers," which makes travelling rather dangerous to men carrying heavy swags. The bush on either bank also changes—the cedars, ratas, and totaras are still there, but they appear isolated above a dense jungle of mountain-scrub, hard to cut through, and which can neither be crawled over nor under. Opposite Big Slip the terminal moraine of the Strauchon Glacier commences, and runs to the Middle Forks as an almost perpendicular face of drift 600ft. high, cut, but very slightly, by small watercourses. This moraine abuts on its lower end against the precipitous spur from Price's Peak, and at one time, no doubt, filled the whole valley, but it has been worn down to its present form by the action of the Copland and Douglas Rivers. A road could never be taken either down or along this face. It is standing safe at present, but once remove the trees and down it would come in immense slips. The whole valley of the Copland is remarkably free from land-slides, the Big Slip shown on the map being the only one worth mentioning. It has come down entirely from above—a height of some 2,000ft.—and it has not only filled up the old river-bed, but the rocks have bounded hundreds of feet up the other side. This slip I should judge from the size of the scrub to be about ten years old, and at the time it fell must have completely blocked the river, but not for long, as such slips contain too much rock and too little earth to dam those immense bodies of water so dangerous in other parts of the world. The rocky spur from Price's Peak, mentioned before, must at one time have sent down great masses of rock, as on that side down to the Welcome Flats the slope is piled with boulders like those in the lower gorge; but it is at rest just now, and looks as if it would fall no more.

From the Strauchon Glacier down to the Middle Forks the river has cut a deep, rugged channel through the moraine. The south bank has a comparatively gentle slope from the Round Hill, but the northern side is almost as steep as the terminal face. The river is passable travelling, considering the nature of the country, and rises very fast to the ice; thence along the glacier to the foot of the saddle the slope is easy. Near the end of the glacier is a broken hill (point K), some 400ft. high, composed of moraine-drift, and from the cairn on this knob a complete view of the Strauchon Glacier, Mounts Cook and Stokes, and Banks's Peak can be obtained.

The Strauchon Glacier, which is of the first order, is fed principally from the slopes of Mount Stokes and Banks's Peak, and its size is out of all proportion to the snow-fields at its head, but as it lies in a sunless valley, into which pile the snow-drifts swept in by the northerly gales, its position accounts for the large mass of ice. From its terminal fall almost to the ascent to the saddle the glacier is so covered with *débris* that it is hard to believe, when crossing it, that beneath you are hundreds of feet of solid ice. Here and there, in round holes, or cracks where a cavern-roof has collapsed, the ice can be seen, otherwise the walking, but for the absence of vegetation, was just the same as coming up the moraine. To the right a small glacier from Banks's Peak has broken the regularity of the terraces which run from the foot of the glacier towards the saddle. These terraces are about 200ft. high, and are by far the most difficult and dangerous part of the country to travel—worse than any of the kind I have seen. They are formed of drift so loosely packed that the greatest care has to be taken in ascending them. Once on the top of the moraine the travelling is good, the surface being comparatively level, and covered with grass and low scrub. The slope from Banks's Peak is gentle for 1,000ft. up, but further on the cliffs come sheer down some 1,500ft., the precipices on the opposite side, being of the same height, forming, as it were, the frame of a picture of wonderful grandeur, the blue ice-slopes from Baker's Saddle in the middle distance, with the gleaming snows of Mount Cook in the background. On the opposite side the terraces are about 150ft. high, and flat on the top, but they only extend from point K, about 40 chains, when the cliffs cut them off. Between offshoot spurs of the Navigator's Range descend two small glaciers of the perpendicular class. The first (Cuttance Glacier) is from a saddle forming an interesting but impracticable route into Cook River; the other (Law Glacier) is simply a slope of snow and ice extending from the crest of the range right down to the main stream. The trunk of the Strauchon Glacier is flanked, as said before, by towering precipices, but once past them the ice-stream widens out and a face of clear serac ice leads up towards Baker's Saddle, the ascent to which it would be best to attempt from the middle for a few hundred feet, and then edge away towards Mount Stokes. But at certain seasons the avalanches and falling rocks must make the enterprise very dangerous.

The Douglas River next engages attention. This stream comes out of a second-order glacier (the Marchant), which is fed by the snows of Banks's Peak and Raureka. Proceeding from the Middle Forks, the river bends away to the south for about a mile, and then to the right, the peak of Mount Sefton towering above in immense precipices, with glaciers hanging, as it were, on the top of cliffs 2,000ft. high. From the foot of the cliffs to the river the valley is filled with a slope of *débris* rising 2,000ft. in the distance of about a mile, and over this slope, in places, avalanches are continually coming down almost to the river-bed. High as Sefton is, it is too steep on its northern face to hold a glacier large enough to reach the bed of the river, but the continued denuding of the rocks has filled in the whole valley of the Douglas from the Marchant Glacier to the Middle Forks with this slope of drift. Except where avalanches have come down, the whole country is covered with a scrub that defies description. Fortunately, the rocks are not like those on Strauchon Moraine; they are smaller and better packed; so if any sort of a track was bored through this scrub the travelling would be tolerable. Forced by the slips from Mount Sefton to coast along the base of the Round Hill, the Douglas has cut a trench through the drift for about two miles, when the terminal face of the glacier is reached. Although not so wide as the terminal moraine of the Strauchon, this one is very nearly as high at its lower face, but it is far more cut into ridges. A branch coming off Sefton joins the river just below the terminal face of the Marchant, and has helped to round off the moraines, forming what I call the Upper Forks. This south branch is a small one, and sends no ice down low,